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THE MALE ABUSER'S PROFILE

TELLTALE BIOLOGY?

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Identifying markers of psychobiological predisposition to violence opens the door to prevention and intervention in the field of male violence against women. Currently, we have no effective drugs to treat abusers of women, but the development of psychotherapeutic intervention programmes and neuropsychological rehabilitation marks a promising path.

Keywords: hormones, psychobiology, neuroscience, violence against women.

The figures of women murdered by their partners are startling (World Health Organization, 2011), so gender violence has become an issue of public health relevance. Much of current research in this field has focused on the study of the consequences of violence on the health of the victims. However, which kind of men are punished because of domestic violence against women, the factors that enable those violent acts, or the psychotherapeutic and neuropsychological interventions that allow for an effective treatment towards reintegration have not received the same attention.

The profile of offenders is well described by social and personality psychology. Some features, such as high emotional dependency and low self-esteem and social assertiveness, have been pointed out. In addition, they often present hostile cognitive schemas such as degrading and sexist attitudes toward women, together with inadequate feelings toward themselves and their partners, resulting in pathological jealousy. This leads to an inability to resolve conflicts through mature mechanisms like negotiation or empathetic cooperation, thus triggering violence (Farrell, 2011). Psychobiological research of abusers is almost nonexistent, greatly hindering the formulation of initial hypotheses. The study of these variables will optimise and improve the limited effectiveness of current therapies (Echeburúa-Odriozola *et al.*, 2010).

But not all offenders are alike in personality, cognitive schemas, psychosocial and cultural variables and, by extension, in biological characteristics that

predispose them to violence. In this sense, they have been classified into two categories according to their sympathetic reactivity (the nerves that prepare us for action) to stress or psychophysiological predisposition to cope with it. Type I individuals act with premeditation and tend to show a low arousal or behavioural reaction to alerts or attention to the appearance of a stimulus to cope with stress, and tend to show more proactive violence. On the other hand, type II (the object of our investigation) react with violence impulsively and are more physiologically activated before the stressor or any stimulus that produces an imbalance in the body appears (Gottman *et al.*, 1995).

The lack of research with a comprehensive perspective on the study of abusers and violence and empathy led us to gather as much data as possible to develop the appropriate research methodology to allow us to analyse the psychobiological

response of impulsive abusers (pre-selected based on their psychological and criminological profile). We designed a specific laboratory situation that would stress this population and, therefore, raise a stress response. To this end, they had to speak in front of evaluators (with gender parity) about the law against gender violence and their particular situation after being accused by their former partners. Furthermore, they were questioned to elicit an emotional reaction to issues related to the law against gender violence and its perception as fair or unfair. Hormonal, immunological, psychophysiological (electrodermal activity and heart

«THE PROFILE OF OFFENDERS PRESENTS A HIGH EMOTIONAL DEPENDENCY AND LOW SELF-ESTEEM AND SOCIAL ASSERTIVENESS AS FEATURES»

rate), psychological and neuropsychological variables were registered during the whole session to see how they prepared, how they responded and how they returned to normal.

We have found that, when coping with stress, there is less production of the main hormone that is related to it: cortisone (product of the hypothalamic-pituitary-adrenal axis). This hormone acts as a brake on the hypothalamic-pituitary-gonadal axis and thus decreases the production of testosterone, the hormone that facilitates the expression of violence (Terburg *et al.*, 2009). Traditionally, testosterone was thought to be a cause of violence. However, it is now seen as a modulating factor, the increase of which appears to increase the likelihood of behaving violently (Moya-Albiol, 2010). This modulation may occur and affect different cognitive abilities that alter information processing. Furthermore, this increase in testosterone seems to produce a temporary worsening of cognitive empathy and negative affection, i.e. the ability to take the mental distance to understand the thoughts and feelings of others decreases and negative emotions like anxiety, anger and moodiness increase (Romero-Martínez *et al.*, 2013c). Thus, the abusers appear to have temporary difficulty to put themselves in the place of the victims and so they get carried away by anger. Therefore, we conclude that an imbalance between testosterone and cortisone predisposes to violence, and the ratio between the two hormones (testosterone-cortisol ratio) can be a valid indicator of violent men or impulsive abusers (Romero Martínez *et al.*, 2013a).

Impulsiveness can be detected by skin conductance, marker of the autonomic nervous system (Gottman *et al.*, 1995). Impulsive abusers present electrodermal hyperreactivity, i.e., a greater increase in skin conductance before the stressful stimulus appears (Babcock *et al.*, 2005). Therefore, the abusers are prepared before the threat is present, or they remain in a state of high alert, which lowers the threshold to display violence. In addition, they maintain activation after being questioned about domestic violence (opinions and personal experience) (Romero-Martínez, Lila, Williams *et al.*, 2013). In this respect, the study of cardiovascular measurements revealed a predominance of sympathetic over parasympathetic nervous system in stress response related to violence in these offenders. Therefore, we conclude that they have deficits in emotional regulation, so their threshold for violence is lowered. Furthermore, increases in vigilance or



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general body activation (defined in terms of increased cardiovascular and electrodermal response to stress) appear to be related to increases in testosterone levels (Romero-Martínez *et al.*, 2013d). Furthermore, this hypervigilance or excessive general activation of the body can improve subjects' immune ability (measured by the response of a type of substance that is in saliva, tears, and breast milk, known as immunoglobulin A, which defends us from external aggressions from substances that may be harmful to our body) when faced with the aforementioned stressful task, as well as their self-esteem and, in general, their health status (Romero-Martínez *et al.*, 2014). Does that mean

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that offenders behave violently because the expression of violence improves their health and psychological state? We cannot answer that precisely. Moreover, it is important to highlight the role of personality, as changes occur only in offenders with low self-esteem, signs of psychopathology and high cognitive rigidity. These

individuals also have limited empathic qualities, leading to a restricted ability to put themselves in the place of the other (Romero-Martínez, Lila, Sariñana-González *et al.*, 2013c). On the contrary, violence could have negative consequences for the immunity and health of men with no history of abuse or violence (Martínez-Romero *et al.*, 2014). Therefore, we conclude that, by inflicting violence against their partners, abusers get a sense of power that reinforces their health. However, why do they use violence specifically against their partners? We worked with the hypothesis that low self-esteem makes them show violence only toward their partners (and sometimes also their offspring), after a long process in which they have marked their power and dominion over the victims, since they feel inferior to others outside this context.

Are there aspects of their childhood that predispose them to an excessive use of force and to perpetuate the so-called cycle of violence? To answer this question, a retrospective study would be necessary.



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Registering psychobiological variables (questionnaires, autonomous nervous system, immune system and endocrine system).

«TRADITIONALLY, TESTOSTERONE WAS THOUGHT TO BE A CAUSE OF VIOLENCE. HOWEVER, IT IS NOW SEEN AS A MODULATING FACTOR»

We observed in the data we collected that the presence of maltreatment during childhood increased the probability of alcohol dependence in adulthood, a characteristic that facilitates the expression of anger (Romero-Martínez *et al.*, 2013b). Alcohol consumption produces significant deficits in several cognitive abilities, especially in cognitive flexibility and empathy, i.e. the skills to present a socially acceptable behaviour (Romero-Martínez and Moya-Albiol, 2013). However, other prenatal factors, such as excessive exposure to testosterone before birth, can decrease the ability to empathise and can facilitate the emergence of violence. As a result of this exposure, the individual would have an overly male brain with a poor emotional system. In addition, androgens may be partly responsible for excessive impulsivity, which can also lead to less impulse control marked by the emergence of violence and alcohol consumption. Therefore, influences in the early stages of life are critical for violence and empathy in adulthood. A man's brain might be predisposed to violence and, along with alcohol and substance abuse, this may lower impulse control, facilitating violence against women.

«ABUSERS ARE PREPARED BEFORE THE THREAT IS PRESENT OR THEY REMAIN IN A STATE OF HIGH ALERT, WHICH LOWERS THE THRESHOLD TO DISPLAY VIOLENCE»

A high percentage of batterers abuse or depend on alcohol or other drugs. In addition, alcoholic abusers are probably the most violent. Although many do not abuse these substances, they may commit the violent act under their effects. Chronic use of substances has been associated with deficits in different cognitive skills, such as working memory, attention and verbal learning, decision-making, verbal skills and long-term memory (Romero-Martínez and Moya Albiol, 2013). Of all the deficits found in alcoholics, the ones that have been studied more extensively are executive function and the cognitive skills that help us to plan and implement the behaviour and memory, mainly because of their greater vulnerability to the toxic effects of alcohol, but also because of the importance they have for social adequacy, disease prognosis and subjective complaints by the patients themselves, whose life is severely hampered by poor decisions. Yet, as we have explained above, there are abusers who do not present chronic alcohol consumption;

therefore, they do not have these deficits and the manifestation of their violent behaviour has another explanation. The perpetration of violent acts under the influence of alcohol or because of acute consumption could be explained by the hypothesis of the Alcohol Myopia Model (AMM), which states that alcohol impairs attention-dependent cognitive processing (Giancola *et al.*, 2011). The perception of external and internal information is restricted in these two ways to focus conscious perception on a small number of salient stimuli, thereby increasing the likelihood of reacting violently when a piece of information is neglected.

As scientists and humanistic psychologists, we are reluctant to accept that these people have no chance to recover and redirect their aggression. Despite having a limited capacity to put themselves in the place of the other, reactive/impulsive abusers are capable of feeling remorse and apologising for what they have done (in most cases), that is, they have emotional empathy. Therefore, it is important to work on empathy to break the cycle of violence. Their violence could be a continuation of their experience as victims during childhood. As a result, they developed a limited emotional system. It is very important that future research takes into account these aspects, because gender violence is more than sexist men perpetuating patriarchal values. Through our studies we realise that abusers have poor emotional regulation, both at the biological and psychological level, so it is important to work with emotional decoding (to avoid misinterpreting emotions and triggering violent responses). It is also important to intervene in neuropsychological deficits, as they would hinder the benefits of psychological therapies, and to treat alcohol dependence, which is essential for the perpetration and perpetuation of violence. Neuroimaging studies, based on taking pictures of the human brain during different tasks and obtaining images that show the activation of different parts of the brain, can supplement the data obtained for the different variables mentioned, thus enriching results. At present, there are no effective drugs for the treatment of violence against women, but the development of psychotherapeutic intervention and neuropsychological rehabilitation programmes indicates a path of hope. Considering markers of psychobiological predisposition to violence in such abusers opens a door to prevention and intervention in the field of violence against women. ☺

**«ABUSERS HAVE POOR
EMOTIONAL REGULATION,
BOTH AT THE BIOLOGICAL
AND PSYCHOLOGICAL LEVEL,
SO IT IS IMPORTANT TO WORK
WITH EMOTIONAL DECODING»**

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