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Predictors of Mother's Adjustment in the Context of Intimate Partner Violence

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Abstract

The purpose of this study was to address some factors described in literature that can influence the impact on the adjustment among women's victims of intimate partner violence (IPV). We used as woman's adjustment the dependent variables, psychopathology, post-traumatic stress disorder (PTSD) and salivary cortisol, and as influencers the independent variables, as social support, childhood adversity and perception of parenting competence. The study comprised 156 participants ($n = 156$), women's victims of IPV. The sample included 75 (48.1%) women living with their partners and 81 (51.9%) women living in shelters. We used self-report questionnaires to assess psychopathology symptoms, PTSD symptoms, and social support perception, history of childhood adversity, and perception of parenting competence. We also used a salivary cortisol measure (cortisol awakening response). The hierarchical regression analyses, using the total psychopathology symptoms as outcome variable, demonstrated that sexual abuse, reassurance of worth scale and satisfaction were significant correlates in the final model, $F(19, 136) = 6.66$, $p = .00$, Cohen's $f^2 = .05$. Linear hierarchical regression using PTSD as outcome variable showed that reassurance of worth scale and satisfaction were significant correlates in the final model, $F(21, 135) = 5.44$, $p = .00$, Cohen's $f^2 = .03$. Logistic regression analyses using cortisol as outcome variable demonstrated that the full model was significantly reliable ($\chi^2 = 12.961$, $p = .04$). In general, we found that social support was a protective factor towards psychopathology and PTSD. Additionally, we found that childhood adversity can increase the risk for psychopathology symptoms, perception of parenting competence was negative associated with psychopathology and PTSD symptoms, and social support, childhood adversity and perception of parenting competence have not shown an influence on the cortisol.

Keywords: intimate partner violence, social support, childhood adversity, perception of parenting competence, psychopathology, PTSD, cortisol

Resumo

O objetivo deste estudo foi abordar alguns fatores descritos na literatura que podem influenciar o impacto no ajustamento entre mulheres vítimas de violência nas relações de intimidade (VRI). Usámos como ajustamento da mulher as variáveis dependentes, psicopatologia, perturbação de *stress* pós-traumático (PTSD) e cortisol salivar, e como influenciadores as variáveis independentes, como suporte social, adversidade na infância e perceção de competência parental. O estudo envolveu 156 participantes (n = 156), mulheres vítimas de VRI. A amostra incluiu 75 (48.1%) mulheres a viver com o companheiro e 81 (51.9%) mulheres a viver em casa-abrigo. Usámos questionários de auto-relato para avaliar sintomas de psicopatologia, sintomas de PTSD, e perceção de suporte social, história de adversidade na infância, e perceção de competência parental. Usámos também a medida de cortisol salivar (resposta ao despertar de cortisol). As análises de regressão hierárquicas, usando o total de sintomas psicopatológicos como variável efeito, demonstraram que o abuso sexual, escala de reafirmação de valor e satisfação foram significativamente correlacionadas no modelo final, $F(19, 136)$ = 6.66, p = .00, Cohen's f^2 = .05. Regressões lineares hierárquicas usando a PTSD como variável efeito mostrou que a escala de reafirmação de valor e satisfação foram significativamente correlacionadas no modelo final, $F(21, 135)$ = 5.44, p = .00, Cohen's f^2 = .03. Análises de regressão logística usando o cortisol como variável efeito demonstrou que o modelo completo era significativamente confiável ($\chi2$ = 12.961, p = .04). Em geral, constatámos que o suporte social era um fator protetor relativamente à psicopatologia e PTSD. Adicionalmente constatámos que a adversidade na infância pode aumentar o risco de sintomas psicopatológicos, a perceção de competência parental foi negativamente associada com os sintomas psicopatológicos e sintomas de PTSD, e suporte social, adversidade na infância e perceção de competência parental não mostraram ter influência no cortisol.

Palavras-chave: violência nas relações de intimidade, suporte social, adversidade na infância, perceção de competência parental, psicopatologia, PTSD, cortisol

Predictors of Mother's Adjustment in the Context of Intimate Partner Violence

Intimate partner violence (IPV) is a serious health problem around the world. This type of violence is defined as:

> "…physical violence, sexual violence, stalking and psychological aggression (including coercive tactics) by a current or former intimate partner (i.e., spouse, boyfriend/girlfriend, dating partner, or ongoing sexual partner)." (Breiding, Basile, Smith, Black & Mahendra, 2015, p. 11)

In this study, we assessed violence against women perpetrated by their intimate partner. Although this violence can be perpetuated by men or women, the most common victims of violence are women and the consequences to a man who is a victim of domestic violence are lower, i.e., they suffer violence in a much lower frequency than women, suffer less damages prevenient from these events and report to live without fear from their partners (World Health Organization, 2010). The global prevalence of IPV was observed by a report made by the World Health Organization (WHO) in 2013. The obtained results demonstrated the prevalence of 30% of physical and/or sexual IPV among women around the world. The prevalence of women who reported to have a lifetime exposure to this violence was higher in the WHO Regions of the Americas with 30%. A lower prevalence was registered in the high-income regions (e.g. Australia, Spain, United States of America) (23%) and 25% of prevalence in the European and the Western Pacific Regions (World Health Organization, 2013). In 2010 WHO published another multi-country study report about the domestic violence and women's health. The researchers interviewed more than 24000 women of low- and middle-income with ages between 15 and 49 years old, in which the prevalence of physical and/or sexual violence was very different along the different countries (e.g. 15% in Japan, 70% in Ethiopia). In this report demonstrated that 6% to 59% of women report to have been sexual abused by their intimate partner (World Health Organization, 2010). Likewise, IPV has also been observed in Portugal and its prevalence is significant. Through an annual report done by the Ministry of Internal Administration there was 27318 participations of domestic violence in 2013 reported to the authorities. There was an increase of 2.4% in participations comparing to 2012. The majority of the victims and perpetuators had been between 25 and 64 years old, in which 82% of them, men were the aggressors (Ministério da Administração Interna, 2014). Linking this data to the APAV (Portuguese Association of Support to the Victim) in the year 2013, the only people registered were people that were

given support to, as observed 8733 victims of IPV, 82% of the victims were women and registering higher number of events in conjugal relationships and dating relationships (APAV, 2014). Thus, it is evident that domestic violence is an extremely important topic of interest. This epidemic is globally observed and is classified as a serious health problem. Therefore, this problem can't be disregarded, because of the magnitude of the consequences that the violence brings to the victim's life.

Many theoretical models have been used to explain the effects that violence has on battered women, like the ecological, stress, and cognitive models. Regarding the ecological model (Bronfenbrenner, 1979; Belsky, 1993), explains the significance associated with violence and how to prevent it, by taking into account the interaction between the different systems: macrosystem, meso/ exosystem, macrosystem and chronosystem (Campbell, Dworkin & Cabral, 2009). This model encourages the investigation of the factors relating to violence, and thus understanding what factors can have a protective role in the life of the battered women. Therefore, it permits the observation of which factors influence violence and how they work along the different systems (Casique & Furegato, 2006). To the stress models, the Buffering and Main Effect Model investigate the influence that the social support has on the individual's health (Cohen & Wills, 1985). The Buffering Model indicates that the individuals who have more social support have a better adaptation to the change and lower probability to develop health problems. Therefore, the social support is a protector factor to the individual's development when she/he experiences stressful events within the environments (Miranda, 2011). As to the Main Effect Model, the conception is that even if the individual is or is not experiencing a stressful situation, the social support is a protector factor. The concept relating to the protector factor also permits that the individual has a better capability of adaptation towards changes in her/his life. This social support comes from the social network, which encourages a higher sense of well-being, while simultaneously decreasing the impact of possible negative events. This leads to the prevention of psychological and physical consequences relating to negative events (Cohen & Wills, 1985). In terms of the cognitive model, the Trauma Theory is a good model to explain the impact that IPV has on a woman's life. Herman (1992) states that trauma has a significant connection to the development of negative psychological symptoms. Battered women experience not only psychological, but also physiological changes due to the ongoing violence. So, they present changes that affect regulation, consciousness and self-perceptions. Regarding the consciousness, there can be changes in their perception, as the case of

dissociation, making them less alarmed and awareness to future abuse towards her and possible to their children. This dissociation is linked to the HPA axis, leading to abnormal responses to stress (Levendosky & Graham-Berman, 2000).

Many epidemiological and empirical studies have been performed to assess the consequences of IPV in women. These studies found several psychological, physical, and social problems, as instance the development of psychopathology (Levendosky, Lannert & Yalch, 2012) and post-traumatic stress disorder (PTSD) (Eshelman & Levendosky, 2012), which the two last ones can be associated with disturbances in the functioning of the hypothalamic-pituitary-adrenal axis (HPA) (having as final product the cortisol) and consequences to the neuroendocrine system (Mello el al., 2009) which leads to maladaptive responses to stress (Nicolson, 2008). Concerning the psychopathology, depression it is a very a common consequence of IPV (Wong, Fong & Tiwari, 2012) and has been shown that its rate is much higher in battered women in comparison to non-battered (Bonomi et al., 2009). Most of the battered women have this type of psychopathology (living with their partners and even when they are already separated) (Wong et al., 2012). The anxiety is another type of psychopathology that is also very associated with IPV events, independent of the type of abuse (Coker et al., 2002). For instance, a study found high rates of anxiety among women´s victims of IPV (Dorahy, Lewis, & Wolfe, 2007). In terms of PTSD, it has been considered one of the most common consequence of IPV (Pinna, Johnson & Delahanty, 2014) and it is been related to the severity of abuse, i.e., severity of abuse is positively correlated to the intensity of PTSD symptomatology (Woods, 2000; Duttton, 1992; Austin, Lawrence & Foy, 1993; Houskamp & Foy, 1991; Astin, Ogland-Hand, Coleman & Foy, 1995; Vitanza, Vogel & Marshall, 1995; Kemp, Rawlings & Green, 1991, cit in Pico-Alonso, 2005). Moreover, PTSD has a high comorbidity with depression (Eshelman & Levendosky, 2012). This comorbidity and development of both depression and PTSD in the context of IPV will have an impact on the HPA dynamics (Pinna et al., 2014) (e.g. influence in the levels of cortisol) (Levendosky, 2013). The battered women have different levels of dissociative symptoms than the non-battered women. The dissociation is a behavioral response of shutting-down towards trauma. Therefore, battered women have higher levels of dissociative symptoms, which means that they will probably have lower levels of awakening cortisol (Levendosky, 2013). Conversely, other studies showed that the cortisol awaking response, only associated with PTSD, from battered women living in shelters, was elevated (Pinna et al., 2014). According to this evidence, it is possible to observe elevated levels of cortisol awaking response when

there is comorbidity of depression and PTSD. Therefore, these higher levels are potentially due to the comorbid depression and not because of the PTSD (Pinna et al., 2014).

The link between IPV and health consequences is not linear. The magnitude of the consequences of violence towards of battered women can be affected by other variables, as instance the social support, childhood adversity and perception of parenting competence. It has been shown that social support is positive to the individual's life, which means that the social support is a protector factor that can lead to the well-being (Maia & Seabra, 2007). This protector factor as a very important role especially when the individual is in stressful environment, due to its buffering effect that decrease and reduce the negative effects of the adverse environment (Dunbar, Ford & Hunt, 1998; Horton & Wallander, 2001; Nielson, 2003; Maia & Seabra, 2007). Regarding the psychopathology, social support is important to determinate the presence of this disorder (Fonseca, 2010) including in adverse environments (Maia & Seabra, 2007). It has been characterized as a protector factor towards stress events like the context of IPV (Borges & Dell'Aglio, 2008). This means that lack of social support in battered women will make them more vulnerable to develop psychopathology (Mburia-Mwalili, Clements-Nolle, Lee, Shadley & Yang, 2010). Additionally, the quality and the strength of social support will protect women's functioning (Levendosky & Graham-Bermann, 2001), meaning that the battered women that are provided with less social support have higher probability to report psychopathology than the ones that have social support with good quality (Coker et al., 2002). When there is low social support, these women have more psychopathology symptoms (Levendosky & Graham-Bermann, 2001). For instance, Muller, Gragtmans and Baker (2008) found that when there is high levels of social support, there is lower levels of psychopathology. Similarly, Cordeiro, Claudino and Arriaga (2006), in a cross-sectional study, showed that the psychopathology was negatively correlated with the social support.

In terms of PTSD, the social support is considered to be a predictor of this disorder (APA, 2000), which means that lower levels of social support can lead to PTSD symptoms as consequence of a traumatic exposure (Borges & Dell'Aglio, 2008; Varela & Leal, 2008). In fact, it has been shown in different studies (Andrykowski & Cordova, 1998; Widows, Jacobsen, & Fields, 2000) that the social support has a buffering effect in the development of PTSD.

Regarding the cortisol, there has also been found a relation with social support, considering that the social support has a positive effect on the cortisol levels (Matias & Freire, 2009). Moreno, Ramos, Vaz, Santos e Fernández (2012) showed that higher levels of social support are associated with low levels of cortisol.

Other variable that influences the consequences of IPV is the history of childhood adversity in women's victims of IPV. In terms of psychopathology, it has been related to childhood adversities (Mello, Mello, Carpenter, & Price, 2003), been considered has a predictor of psychological problems in the adulthood (de Souza, Baptista, & Silva Alves, 2008). This abuse and neglect on their childhood can help the path to depression, due to the low self-esteem built over the years, fear and responses towards the current abuse as an adult (Wong et al., 2012). This is why psychopathology is more observed in individuals who have experienced childhood adversities than individuals who do not have experience (Maia et al., 2007). In women who have experienced sexual abuse in their childhood, have also more risk to develop several problems like psychopathological disorders (Silva, Gava, & Dell'Aglio, 2013). Additionally, the research has shown that the amount of adversities experienced in the childhood is a crucial factor to determine the development of later psychopathology. Therefore, when there is a higher chronicity of adverse events, there is a higher probability to the development of psychopathology. The accumulation of adverse situations leads to lower resistance and greater vulnerability. The research group of Ace Study showed that several data on the relation between childhood adversity exposure and the development of later psychopathology (e. g. Dube et al., 2001; Edwards, Holden, Felitti, & Anda, 2003; Anda et al., 2006). Likewise, this study showed that an elevated chronicity of adversities in the childhood leads to a greater probability of psychopathological disorders (Monteiro, 2010). Moreover, Hankin (2006) verified the relation between these two variables, and found that adversity in the childhood lead to psychopathology. In addition, this study found that childhood adversity leads to psychopathology but the severity of this disorder was influenced by social support (Fraga, 2012). Therefore, the social support is not only important in the adulthood but in the childhood as well when experiencing adversities. However, there are cases of resilience amount these children. Some children who experienced sexual abuse do not manifest psychopathology which indicated protector factors in their environment and the way they cope with the abuse (Antunes & Machado, 2012).

Regarding the relation between PTSD and childhood adversity, the PTSD is one of the most common consequences when the individuals experience childhood adversity (Maia, 2007), and battered women who were abused in their childhood have more potential to develop much higher levels of PTSD than the ones who have been only abused in their adulthood (Tramayne, 2012). This consequence is especially observed when the individual experienced sexual abuse (Hébert, Lavoie, & Blais, 2014). Therefore, children who experienced sexual abuse have a high prevalence of PTSD, meaning that the consequences of this abuse may continue throughout the adolescence and adulthood (Borges & Dell'Aglio, 2008). For instance, Cloitre, Scarvalone e Difede (1997, cit in Maia et al., 2007) demonstrated with a clinical sample of adults that the PTSD is the more frequent consequence associated to childhood adversity, having 85% of prevalence throughout life. Likewise it was shown a prevalence of 36.3% of PTSD in children who were sexual abuse in the United States (Ruggiero et al., 2000, cit in Habigzang, Borges, Dell'Aglio, & Koller, 2010) and 46% in Canada (Collin-Vézina, & Hébert, 2005, cit in Habigzang, Borges, Dell'Aglio, & Koller, 2010). However, not all children who was sexually abused develop PTSD. The children may have different emotional reactions towards the sexual abuse. These different reactions combining with the presence of protector factors provides a positive adaptation to some children even thou they experienced adverse situations (Habigzang, Borges, Dell'Aglio, & Koller, 2010).

In terms of the influence of childhood adversity in the cortisol levels, the experience towards adverse situations activate neural systems of stress response like the hypothalamic-pituitary-adrenal axis (HPA) (De Bellis, 2001; Glaser, 2000; Yehuda, 2001, cit in Borges & Dell'Aglio, 2008), which leads to a hyper function and dysfunction of the cortisol levels (De Bellis, 2005; Nemeroff, 2004, cit in Borges & Dell'Aglio, 2008). Therefore is visible that childhood adversities has as consequence an alteration in the response towards stress of the individuals in their physiological system, making possible to observe a predisposition in an increase of the levels of cortisol as a response towards stress (Mello et al., 2009). When the individual experiences high levels of chronicity of negative and adverse situations it has as consequence the maladaptive response of this physiological system. This maladaptive response is a deregulation towards stress that in positive stress situations would be a response of adaptation to the environment (Quartilho, 2012). Nevertheless is important to refer that childhood adversity and its impact is different among the individuals due to the heterogeneity of their development. Which person has its own course through life, and when there is

positive experiences in this course, can produce the attenuation of the negative experiences (Quartilho, 2012). The dysregulation that an individual experiences is also very associated with the PTSD and depression. Borges & Dell'Aglio (2008) mentioned that where observed high levels of cortisol in children who have experienced adversities in their childhood and have develop PTSD when considered the severity of the symptomology of PTSD and duration of the trauma (De Bellis et al., 1999a, cit in Borges & Dell'Aglio, 2008). However in children who were sexual abuse was observed low levels of cortisol (King, Mandansky, King, Fletcher, & Brewer, 2001, cit in Borges & Dell'Aglio, 2008).

Regarding the relation between the cortisol and depression, it has been shown that depression leads to a hyperactivity of the HPA, therefore high levels of cortisol. Heim et al. (2008), made a study where they divided women in four groups with the aim of assess the neuroendocrine and autonomic responses. They were characterized by the presence of childhood adversity and depression. Thus, the groups were consisted by: history of childhood adversity and presence of depression; history of childhood adversity and no presence of depression; no history of childhood adversity and presence of depression; and no history of childhood adversity and no presence of depression (control group). The authors concluded that women with history of childhood adversity had higher levels of cortisol comparing with the control group. Considering the depression, it was observed that the women who had depression in the moment of the study presented high levels of cortisol comparing with the ones that did not have depression in the moment of evaluation (Heim et al., 2008). The same conclusions where observed with laboratory animals, in which they demonstrated that the hyperactivity of the HPA can be a consequence of the chronicity of childhood adversities and a risk to the development of psychopathology (Mello et al., 2009). Thus, childhood adversity is linked with high levels in the HPA system that are amplified when the occurrence of adversities in the adulthood. However, other study (Carpenter et al., 2007) found opposite results when mentioned that women with childhood adversities and with no history of depression presented low levels of cortisol.

Finally, in terms of the influence of the perception of parenting competence, this has an influence in the psychopathology concerning its impact in the loss of autonomy and perceived control by the battered woman (e.g Belsky, 1993; Ackerson, 2003; Mourad, Levendosky, Bogat, & Von Eye, 2008; Jaffe, Cranston, & Shadlow, 2012; Camilo & Garrido, 2013), and the lower psychopathological functioning has been proven to interfere with the

parenting of these women (Belsky, 1993; Levendosky & Graham-Bermann, 2001; Sani, 2008). Therefore battered women who have psychopathological symptomology are less awareness to their child's needs and less interactive (Ackerson, 2003), leading to lower emotionally availability, warmth and responsiveness towards the child (Jaffe et al., 2012). However, is important to report that battered women have also felt positive effects from these negative life experiences, like the mobilization of resources to respond to abuse in defense of their children, providing structure, improving of the affection towards their children, emotional availability towards their children or in the guidance to positivity reinforce them (Sani & Cunha, 2011), and more warmth as a way to compensate the adverse environment (Jaffe et al., 2012).

Regarding the relation between the PTSD and perception of parenting competence, several studies showed that the PTSD has an impact on the perception of parenting competence of the battered women (e.g. Levendosky & Graham-Bermann, 1998; Levendosky & Graham-Bermann, 2000; Jaffe et al., 2012). This influence leads to a decrease in the warmth, effectiveness and control that these women have towards their children (Jaffe et al., 2012).

Concerning the relation of the perception of parenting competence and cortisol, it was shown that a secure attachment leads to a proper emotional auto capacity regulation, which means an adaptive response of the HPA system. In a study with the aim of evaluate the relation between the salivary cortisol and the type of attachment in provoke stressful environment, the results showed that the avoidant attachment style had lower levels of cortisol, ambivalent attachment style the second low levels of cortisol and the secure attachment style with the highest levels in comparison with the remaining attachment styles (Kidd, Hamer, & Steptoe, 2011). In another study was evaluated the perception of parenting competence with the response of the cortisol to the stress on a community sample consisted with young adults (Engert et al., 2010). The perception of parenting competence was divided in three groups: low, middle and high perception. They found out that the group with higher levels of cortisol was the middle perception. While the lowest levels of cortisol corresponded to the low and high perception of parenting competence. The low levels of cortisol obtained were explained by been a result of chronic adaptation and negative regulation of the HPA (Reguera Nieto, 2015).

Considering the previous introduction, this study has the aim to overcome some limitations found in literature on women's victims of IPV. Most of the studies found were based in community samples and make comparison between battered women with non-battered. Likewise, previous studies have focused in a negative consequences of the IPV and do not refer much of what makes resilient battered women different from the ones that are not. The references to positives/protective factors in the battered woman's life are less reported. Finally, although the negative effects of violence in women's physical health are well known, there is lack of studies that have used cortisol measures, considering that one pathway that links women's victims of PV with negative mental and physical health may be via to the dysregulation of the hypothalamic–pituitary–adrenal (HPA) axis functioning (Kim et al., 2015). Therefore, the strength of the current study was the characteristics of the sample, i.e., all of the women that participated in this study have been identified as victims of IPV, which lived with their partner or lived in shelters, the focus on the positive effects that certain variables can have on battered women and evaluation of perception of parenting competence in the relation between IPV and adjustment. Moreover, this study is part of an embracing investigation about "Parenting in the Context of Intimate Partner Violent: Physiological and Psychological Predictors", that is financed by the Foundation to Science and Technology [FCT; EXPL/MHC -PED/1977/2013]. The general objective of this investigation is to explore the negative impact of the domestic violence but also the factors that lead to the adjustment of the battered women. Regarding this study, the general objective is to show if the adjustment (psychopathology, PTSD and cortisol) of the battered woman is affect by the independent variables (social support, childhood adversity and perception of parenting competence). Then according with the this general objective, the study has as specific objectives to observe like: if there is more adjustment when there is better social support, perception of parenting competence, and if there is lower adjustment when the exposure to childhood adversity is higher. Thus, in this study we will understand how and if when exist more social support and perception of parenting competence will lead to a better adjustment and when a large amount of childhood adversity exists, this will lead to a lower adjustment. So the hypotheses develop consist in: better adjustment is expected when there is more social support; exposure to childhood adversity leads to lower adjustment; and better adjustment is expected when greater perception of parenting competence exists.

Method

Participants

The sample was consisted by 156 participants of the feminine sex, with ages between 21 and 54 years old (M = 36.43, DP = 7.63), 81 (51.9%) living in shelters, 75 (48.1%) living with their aggressor, where 143 had Portuguese nationality (92.3%). Regarding their education, most of the participants (40.0%) had the second cycle and considering the professional situation, 74.2% were unemployed. Has to the ones who were employed (24.5%), the majority presented a weekly charge of 40 hours (57.9%), only 4 (11.1%) made night services and 5 (71.4%) worked on the weekends/holidays. Regarding the pregnancy period, 87.0% had a good reaction to their pregnancy and the opposite was 13.0% of bad reactions to the pregnancy. Relatively to medical complications during the pregnancy, 23.2% related yes, being the most frequent complication the violence (20.8%) and gestational diabetes (16.7%). Only 36.1% of the mothers reported to have companion to the prenatal consults during the pregnancy. Of the participants, 60.1% already suffer violence before the pregnancy, 49.3% were battered during the pregnancy. In terms of care providers to the baby, 95.5% of the mothers reported that they were the principal caregiver of the baby, where the majority of the participants were not remoteness from the child (89.0%). Regarding their health, 36.1% affirmed to have psychiatric diseases, being the depression the most evidenced (48.3%), having a percentage of 25.0% of the women that take antidepressants. In terms of risk behaviors to their health, 51.0% of the women smoked, 24.4% consumed alcohol and 0.6% consumed substances, also reveling the majority, problems of initial insomnia and maintenance (46.4%) (Table 1).

Table 1

Descriptive analyses of the sample

		n	(%)
Citizenship			
	Portuguese	145	92.3
	Brazilian	2	1.3
	Romanian	2	1.3
	Angolan	3	1.9

Guinean	3	1.9
Colombian	1	0.6
Ukrainian	1	0.6
Education		
Without Education	2	1.3
1° Cycle	19	12.3
2° Cycle	62	40.0
3° Cycle	56	36.1
Secondary	12	7.7
Graduation	4	2.6
Professional Situation		
Unemployed	115	74.2
Employed	38	24.5
Never Worked	2	1.3
Weekly Charge		
2 Hours	1	2.6
7 Hours	1	2.6
8 Hours	3	7.9
20 Hours	7	18.4
39 Hours	1	2.6
40 Hours	22	57.9
45 Hours	1	2.6
50 Hours	2	5.3
Working in Shifts		
No	33	86.8

	Yes	5	13.2
Night Service			
	No	32	88.9
	Yes	4	11.1
Weekends/Holidays			
	No	2	28.6
	Yes	5	71.4
Mother's Reaction Towards the Pregnancy			
	Bad	20	13.0
	Good	134	87.0
Medical Complications During the Pregnancy			
	Gestational Diabetes	8	16.7
	Leg's Paralysis	1	2.1
	Premature	3	6.3
	Coma	1	2.1
	Hysterectomy	1	2.1
	Hemorrhage	2	4.2
	Nervous System	3	6.3
	Adolescent Mother	3	6.3
	Anemia	3	6.3
	Threatened Abortion	3	6.3
	Mother After 40's	4	8.3
	Kidney Stop	2	4.2

	Violence	10	20.8
	Diabetes	1	2.1
	Others	3	6.3
Follow-up Consultations			
	Child's Father	37	24.3
	Mother	4	2.6
	Father	3	2.0
	Other Relatives	7	4.6
	Friends	4	2.6
	No One	97	63.8
Aggression During the Pregnancy			
	No	77	50.7
	Yes	75	49.3
Aggression Before the Pregnancy			
	No	61	39.9
	Yes	92	60.1
Care Providers to the Baby			
	Mother	148	95.5
	Father	2	1.3
	Maternal Grandmother	1	0.6
	Paternal Grandmother	1	0.6
	Other Relatives	2	1.3
	Mother and Father	1	0.6

Son Remoteness			
	No	138	89.0
	Yes	17	11.0
Psychiatrists Diseases			
	No	99	63.9
	Yes	56	36.1
Current Medication			
	Anxiolytics	9	17.3
	Antidepressants	13	25.0
	Anxiolytics and Antidepressants	13	25.0
	Others	17	32.7
Smoke			
	No	76	49.0
	Yes	79	51.0
Alcohol			
	No	102	75.6
	Yes	33	24.4
Substances Consume			
	No	153	99.4
	Yes	1	0.6
Types of Insomnia			
	Initial	27	24.1
	Maintenance	28	25.0
	Final	4	3.6

Initial e Maintenance	52	36.4

Measures

Sociodemographic Questionnaire. This measure was elaborated and used to collect information about sociodemographic indicators of the woman, including information relating to civil status, qualifications, position with regard to employment, as well as the context in which the woman was (shelter home or cohabitation with the aggressor). Also included are other variables of the woman, including medical history, presence or absence of substance use, alcohol and medication as well as a history of violence.

Adverse Childhood Experiences Study Questionnaire – ACE (Felitti & Anda, 1998; Translated by Silva & Maia, 2007; adapted by Pinto & Maia, 2013). Self-report questionnaire that assesses to experiences of adversity. Adverse experiences are divided into two categories: experiences where the child was a direct victim and experiences integrated in a dysfunctional family background. The participant indicate how often the experience occurred in each question, being rated from 1 (Completely disagree) to 6 (Completely agree). Also exists questions where has as option the score of NA (Not applicable). The questions are related to the mother and father of the subject (Pinto, 2013).

Parenting Sense of Competence Scale – PSOC (Johnston & Mash, 1989; [original version of Guibaud-Wallston & Wandersman, 1978]; Portuguese translation of Seabra-Santos & Pimentel, 2007). Scale compost by 17-item self-report, that assess the parental self-esteem of parents of children with 4 to 9 years old. These items are rated by a 6-Likert scale that varies between 1= "Strongly agree" and 6= "Strongly disagree". The scale has two dimensions, the satisfaction and efficacy, and the total score of all the items. Having in consideration how the scale has projected, then is presented higher scores, less satisfaction and efficacy exist. The subscales of satisfaction and efficacy, as well as the full scale, have good levels of internal consistency (Seabra-Santos et al., 2015).

Social Provisions Scale (Cutrona & Russell, 1987; Portuguese translation of Moreira & Canaipa, 2007). Scale consisted by 24 items and rated through a 4-Likert scale ("Strongly disagreed" (1) to "Strongly agreed" (4)). Assess the perceived social support. It is based on a theory model that affirms that social support consists on a set of resources that individuals need when they face against stressful situations. These resources are divided in six different types: counseling, reliable alliance, attachment, social integration, reassurance of worth and

opportunity to care provision. This questionnaire also permits to assess these provisions separate and also the perceived support globally and two intermediate dimensions of intimate support and casual support. The scale has adequate levels of reliability and validity (Moreira & Canaipa, 2007).

Brief Symptom Inventory – BSI (Derogatis 1993; Canavarro, 1995). Inventory constructed as a brief-version of the SCL-90-R (Derogatis, 1977). Consists by 53-item self-report questions that are rated through a 4-Likert scale ("Not at all" (0) to "Extremely" (4)). These questions are intended to the subject answer relatively with the degree of which problem that affected him in the last week. The scale evaluates nine psychopathology dimensions (somatization, obsessive, compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism) and three global index (General Index of Symptoms, Total of Positive Symptoms, Index of Positive Symptoms). The scale has good psychometric characteristics (Pinto, 2013).

Evaluation of Post-Traumatic Stress Questionnaire – PCL-C (Weathers, Litz, Herman, Huska, & Keane, 1994; Portuguese version adapted by Marcelino & Gonçalves, 2012)**.** Scale compost by 17-item self-report checklist of PTSD symptoms based closely on the DSM-VI-TR criteria (criteria B – re-experience; criteria C – avoidance; criteria D – hyper-activation). The items are rated in a scale of 1 to 5 (1= not at all; to 5= extremely), which permits to observe the degree that the subject feels bothered by a specific symptom after a certain event. The version used is PLC-C (a general civilian version) that isn't limited to a single and specific situation, having questions that are related to a stressful experience from the past. This scale showed adequate levels of reliability and validity (Marcelino & Gonçalves, 2012).

The Revised Conflict Tactics Scales – CTS2 (Straus, Hamby, Boney-McCoy, & Sugarman, 1996; Portuguese version by Paiva & Figueiredo, 2006). Scale that evaluates the way that the couples resolve their conflicts through negotiation strategies or abuse: physical abuse without sequels, physical abuse with sequels, psychological aggression and sexual coercion. It is consisted by 39 items which are grouped in pars of brief questions destined to the participants and the partner, having a total of 78 questions. This permits to obtain information about the two elements of the couple and determined how much the resolution strategies are determine by each other even though one of them is not directly evaluated. Also permits to count the number the occurrences of the last year by the participant and the partner by including 8 categories, in which the first 6 destined to determine the prevalence and

chronicity in the last year [(1) one time in the last year, (2) two time in the last year, (3) 3-5 times in the last year, (4) 6-10 times in the last year, (5) 11-20 times in the last year, (6) more than 20 times in the last year] and the other ones are destined to determine the global prevalence [(7) not in the last year but occurred before] and the inexistence of this type of abuse [(8) never happened]. The scale has adequate levels of reliability and validity (Alexandra & Figueiredo, 2006).

Procedure

Participants residing at home were contacted by the researchers, in collaboration with APAV, or other institutions for assistance to victims of domestic violence, by phone or letter, and were invited to participate in this study. This participation was taken place, where possible, at the premises of these institutions and the time was arranged between the technical institutions and participants. In the case of women living in shelters, researchers went to these houses to request authorization for collecting the data. Their participation was taken place in the shelter homes and the time was arranged between experts and participants.

Self-report questionnaires were filled in APAV facilities, shelter homes, or other institutions, in a room that allowed protection of participant's privacy, only accompanied by a member of the research team to provide assistance in case of need. Efforts were made by the researcher in charge that the gathering of information was done in as little time as possible, and that the collection was made in one single attempt.

Collection of Cortisol

There are three methods of collection of cortisol, been one accomplished by the samples collection of blood (plasmatic cortisol), other through the urine and another realized through the saliva collection (salivary cortisol). The method of collection of this study is the salivary, been the one that is not intrusive and the most simple and easy to perform. The participant had to simply put the cotton in the mouth and absorb some saliva, conditioning and store in appropriate container, in the refrigerator. Samples were taken immediately after they awake and 30 minutes later, on the same day. The first saliva sample was collected as soon as the participants awakened up but still lying. Then given an indication not to brush their teeth, or eat or drink anything other than water, between the first and second collection of saliva. The sample collection was arranged between the researcher and the participants, if possible, the same day that the remaining participation was performed (i.e., questionnaires to fill in). Participants were remembered the night before, via SMS, to carry out the tasks in the

morning.

Informed Consent

Information was provided about the study objectives, methods and procedures to the women. If they accepted to voluntarily participate in the study, they were further informed of their rights, nature of the study and the collected data, confidentiality and voluntary nature of participation through an informed consent signed by the participants and researcher, and delivered prior to completing the questionnaires. All personal data was encoded to identify the participants in the second collection, but without their identity revealed, thus making it anonymous and confidential all identifying information, in accordance with the Protection Act of Personal Data n. 67/98 of 26 October and Resolution No. 227/2007.

To every woman who agreed to participate in the study, a voucher was offered, courtesy on the part of the research team, which the participant could use in local shops to choose from, a procedure that the scoreboard of FCT Science Team did not object, as is usual in several international investigations.

Analyses

Statistics analyses were made with the use of Statistical Package for the Social Sciences - (SPSS) - version 21.0. To the power analyses Post-hoc was used the GPower 3.1 (Faul, Erdfelder, Buchner, & Lang, 2009). We used descriptive statistics to characterize the study variables, as the dependent variables (cortisol, total score of psychopathology symptoms and PTSD symptoms) and independent variables (social support, childhood adversities and perception of parenting competence). Pearson correlation analyses and Point-biserial correlation coefficient were used to establish correlations among all study variables. Finally, we used linear hierarchical regression analyses to verify the predictive power of the different predictors, as social support, childhood adversity and perception of parental competence, being the effects adjusted by three variables (age, setting and chronicity victimization), to the outcome variables, psychopathology symptoms, total score of PTSD. The variables inserted in these regression analyses were the ones that were previously significant correlated with the outcome variables in the analyses previously made. Additionally, we used a logistic regression analyses with cortisol as a dichotomy variable (CAR positive vs. negative).

Results

In terms of dynamic state measure of cortisol output, the Cortisol Awakening Response (CAR) (Wust, Federenko, Hellhammer, & Kirschbaum, 2000; Wust, Hellhammer,

Federenko, Schommer, & Kirschbaum, 2000), which is the absolute increase in cortisol within the post-awakening period, we verified that in 59 (40.4%) women, the cortisol decreased between the first sample collection, immediately after awakening; in 5 (3.4%) women, the cortisol released was the same for both moments, immediately after awakening and 30 minutes after awakening; in 26 (17.8%) women, the cortisol increased within the first 30 minutes after awakening to the 2.5 nmol/l level; and in 56 (38.4%) women, the cortisol response was defined as an increase of salivary cortisol levels of at least 2.5 nmol/l above individual baseline (Weitzman et al., 1971).

Regarding the symptoms of psychopathology, we verified that 144 (94.1%) of the participants showed to have psychopathology. In terms of PTSD, 71.2% ($n = 111$) of the battered women demonstrated to have positive diagnostic to post-traumatic stress disorder.

Considering the social support, through the output we conclude that in the guidance scale the women experienced between 4 and 16 this type of social support (M = 11.17, DP = 2.34), reliable alliance between 4 and 16 (M = 11.57, DP = 2.41), reassurance of worth between 7 and 16 (M = 10.83, DP = 2.06), opportunity for nurturance between 7 and 16 (M = 12.11, DP = 2.02), attachment between 6 and 16 (M = 11.05, DP = 1.85), social integration between 7 and 16 (M = 10.63, DP = 2.15), intimate support between 27 and 64 (M = 45.90, DP = 7.49) and casual support between 44 and 94 (M = 67.36, DP = 10.77).

Relatively to the adversities that the woman victim of domestic violence could experience in her childhood by her caregivers, we verified that 47.1% ($n = 73$) suffered emotional abuse, 55.5% ($n = 86$) physical abuse, 37.7% ($n = 58$) sexual abuse, 60.0% ($n = 93$) emotional negligence, 61.9% ($n = 96$) physical negligence, 21.9% ($n = 34$) had divorced parents, 55.5% ($n = 86$) were exposure to domestic violence, 62.6% ($n = 97$) had one or more relatives who presented substance abuse, 33.5% ($n = 52$) had one or more relatives with mental disturbance or that committed suicide and 14.2% ($n = 22$) had one or more relatives in the prison. Likewise, in the total of women who suffered the adversities referred in their childhood, we verified that the major percentage obtained remitted to five types of suffered adversities, i. e, 27 (17.5%) of the women suffered five different adversities during their childhood. The minor percentage referred to ten types of adversities, equivalent to one woman (0.6%).

In terms of perception of parenting competence, according with the nature of responses in a Likert scale (1 = strongly agree; 2 = agree; 3 = slightly agree; 4 = ; 5 = slightly disagree; 6 = strongly disagree), the scale of Efficacy demonstrated responses from 1.00 to 4.71 (M = 2.34, DP = .06), the Satisfaction from 1.11 to 5.22 (M = 3.71, DP = .93) and the Total Scale from 22.00 to 71.00 (M = 49.80, DP = 10.70).

Correlations among Study Measures

We performed correlation analyses among the study measures. In terms of correlation between psychopathology symptoms and childhood adversities, we verified that Total BSI was significant correlated with the emotional abuse, $r = .35$, $p < .01$, physical abuse, $r = .26$, $p < .01$, sexual abuse, $r = .28$, $p < .01$, emotional negligence, $r = .16$, $p < .05$, physical negligence, $r = .35$, $p < .01$, substance abuse, $r = .28$, $p < .01$, and general index of adversity, $r = .55$, $p < .01$. Regarding the remaining psychopathology dimensions and their correlations, it is possible to see them in the correspondent table (Table 2).

In terms of correlation between psychopathology symptoms and perception of parenting competence, we verified that the Total BSI was significant correlated with the total scale, $r = .46$, $p < .01$, and satisfaction, $r = .52$, $p < .01$. The correlations of the remaining psychopathology dimensions are exposed in the correspondent table (Table 3).

Regarding the correlation between psychopathology symptoms and social support, we Total BSI was significant correlated with the subscales counseling, $r = -.32$, $p < .01$, reliable alliance, $r = -.34$, $p < .01$, reassurance of worth, $r = -.52$, $p < .01$, opportunity for nurturance, $r = -.36$, $p < .01$, attachment, $r = -.44$, $p < .01$, social integration, $r = -.38$, $p < .01$, intimate support, $r = -.41$, $p < .01$, casual support, $r = -.48$, $p < .01$, and total scale, $r = -.46$, $p < .01$. The correlations between the social support and the other psychopathology dimensions are available in the corresponding table (Table 4).

Concerning the correlation between psychopathology symptoms and chronicity victimization, we verified that Total BSI has significant results with the physical abuse without sequels scales, $r = .40$, $p < .01$, physical abuse with sequels, $r = .33$, $p < .01$, psychological aggression, $r = .37$, $p < .01$, and sexual coercion, $r = .24$, $p < .01$. In terms of the remaining psychopathology dimensions and their correlations with the chronicity victimization, they are exposed in the corresponding table (Table 5).

Table 2

Pearson correlations between psychopathology variable and childhood adversities

Psychopathology	Childhood Adversities										
	EA	PA	SA	EN	PN	D/S	EDV	SAb	M/AP	FP	GIA
Total BSI	.35**	.26**	.28**	.16*	.35**	.01	.11	.28**	-.08	-.08	.55**
Depression	.29**	.26**	.23**	.21**	.30**	.12	.17*	.21**	-.03	-.13	.53**
Anxiety	.33**	.25**	.29**	.09	.28**	-.04	.15	.22**	-.04	-.04	.56**
Somatization	.22**	.11	.08	.03	.17*	-.00	-.01	.19*	-.03	.01	.22*
Obsessive-compulsive	.27**	.11	.24**	.07	.27**	-.01	.00	.17*	-.07	-.11	.44**
Interpersonal Sensibility	.26**	.23**	.18*	.14	.26**	.01	.15	.23**	-.12	-.07	.43**
Hostility	.36**	.22**	.20*	.18*	.34**	.04	.13	.28**	-.11	-.11	.47**
Phobic Anxiety	.22**	.11	.21**	.04	.16*	-.07	-.04	.14	-.04	-.03	.27**
Paranoid Ideation	.34**	.40**	.25**	.21*	.36**	-.00	.15	.32**	-.05	-.04	.44**
Psychoticism	.21**	.21**	.26**	.14	.29**	-.02	.12	.29**	-.11	-.10	.50**

Note: BSI = Brief Symptom Inventory; EA – Emotional Abuse; PA – Physical Abuse; SA – Sexual Abuse; EN – Emotional Negligence; PN – Physical Negligence; D/S – Divorce/Separation; EDV – Exposure to Domestic Violence; SAb – Substance Abuse; M/SP – Mental or Suicidal Perturbation; FP – Familiar Prison; GIA – General Index of Adversity; *p < .05; **p < .01

Table 3

Pearson correlations between psychopathology variable and perception of parenting competence

Psychopathology	Perception of Parenting Competence		
	Total Scale	Satisfaction	Efficacy
Total BSI	.46**	.52**	.13
Depression	.50**	.53**	.22**
Anxiety	.41**	.45**	.12
Somatization	.10	.17*	-.08
Obsessive-compulsive	.41**	.46**	.12
Interpersonal Sensibility	.48**	.54**	.14
Hostility	.48**	.53**	.16*
Phobic Anxiety	.22**	.24**	.09
Paranoid Ideation	.32**	.37**	.09
Psychoticism	.43**	.49**	.10

Note: BSI = Brief Symptom Inventory; *p* < .05;**p* < .01

Table 4

Correlations between the psychopathology variable and social support

Psychopathology	Social Support								
	G	RA	RW	ON	A	SI	IS	CS	TS
Total BSI	-.32**	-.34**	-.52**	-.36**	-.44**	-.38**	-.41**	-.48**	-.46**
Depression	-.37**	-.35**	-.58**	-.41**	-.43**	-.41**	-.44**	-.53**	-.50**
Anxiety	-.30**	-.34**	-.43**	-.32**	-.42**	-.34**	-.39**	-.42**	-.42**
Somatization	-.08	-.07	-.12	-.01	-.15	-.09	-.08	-.11	-.10
Obsessive-compulsive	-.21**	-.21**	-.39**	-.32**	-.36**	-.28**	-.31**	-.36**	-.34**
Interpersonal Sensibility	-.33**	-.35**	-.55**	-.34**	-.45**	-.38**	-.42**	-.50**	-.47**
Hostility	-.38**	-.36**	-.47**	-.40**	-.41**	-.38**	-.44**	-.46**	-.47**
Phobic Anxiety	-.08	-.14	-.28**	-.23**	-.25**	-.20*	-.19*	-.26**	-.23**
Paranoid Ideation	-.26**	-.30**	-.50**	-.20*	-.28**	-.25**	-.30**	-.40**	-.35**
Psychoticism	-.25**	-.28**	-.45**	-.34**	-.41**	-.30**	-.36**	-.40**	-.40**

Note: BSI = Brief Symptom Inventory; G – Guidance Scale; RA – Reliable Alliance Scale; RW – Reassurance of Worth Scale; ON – Opportunity for Nurturance Scale; A – Attachment Scale; SI – Social Integration Scale; IS – Intimate Support Scale; CS – Casual Support Scale; TS – Total Scale; *p < .05; **p < .01

Table 5

Pearson correlations between psychopathology variable and victimization chronicity

Psychopathology	Victimization Chronicity				
	N	PAWoutS	PAWS	PA	SC
Total BSI	.00	.40**	.33**	.37**	.24**
Depression	.01	.36**	.34**	.37**	.19*
Anxiety	-.04	.36**	.30**	.35**	.23**
Somatization	.00	.14	.09	.12	.11
Obsessive-compulsive	.05	.29**	.25**	.26**	.18*
Interpersonal Sensibility	-.03	.37**	.34**	.34**	.19*
Hostility	.06	.36**	.28**	.33**	.19*
Phobic Anxiety	.03	.27**	.18*	.23**	.16*
Paranoid Ideation	-.10	.31**	.32**	.25**	.25**
Psychoticism	-.05	.40**	.34**	.37**	.28**

Note: BSI = Brief Symptom Inventory; N – Negotiation; PAWoutS – Physical Abuse Without Sequels; PAWS – Physical Abuse With Sequels; PA – Psychological Aggression; SC – Sexual Coercion; *$p < .05$; **$p < .01$

In terms of correlation between PTSD symptoms and childhood adversities, we verified that PTSD was significant correlated with the emotional abuse, $r = .28$, $p < .01$, physical abuse, $r = .21$, $p < .01$, sexual abuse, $r = .22$, $p < .01$, physical negligence, $r = .20$, $p < .05$, exposure to domestic violence, $r = .19$, $p < .05$, substance abuse, $r = .24$, $p < .01$, and general index of adversity, $r = .46$, $p < .01$ (Table 6).

Table 6

Pearson correlations between PTSD and childhood adversity

	Childhood Adversity										
	EA	PA	SA	EN	PN	D/S	EDV	SAb	M/SP	FP	GIA
PTSD	.28**	.21**	.22**	.12	.20*	-.01	.19*	.24**	.01	-.02	.46**

Note: PTSD = Post-traumatic Stress Disorder; EA – Emotional Abuse; PA – Physical Abuse; SA – Sexual Abuse; EN – Emotional Negligence; PN – Physical Negligence; D/S – Divorce/Separation; EDV – Exposure to Domestic Violence; SAb – Substance Abuse; M/SP – Mental or Suicidal Perturbation; FP – Familiar Prison; GIA – General Index of Adversity; **$p < .01$

Regarding the correlation between PTSD symptoms and perception of parenting competence, we verified the existence of significant correlations in the total scale, $r = .47$, $p < .01$, satisfaction, $r = .49$, $p < .01$, and efficacy, $r = .20$, $p < .05$ (Table 7).

Table 7

Pearson correlations between PTSD variable and perception of parenting competence

	Perception of Parenting Competence		
	Total scale	Satisfaction	Efficacy
PTSD	.47**	.49**	.20*

Note: PTSD = Post-traumatic Stress Disorder; *$p < .05$; **$p < .01$

In terms of correlation between PTSD symptoms and social support, we verified significant results with the subscales counseling, $r = -.27$, $p < .01$, reliable alliance, $r = -.34$, $p < .01$, reassurance of worth, $r = -.52$, $p < .01$, opportunity for nurturance, $r = -.38$, $p < .01$, attachment, $r = -.43$, $p < .01$, social integration, $r = -.38$, $p < .01$, intimate support, $r = -.41$, $p < .01$, casual support, $r = -.49$, $p < .01$, and total scale, $r = -.46$, $p < .01$ (Table 8).

Table 8

Pearson correlations between PTSD and social support

	Social Support								
	G	RA	RW	ON	A	SI	IS	CS	TS
PTSD	-.27**	-.34**	-.52**	-.38**	-.43**	-.38**	-.41**	-.49**	-.46**

Note: PTSD = Post-traumatic Stress Disorder; G – Guidance Scale; RA – Reliable Alliance Scale; RW – Reassurance of Worth Scale; ON – Opportunity for Nurturance Scale; A – Attachment Scale; SI – Social Integration Scale; IS – Intimate Support Scale; CS – Casual Support Scale; TS – Total Scale; **$p < .01$

Considering the correlation between PTSD symptoms and chronicity victimization, we verified significant results with the physical abuse without sequels scale, $r = .41$, $p < .01$, physical abuse with sequels, $r = .38$, $p < .01$, psychological aggression, $r = .42$, $p < .01$, and sexual coercion, $r = .29$, $p < .05$ (Table 9).

Table 9

Pearson correlations between PTSD variable and victimization chronicity

	Victimization Chronicity				
	N	PAWoutS	PAWS	PA	SC
PTSD	-.08	.41**	.38**	.42**	.29**

Note: PTSD = Post-traumatic Stress Disorder; N – Negotiation; PAWoutS – Physical Abuse Without Sequels; PAWS – Physical Abuse With Sequels; PA – Psychological Aggression; SC – Sexual Coercion; **$p < .01$

Regarding the correlation between cortisol awakening response (CAR) and childhood adversities, only emotional abuse was significant correlated, $r = -.18$, $p < .05$ (Table 10).

Table 10

Correlations biserial point between cortisol variable and childhood adversity

	Childhood Adversity										
	EA	PA	SA	EN	PN	D/S	EDV	SAb	M/SP	FP	GIA
Cortisol	-.18*	-.02	-.04	-.03	-.06	-.03	-.09	-.03	.04	-.04	-.09

Note: EA – Emotional Abuse; PA – Physical Abuse; SA – Sexual Abuse; EN – Emotional Negligence; PN – Physical Negligence; D/S – Divorce/Separation; EDV – Exposure to Domestic Violence; SAb – Substance Abuse; M/SP – Mental or Suicidal Perturbation; FP – Familiar Prison; GIA – General Index of Adversity; *$p < .05$

In terms of the correlation between CAR and perception of parenting competence, we did not verified significant results between the variables (Table 11).

Table 11

Correlations biserial point between cortisol variable and perception of parenting competence

	Perception of Parenting Competence		
	Total Scale	Satisfaction	Efficacy
Cortisol	-.15	-.14	-.09

Concerning the correlation between CAR and social support, we verified that reassurance of worth was significant correlated, $r = .18$, $p < .05$ (Table 12).

Table 12

Correlations biserial point between cortisol variable and social support

	Social Support								
	G	RA	RW	ON	A	SI	IS	CS	TS
Cortisol	.12	.15	.18*	.12	.16	.07	.16	.13	.16

Note: G – Guidance Scale; RA – Reliable Alliance Scale; RW – Reassurance of Worth Scale; ON – Opportunity for Nurturance Scale; A – Attachment Scale; SI – Social Integration Scale; IS – Intimate Support Scale; CS – Casual Support Scale; TS – Total Scale; *$p < .05$

Regarding the correlation between CAR and chronicity victimization, we verified that physical abuse without sequels, $r = -.18$, $p < .05$, and psychological aggression, $r = -.18$, $p < .0$ (Table 13).

Table 13

Correlations biserial point between cortisol variable and victimization chronicity

	Victimization Chronicity				
	N	PAWoutS	PAWS	PA	SC
Cortisol	.03	-.18*	-.14	-.18*	-.09

Note: N – Negotiation; PAWoutS – Physical Abuse Without Sequels; PAWS – Physical Abuse With Sequels; PA – Psychological Aggression; SC – Sexual Coercion; *$p < .05$

Regressions among Study Measures

We performed regressions analyses among the study measures. In the hierarchical multiple regression analysis of the dependent variable Total BSI, the first block, including age and setting, significantly contributed to the regression model, $F(2, 153) = 3.76$, $p = .03$, accounting for 4.7% of the variance. The total score of emotional abuse, physical abuse, sexual abuse, emotional negligence, physical negligence and substances abuse were entered in the second step, and the model was statistically significant, $F(8, 147) = 6.44$, $p = .00$, Cohen's $f^2 = .27$, accounting for 25.9% of the variance. Adding the physical abuse without

sequels, physical abuse with sequels, psychological aggression and sexual coercion as the third step, the model remained significant, $F(12, 143) = 5.88$, $p = .00$, Cohen's $f^2 = .08$, contributing an additional 7.1% to the explained variance. Counselling scale, reliable alliance scale, reassurance of worth scale, opportunity for nurturance scale, attachment scale, social integration scale, intimate support scale and casual support scale were entered in the fourth step, and the model was significant, $F(18, 137) = 5.93$, $p = .00$, Cohen's $f^2 = .12$, contributing an additional 10.8% to the explained variance. At this point, age, emotional abuse, physical negligence and reassurance of worth scale were significant correlates of Total BSI. Finally, the satisfaction was added at the fifth step, and the model remained significant, $F(19, 136) = 6.66$, $p = .00$, Cohen's $f^2 = .05$, accounting for 48.2% of the variance. In the final model, sexual abuse, reassurance of worth scale and satisfaction were significant (Table 14).

Table 14

Linear Regression of Correlated Predictors of the Dependent Variable Total BSI

Model[a]	B	β	t
Step 1: $R^2 = 4.7^*$; $\Delta R^2 = 4.7^*$			
Age	-.02	-.22	-2.72**
Setting	.09	.06	.75
Step 2: $\Delta R^2 = 21.2^{**}$			
Emotional Abuse	.28	.19	2.03*
Physical Abuse	.022	.02	.16
Sexual Abuse	.25	.17	2.26*
Emotional Negligence	-.01	-.01	-.10
Physical Negligence	.34	.23	2.91**
Substance Abuse	.133	.09	1.15
Step 3: $\Delta R^2 = 7.1^{**}$			
Physical Abuse Without Sequels	.00	.21	1.37
Physical Abuse With Sequels	.00	.03	.25

Psychological Aggression	.00	.13	1.17
Sexual Coercion	-.00	-.08	-.76

Step 4: $\Delta R^2 = 10.8**$

Guidance	.02	.06	.44
Reliable Alliance	.02	.07	.56
Reassurance of Worth	-.12	-.34	-3.18**
Opportunity for Nurturance	-.01	-.02	-.23
Attachment	-.07	-.17	-1.50
Social Integration	.00	.00	.01

Step 5: $R^2 = 48.2**$; $\Delta R^2 = 4.4**$

Constant	1.70		2.44*
Age	-.01	-.13	-1.97
Setting	.10	.07	.94
Emotional Abuse	.18	.13	1.42
Physical Abuse	.09	.06	.67
Sexual Abuse	.23	.16	2.26*
Emotional Negligence	-.05	-.04	-.47
Physical Negligence	.13	.09	1.24
Substance Abuse	-.01	-.01	-.11
Physical Abuse Without Sequels	.00	.07	.45
Physical Abuse With Sequels	.00	.04	.32
Psychological Aggression	.00	.04	.40
Sexual Coercion	-.00	-.05	-.53
Guidance	.01	.04	.36

Reliable Alliance	.03	.09	.74
Reassurance of Worth	-.09	-.27	-2.60**
Opportunity for Nurturance	.01	.02	.23
Attachment	-.05	-.13	-1.14
Social Integration	.00	.01	.11
Satisfaction[b]	.02	.28	3.40**

Note.: [a]Only Steps 1 and 5 show the complete model for that step. Other steps show only new variables; [b] Parental satisfaction: higher scores means less satisfaction; $*p < 0.5$. $**p < .01$, two-tailed

In the hierarchical multiple regression analysis of the dependent variable PTSD, the first block, including age and setting, did not significantly contributed to the regression model, $F(2, 153) = 1.878$, $p = .16$, accounting for 2.4% of the variance. The total score of emotional abuse, physical abuse, sexual abuse, physical negligence, exposure to domestic violence and substances abuse were entered in the second step, and the model was statistically significant, $F(8, 147) = 3.11$, $p = .003$, Cohen's $f^2 = .14$, accounting for 14.5% of the variance. Adding the physical abuse without sequels, physical abuse with sequels, psychological aggression and sexual coercion as the third step, the model remained significant, $F(12, 143) = 4.28$, $p = .00$, Cohen's $f^2 = .14$, contributing an additional 11.9% to the explained variance. Counselling scale, reliable alliance scale, reassurance of worth scale, opportunity for nurturance scale, attachment scale, social integration scale, intimate support scale and casual support scale were entered in the fourth step, and the model was significant, $F(18, 137) = 5.49$, $p = .00$, Cohen's $f^2 = .18$, contributing an additional 15.5% to the explained variance. At this point, psychological aggression and reassurance of worth scale were significant correlates of PTSD. Finally, the satisfaction and efficacy were added at the fifth step, and the model remained significant, $F(21, 135) = 5.44$, $p = .00$, Cohen's $f^2 = .03$, accounting for 44.6% of the variance. In the final model, reassurance of worth scale and satisfaction were significant (Table 15).

Table 15

Linear Regression of Correlated Predictors of the Dependent Variable PTSD

Model[a]	B	β	t
Step 1: $R^2 = 2.4$; $\Delta R^2 = 2.4$			
Age	-.08	-.13	-1.60
Setting	-.61	-.07	-.85
Step 2: $\Delta R^2 = 12.1$**			
Emotional Abuse	1.41	.16	1.54
Physical Abuse	.21	.02	.23
Sexual Abuse	1.09	.12	1.45
Physical Negligence	.47	.05	.59
Exposure to Domestic Violence	.80	.09	.96
Substance Abuse	.92	.10	1.10
Step 3: $\Delta R^2 = 11.9$**			
Physical Abuse Without Sequels	.01	.16	.99
Physical Abuse With Sequels	.01	.10	.77
Psychological Aggression	.02	.24	2.02*
Sexual Coercion	-.01	-.08	-.73
Step 4: $\Delta R^2 = 15.5$**			
Guidance	.37	.20	1.51
Reliable Alliance	-.04	-.02	-.17
Reassurance of Worth	-.87	-.40	-3.69**
Opportunity for Nurturance	-.25	-.11	-1.20
Attachment	-.33	-.13	-1.17
Social Integration	-.01	-.00	-.04

Step 5: $R^2 = 44.6^*$; $\Delta R^2 = 2.7^*$

Constant	16.52		3.56**
Age	-.03	-.06	-.78
Setting	-.57	-.06	-.84
Emotional Abuse	1.00	.11	1.20
Physical Abuse	.32	.04	.38
Sexual Abuse	.84	.09	1.28
Physical Negligence	-1.10	-.12	-1.57
Exposure to Domestic Violence	.19	.02	.25
Substance Abuse	.13	.01	.17
Physical Abuse Without Sequels	.00	.02	.11
Physical Abuse With Sequels	.02	.11	.88
Psychological Aggression	.01	.10	.93
Sexual Coercion	-.00	-.04	-.46
Guidance	.35	.18	1.44
Reliable Alliance	-.01	-.00	-.04
Reassurance of Worth	-.76	-.35	-3.20**
Opportunity for Nurturance	-.18	-.08	-.84
Attachment	-.26	-.11	-.94
Social Integration	.00	.00	.02
Satisfaction[b]	.12	.22	2.56*
Efficacy[c]	-.02	-.02	-1.07

Note.: [a]Only Steps 1 and 5 show the complete model for that step. Other steps show only new variables; [b] Parental satisfaction: higher scores means less satisfaction; [c] Parental efficacy: higher scores means less efficacy; *$p < 0.5$. **$p < .01$, two-tailed

Regarding the logistic regression analysis of the dependent variable cortisol, the social support scales that were significantly associated with the belonging to the cortisol were included in the logistic regression analyses, such as emotional abuse (r = -.18, $p < .05$), physical abuse without sequels (r = -.18, $p < .05$), psychological aggression (r = -.18, $p < .05$) and reassurance of worth (r = .18, $p < .05$). These categories were used as predictor variables in the total sample of battered women, after adjusting for age, setting and chronicity victimization. The full model was significantly reliable (χ^2 = 12.961, p = .04) (Table 16).

Table 16

Logistic Regression of Correlated Predictors of Cortisol with CTS

Model[a]	β	SE	95% CI	OR
Step 1: R^2 = .013 (Cox & Snell), .017 (Nagelkerke)				
Age	.01	.02	[.96, 1.05]	1.01
Setting	-.46	.34	[.32, 1.24]	.63
Step 2: R^2 = .051 (Cox & Snell), .068 (Nagelkerke)				
Emotional Abuse	-.86	.36	[.21, .86]	.43*
Step 3: R^2 = .082 (Cox & Snell), .111 (Nagelkerke)				
Physical Abuse Without Sequels	-.00	.00	[.99, 1.00]	1.00
Psychological Aggression	-.00	.01	[.99, 1.01]	1.00
Step 5: R^2 = .086 (Cox & Snell), .115 (Nagelkerke)				
Age	-.01	.03	[.94, 1.04]	.99
Setting	-.66	.39	[.24, 1.12]	.52
Emotional Abuse	-.65	.38	[.25, 1.09]	.52
Physical Abuse Without Sequels	-.00	.00	[.99, 1.00]	1.00
Psychological Aggression	-.00	.01	[.99, 1.01]	1.00
Reassurance of Worth	.07	.10	[.88, 1.31]	1.07

Note.: [a]Only Steps 1 and 5 show the complete model for that step. Other steps show only new variables; *$p < 0.5$. **$p < .01$, two-tailed.

Discussion

The objective of this study was to observe which variables lead to the adjustment of battered women in the context of IPV. This adjustment was constituted by cortisol, psychopathology symptoms and provable PTSD. Therefore, was verified if these outcome variables were influenced by the social support, childhood adversity and perception of parenting competence. That was possible through the hypotheses established to the study: better adjustment is expected when there is more social support; exposure to childhood adversity leads to lower adjustment; and better adjustment is expected when greater perception of parental competence exists.

The hypothesis "Better adjustment is expected when there is more social support" was partial confirmed. Regarding the adjustment, the only variables influenced were the psychopathology and PTSD. Therefore, social support was a negative correlate of psychopathology and PTSD. So, more social support leads to lower levels of psychopathology and PTSD. These results regarding psychopathology and PTSD are consistent with literature that refers that the social support is a protective factor towards violence (e.g. APA, 2000; Borges & Dell'Aglio, 2008; Varela & Leal, 2008; Fonseca, 2010) regarding the health problems like psychopathology and PTSD. In fact, social support has a very important role in individuals that are in an adverse context (Maia & Seabra, 2007), in this case in a context of IPV. Is has been characterized as a protector towards stressful events, as intimate violence (Borges & Dell'Aglio, 2008). Previous studies have shown that the quality and the strength of social support protect women's functioning, making possible to observe lower levels of psychopathology when there is more social support (e.g., Levendosky & Graham-Bermann, 2001). Likewise, a study from Cordeiro, Claudino and Arriaga (2006) demonstrated that individuals, who have low social support, consequently have higher levels of psychopathology. Lower levels of social support can lead also to PTSD (Borges & Dell'Aglio, 2008) as well. Studies of Andrykowski and Cordova (1998) and Widows, Jacobsen, and Fields (2000), showed that social support has an influence in the development of PTSD. Thus, it is possible to observe that Buffering Model is a good model to explain the dada obtain and the literature found. Is very clear the important role that the social support was in different aspects in the context of IPV. Buffering Model considers that the social support has a buffer effect towards the negative outcomes that can develop from stressful events in the life of the individual (Miranda, 2011), like psychopathology and PTSD (e.g.

Borges & Dell'Aglio, 2008; Fonseca, 2010). As it has been shown with the dada and the literature the social support is, in fact, a protector factor that brings positive benefits has a better mental health and physiological responses (Cohen & Wills, 1985), i.e. social support leads to an decrease of the symptomology of psychology and PTSD (e.g. Levendosky & Graham-Bermann, 2001; Borges & Dell'Aglio, 2008). Equally the stress model Main Effect Model goes in the same conception of explaining the dada obtain. Even though the social support is crucial when the individuals are experiencing stressful situations, the existence of a social network throughout the development is a benefit in stressful or normative situations. The social support is always an important part that works as a protective factor to the adaptive development by permitting a well-being, decrease of possible negative events and consequently prevention of physical and psychological consequences of these negative events (Cohen & Wills, 1985).

On the other hand, regarding the previous hypothesis, we did not find any relation between cortisol awakening response and social support, in opposition to some previous studies who found a relation between social support, more specifically social relations, and cortisol in stressful environments, as IPV (Matias & Freire, 2009). Similarly, other studies demonstrated that higher levels of cortisol are associated to low social support (Moreno et al., 2012). Linking the dada from the literature and the results obtain in this study, it can be considered that even though there is no association between the social support and cortisol, the women have different responses towards stressful environments, i.e., their levels of cortisol can decrease or increase.

The hypothesis "Exposure to childhood adversity leads to lower adjustment" was partially confirmed. Only the psychopathology symptoms were influenced by the exposure to adversity in the childhood. We verified an existence of a positive correlation between the psychopathology symptoms and childhood adversity, which means that women exposure to childhood adversity have higher risk for present more psychopathology symptoms than women not exposed. The results about the relation between psychopathology and childhood adversity is consistent with the literature that demonstrate that adversity in childhood can lead to later psychopathology (e. g. Mello et al., 2003; Maia et al., 2007; de Souza et al., 2008; Wong et al., 2012), and a higher risk for more negative outcomes among women victims of partner violence (de Souza et al., 2008). The abuse and neglect that these women suffered in their childhood can increment the risk for more psychopathology symptoms due to the low

self-esteem build over the years, fear and responses towards the current abuse as an adult (Wong et al., 2012). Likewise, the presence of psychopathology is more visible in adult individuals that had adversity in their childhood (Maia et al., 2007). In fact, several studies that have been conducted by Ace Study (e. g. Dube et al., 2001; Edwards et al., 2003; Anda et al., 2006) demonstrated that persons who have experience some kind of adversity in their childhood have more probability of developing psychopathology. Hankin (2006) also verified the relation between these two variables, that adversity in the childhood lead to psychopathology. He observed that childhood adversity leads to psychopathology but the severity of this disorder is controlled by another variable (social support) (Fraga, 2012). However, there are cases of resilience amount these children. There has been found that some children of experience sexual abuse do not manifest psychopathology which indicated protector factors in their environment and the way they cope with the abuse (Antunes & Machado, 2012). Thus, is visible that the Ecological Model (Bronfenbenner, 1979) can explain this event. There are different systems that interacts in the life of the individuals has an influence on his development. In this context the individual system was very influenced by the microsystem that is compost by the family. So in their childhood when they experience adversity, this same adversity influenced to own individual even if the violence was not directly towards him. This influence can lead and have a role on their own development by the appearance of psychopathological symptoms (e.g. Maia et al., 2007; de Souza et al., 2008; Wong et al., 2012). This means that the violence as influence on different systems and not only on the individual that is battered. The children that are in the context of IPV also suffers and have consequences due to the environment (Casique & Furgato, 2006).

Still concerning the previous hypothesis, was not found a significant correlation between PTSD, cortisol and the childhood adversity. Although in the literature was found that the childhood adversity can lead to PTSD throughout the course of their lives, meaning that the consequents of the adversity persists throughout the adolescence and adulthood. The PTSD has a great probability to be develop when there is childhood adversity history (Maia et al., 2007). Likewise, battered women who were abused in their childhood have more potential to develop much higher levels of PTSD than the ones who have been only abused in their adulthood (Tramayne, 2012). It was also found high levels of PTSD in individuals who suffer sexual abuse as children, indicating that sexual abuse is very associated to PTSD (Borges & Dell'Aglio, 208). Even though a large part of the literature consists in the

confirmation of the association between this two variables, it has to be considered that this results are part of a percentage of the children. That means that not all of the children who experienced adversity will develop PTSD due to the presence of protector factors in their lives (Habigzang et al., 2010). It can be an explanation for the results obtained in this study. In the case of cortisol the literature says that childhood adversity was an influence in it, having in consideration the chronicity of the adversities. The more adversities situations exists, the more the response of stress is inadequate. An individual who experiences a great amount of adversities during their childhood and in the course of their lives create dysfunctional responses that influences the reactive of the physiological mediator of stress like the cortisol and a predisposition to have high levels of cortisol as a response to the stress (Mello et al., 2009). Despite of that, the chronicity of adversity is not the only factor that will influence the HPA functioning. The time that the adversity occurs is also important due to the existence of crucial individual development moments, like the childhood (Quartilho, 2012). However, findings on the relation between childhood adversity and later cortisol awakening response are mixed (e. g. Carpenter et al., 2007; Borges & Dell'Aglio, 2008; Mello et al., 2009; Quartilho, 2012). This evidence could means that CAR among women victim of partner violence is different from individual to individual and a multifactorial problem as well. For instance, the existence of positive experiences during the childhood may have reduced the later HPA impact (Quartilho, 2012). Other explanation is the comorbidity in our sample, considering that almost of the sample had clinical values of psychopathology and two thirds met criteria for provable PTSD. Heim et al. (2008) made a study to observe the neuroendocrine and autonomic responses of women characterized by childhood adversity and actual major depression. They conclude that women with childhood adversity who had or did not had major depression, had high levels of cortisol comparing with the control group (none childhood adversity and without major depression) when in psychosocial stress. They also demonstrated that adversity in the childhood is correlated with the increase of the HPA axis reactivity, which is amplified in the occurrence of other adversities in the adulthood. Other studies concluded that women with childhood adversity and inexistence of psychopathology had low levels of cortisol (Mello el al., 2009). Having in consideration the information collected it is visible the controversy regarding the relation between the childhood adversity and cortisol. The obtain results in this study, they can be explain by low levels of chronicity regarding to childhood adversities and the existence of positive experiences that help them during their development and reduced the negative impact on the HPA.

Finally, the third hypothesis "Better adjustment is expected when greater perception of parental competence exists" was partial confirmed, due to only the psychopathology and PTSD be significantly influenced by the perception of parental competence. There has been obtained a negative correlation between psychopathology and perception of parenting competence, which may indicates that lower perception of parental competence is associated to higher levels of psychopathology (having in consideration the interpretation of the instrument of measure the perception of parental competence). This finding suggest that positive perception of parental competence may buffer the effect between women´s violence exposure and the development of psychopathology and PTSD. Future longitudinal studies are needed to examine the role of parental competence as a moderator effect, considering that our cross-sectional design does not allow having accurate models of moderators and mediators. Additionally, our findings are consistent with the literature that indicates that psychopathology leads to the loss of autonomy and perceived control in battered women. This indicates that there is in fact an influence of the psychopathology in the perception of parenting competence (e.g. Belsky, 1993; Ackerson, 2003; Mourad et al., 2008; Jaffe et al., 2012; Camilo & Garrido, 2013). Battered women, living in a context of IPV, suffer psychological consequences (Mendes, 2013) that interferes with their parenting competence (Belsky, 1993; Sani, 2008). Jacobsen e Miller (1999; cit in Ackerson, 2003) e Lee e Gotlib (1989; cit in Ackerson, 2003) demonstrated that women who suffers from psychopathology are less interactive with their child and less attentive to the child's needs, indicating that psychopathology can be a risk factor in their parenting competence. Likewise, in this adverse context, it has been shown that the battered women are less emotionally available, warm, or responsive to their children (Jaffe et al., 2012). However, other studies (Levendosky, Huth-Bocks, Shapiro, & Semel, 2003; Letourneau, Fedick, & Wilms, 2007) demonstrated that battered women did had adaptive parenting competence by having more warmth with their children as a way to compensate the adverse environment (Jaffe et al., 2012). Regarding the relation between the PTSD and perception of parenting competence obtained in this study, the literature found in the research done affirms a relation between the variables (e.g. Levendosky & Graham-Bermann, 1998; Levendosky & Graham-Bermann, 2000; Jaffe et al., 2012). The researchers mentioned affirm that PTSD has an influence on the parenting competence, in the sense that battered women who have PTSD have less warmth, effectiveness and control towards their children. Therefore PTSD can lead to negative influences in the parenting of these women (Jaffe et al., 2012). Thus, is possible to observe

that the context of IPV affects the parenting of the battered women, meaning the violence has an impact on the competence of parenting competence of these women regarding their behaviors (e.g. Sani, 2008; Jaffe et al., 2012; Camilo & Garrido, 2013). These influence on their parenting behavior can lead to a lack of warmth, control effectiveness, among others (e.g. Levendosky & Graham-Bermann, 1998; Levendosky & Graham-Bermann, 2000; Jaffe et al., 2012). Therefore the trauma that the women experience can lead to the development of psychopathology and PTSD which consequently as an influence and impact on the way that the women perceived their capability of being a parent as well as their parenting behaviors (e.g. Levendosky & Graham-Bermann, 2000; Jaffe et al., 2012). These event on their childhood and the impacts of the trauma can be explain by the Trauma Theory theorized by Herman (1992) that says that the trauma leads to the development of negative psychological symptoms. Therefore they present changes in their affect regulation, consciousness and self-perceptions, impacting their parenting competence and making them less alarmed and awareness to the abuse that they suffer and possible to their children (Levendosky & Graham-Berman, 2000). Another conceptual model that can explain the obtain results is the Ecological Model (Belsky, 1993). This model explain the individual differences that occurs in the parental functioning by considering the history and psychological functioning of the parent, individual characteristics of the children, and stressful context in which the woman is inserted and supports that is has. Therefore the context of IPV is a stressful environment that can influence directly the parenting or indirectly by their psychological functioning (psychopathology and PTSD) which leads to changes on their parenting (Levendosky & Graham-Bermann, 2001).

Concerning the relation between the cortisol and the perception of parenting competence, in this study the result obtain reports that the cortisol is not a predicted of the other variable. However the low literature found reports that there is a relation among the parental care and cortisol receptors (e.g. Engert et al., 2010; Kidd et al., 2011; Reguera Nieto, 2015). This relation affirms that a secure attachment leads to a proper emotional auto regulation capacity. One study evaluated the relation between the salivary cortisol and the type of attachment (avoidant, ambivalent and secure attachment) in provoke stressful environment. The results showed that among the three types of attachment, the secure attachment style was the one with the highest levels of salivary cortisol (Kidd et al., 2011). In other study with a community sample consisted by young adults evaluated the perception of

parenting competence (low, middle and high perception) with the response of the cortisol to the stress (Engert et al., 2010). They discovered that the group with low and high perception of parenting competence had low levels of cortisol. These low levels of cortisol obtained were explained has a result of chronic adaptation and negative regulation of the HPA axis (Reguera Nieto, 2015).

Having all that it has been said this study presented some limitations. One of them was the difficultly felt to accomplish the number of participants necessary to this study in the time stipulated, due to the requisites necessary to the women to be available to participate in the investigation. Equally the procedure to collect the cortisol samples was difficult to the battered women even though the explanation given by the researches. Another limitation was the use of self-reported measures that could have influenced by the social desirability leading to a not reliable or complete information regarding the variables studied in this study.

The lack of information relatively to some of the relationships studied in this investigation brings a positive aspect, i.e., this study gives the possibility to have more information about the association between the variables of the adjustment and the variables that affect this adjustment. Information that in some aspects were not yet study or there is lack of studies about these influences, like the perception of parenting as a moderator factor and the cortisol. Equally the fact that in this study is used a signalized sample, provides an observation on more accurate dada relatively to the violence that the battered women, instead of using a community sample that can have bias results.

Thus, this study concluded that the social support is a protector factor regarding the psychopathology and PTSD, not having an influence in terms of cortisol. Meaning that high levels of social support leads to the decrease of symptomology of psychopathology and PTSD. Childhood adversity has an influence in the adjustment of the battered women concerning the psychopathology only, which indicates that adversity in the childhood leads to the development of symptoms of psychopathology. Perception of parenting competence is associated with psychopathology and PTSD, i.e., low levels of perception of parenting competence is associated with higher levels of symptoms of psychopathology and PTSD. And social support, childhood adversity and perception of parenting competence have not shown an influence on the cortisol.

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