

Cultural and Biological Aspects of Romantic Relationships and Domestic Violence in Intercultural Couples

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Abstract— *During the last 30 years, the globalization process has favored migratory movements. Social networks and websites promoting romantic relationships facilitate women's marketing from developing to developed countries. To better understand the effects of the patriarchal model and intercultural factors on romantic relationships, we reviewed the recent literature seeking to address the reasons that lead to this type of relationship, and its consequences. For this, we searched for available articles in LILACS, MEDLINE, PubMed, and SciELO databases, and 67 articles met the inclusion criteria. The will to improve living conditions may lead to the decision of migrating. However, the statement about "interest" could not be confirmed. Websites contents reflect the patriarchal model of seeking relationships according to the representation of men's superiority who act as "women's consumers. A recent study showed that Spanish men seek a relationship with women from developing countries, mainly because they are in a condition of "crisis of masculinity. Studies have shown that immigrant women are more vulnerable to violence, social exclusion, and risks of mental health disorders. The different patterns of aggression, according to gender, are, yet, inconclusive. Through our study, based on the current literature, it was possible to identify a set of factors that lead to migratory flows in the context of romantic relationships and how intercultural couples have conducted to preserve their subjectivities and mental health.*

I. INTRODUCTION

During the last 30 years, there has been an increasing contingency of intercultural marital relationships that can be justified by globalization, the expansion of the internet as means of personal communication and the increasing offers for educational exchange programs in different countries [1,2]. The emergence of online social media platforms and specific social sites has promoted romantic bonds between people of different nationalities [1,2]. Recently, several sites promote Brazilian women's meeting with foreign men, such as eHarmony.com, EliteSingles.com, InternationalCupid.com, ChristianMingle.com [3].

Studies on social skills, such as identifying the ideal type of relationship, marital satisfaction, and relationships

that begin through the internet environment, have addressed the subject of romantic relationships [4,5]. A romantic relationship gets established with an increasing attention and admiration of someone's characteristics, minimization of flaws, greater expression of energy or ecstasy when the bond is booming, and a change of mood when the opposite occurs [4]. In addition, when one of the two partners is rejected, a period of complaint and non-acceptance appears in attempt to maintain the relationship. A feeling of anger often arises, which is frequently replaced by resignation or despair [4].

The context of romantic relationships must emphasize the cultural aspects related to a country or community. Culture brings the systems of representations that characterize the dynamics of values or customs in society,

influencing social relationships in many aspects [6]. Culture consists of shared elements that generate patterns of perception, beliefs, evaluations, and communication between those who share the same language, the same historical period, and the same physical location [5,6].

On the other hand, some studies justify the emergence of the need for the romantic relationships as something genetically determined and with manifestations through the action of neurochemical systems [7,8]. Brain systems like sensory perception, memory, emotions, and cognitive processes can determine the need for the romantic relationship [7,8]. The attraction mechanisms include detecting the special person and motivating someone for the romantic relationship [7,8]. There are reports of romantic relationship initiated through internet sites occurring in a sociocultural context that involves values and social representations. It can also include beliefs resulting from historical relations of power or hierarchy between developed and developing countries [9,10]. The biggest challenge in intercultural environments is the possible difficulty of interaction between people with different systems of meanings according to their origin or nationality [11]. In the patriarchal society model, the superiority of gender leads women to suffer severe losses that incapacitate autonomy and freedom [12,13].

Studies show that women suffer greater gender violence compared to men [12,13]. Violence corresponds to all forms of violation of the citizen's freedom and rights [13,14]. Violence against women begins when she admits to being inferior to men just because she was not born a man [14]. In many developing countries, the female identity is built on this concept. Whenever a woman diverges from such expectation, she becomes a target of aggression or discrimination [14]. It is common to assume that domestic violence affects only women, but it's well known that domestic violence can affect all family members [15]. The aggression can be physical (like a slap) or verbal (like screams of abuse); direct (like direct retaliation against a colleague) or indirect (like spreading rumors); reactive (also known as hostile, impulsive aggression resulted from anger in response to provocation) or proactive (also known as instrumental, premeditated aggression used as a means to achieve a goal) [16]. Domestic violence occurs when a partner initiates abusive acts against another partner who is part of their intimate personal relationship or is already broken apart [13,17,18]. Abusive acts can be physical (when it affects physical

integrity); psychological (when there are humiliations, insults, isolation and harassment); sexual (such as forcing someone to witness or engage in unwanted sexual intercourse or forcing a marriage, pregnancy, abortion and even making it difficult to use contraceptives); patrimonial (when the aggressor destroys personal documents, work instruments or violates financial resources) and moral abuses (, which are manifested by lies, defamation or injuries [18]. In domestic violence, threats, harassment and violent behavior are used as a way to coerce psychologically, sexually and even financially [18].

Studies based on romantic relationships have raised questions upon the challenges posed by the internet expansion on personal communication and cultural integration. To better understand the interweaving patriarchal model and intercultural factors on romantic relationships, we carried out a bibliographic review to address the reasons that lead to this type of relationship and its consequences. Through our study, based on the current literature, it was possible to identify a set of factors that lead to migratory flows in the context of love relationships, and how intercultural couples have conducted their different subjectivities and preserved mental health.

II. METHODS

The research was carried out in November 2020 and completed its stages according to criteria described in the national and international scientific literature. Then the search databases and the eligibility criteria were defined. Scientific articles found through the previously defined descriptors, published in English, Portuguese and Spanish, were considered eligible. Articles were obtained from the following databases: Medical Literature Analysis and Retrieval System Online (Medline), Latin American and Caribbean Literature in Health Sciences (LILACS), PubMed, Scientific Electronic Library Online (SciELO) and Scopus (Elsevier).

III. RESULTS

This study examined 98 articles, from which 67 fully met the inclusion criteria. We distributed the selected literature into categories according to subjects, such as: migration and social networking sites (4.5%); romantic bond (26.8%); culture (15%); domestic violence (21%); aggression (25.3%) and exclusion (7.4%) (Fig. 1).

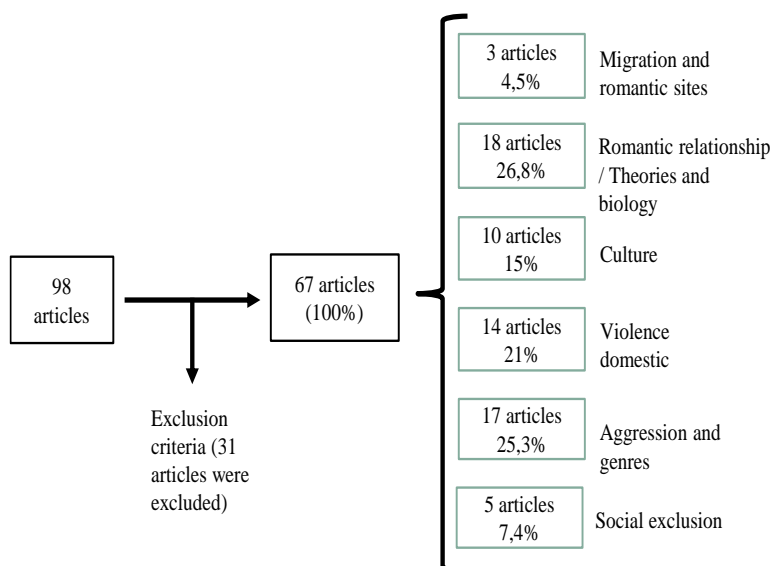


Fig.1 Distribution of selected articles in categories by subjects .

IV. DISCUSSION

We begin to address the role of intercultural factors affecting romantic relationships by examining a total of 67 selected articles, distributed into the following categories:

4.1 Romantic bond

A study involving the participation of 166 societies identified evidence of a romantic relationship in 147 of them. For the 19 cultures where this evidence was not found, there were errors during data collection. The data from this work demonstrated that romantic relationships seem to be a universal behavior [19]. A large-scale study involving 1,086 males and females aged 16–50 years, designed to develop more reliable self-report scales, evaluated several items related to adult attachment. According to the attachment theory, either security or attachment style are learned through social experiences that begin very early in life, and this learning continues in adulthood. [20]. Accordingly, relationships that involve sensitive and attentive behaviors make a person more likely to develop a more secure attachment style [20]. There are many divergences amongst theories about the role of social-relational aspects determining romantic relationship's need and affecting attachment representations [21]. In addition, the data in this study suggest that the direct influence of the original family may become reduced or may disappear internally, considering that the emergence of new romantic relationships for a long time must also influence. [21].

On the other hand, there is the hypothesis that the romantic relationship is the result of a neural mechanism in mammals [10, 22]. The brain system that responds to the sex drive has evolved to motivate individuals to copulate

with a variety of partners, while the dating attraction system has evolved to allow concentration of mating energy on specific partners. The attachment system to partner has evolved to motivate individuals to stay together for a long time, at least long enough to perform their reproductive and parental functions [10,22].

Studies using functional magnetic resonance have identified two specific areas that seem to be more related to the romantic relationship. The first is the right ventral tegmental area in the central region of the brain's reward system associated with pleasure, general excitement, concentrated attention and motivation to seek or acquire rewards [23]. The second area is in the caudate nucleus that plays a role in detecting reward, expecting a reward, representing objectives, and integrating sensory inputs for action [24,25]. According to these studies, in the brain's reward system, the mesolimbic dopamine pathways play a role in feelings of pleasure, focused attention, motivation, and goal-oriented behaviors associated with romantic love [23,24,25]. The neurotransmitter dopamine seems to favor the learning of both habits: to promote a new romantic relationship and associate the partner's characteristics with positive emotions [23,24,25].

A study exploring the correlation between neural aspects and long-term romantic relationships revealed a specific activation of brain regions with high dopamine levels in association with reward, motivation, and 'desire' [26]. Similarly, other studies have demonstrated such association in the early stages of romantic relationships [23,24,25,26,27]. Accordingly, it seems that the reward value associated with the beginning of a relationship can be, similarly, maintained by long-lasting partners [27].

Beyond the brain's serotonin levels genetic variants or polymorphisms of the serotonin receptor (5-HT1) can also contribute to romantic relationship establishment, as demonstrated by a study in China [7]. In the mesocortical system, the dopamine release in the right ventral tegmental area is stimulated by glutamate [28], thus activating the prefrontal cortex related to the reward [26,28]. Hormones oxytocin and vasopressin activities have been associated with both partner preference and attachment behaviors. On the other hand, dopaminergic pathways have also been explicitly associated with partner preference [8]. Noradrenaline can stimulate the release of oxytocin and vasopressin in neurohypophyseal tissues [29]. In the central nervous system, noradrenaline may be associated with attraction to someone since it can generate alertness, insomnia, loss of appetite, attention, and increased memory for new stimuli [23]. Noradrenaline has been associated with the sympathetic peripheral nervous system's responses, causing an increase in heart rate, sweating and tremors [23]. Those physiologic and emotional symptoms and signs are commonly related to identification or attraction at the beginning of the romantic relationship [23].

The courtship attraction and romantic relationship associated with dopaminergic reward pathways in the brain supports the hypothesis that the romantic bond is distinct from the sexual impulse [30, 31]. One study reported that dating involves a sequence of choices, each of which requires a different neurochemical mechanism, and questions whether sex hormones play specific roles in establishing romantic relationships [31].

4.2 Culture and romantic relationships

Authors recognize the importance of social aspects to learning about the romantic relationship and argue whether the social groups' characteristics can cause difficulties or facilitate the dynamics of this type of relationship [6,32]. A study enrolling Brazilian women from Rio de Janeiro identified an idealized view of foreign men and their supposed positive qualities [33]. This study highlighted the women's presumption of a European or North American men's superiority over Latin Americans [33].

Affective migratory motivations may be associated with the desire to improve living conditions with less financial problems [11]. However, the statement about "interest" cannot be confirmed; whenever a participant refers to the "economic interest", after she says that when the ideal person appears, the "interest" disappears [11]. Another study with Brazilian participants living in Switzerland, showed that most of the interviewees left their country of origin driven by the desire to improve their living conditions, get better jobs and establish a marital

relationship to stay legally in the country [5]. There are many women who migrate motivated by the loving relationship and for that reason, they also seem to acquire a more privileged position over other women [5]. A feeling arises through the possibility of integrating into a new society, acquiring documents, and forming a new family [5,11].

Studies about sociocultural implications in intercultural relationships in Brazil revealed a pattern of female profiles presentation in dating sites [2,9,10]. Its contents revealed a great appreciation of supposedly male wills and excessive concerns about the domestic environment. In addition, there are demonstrations of women's skills in this type of environment through photos and texts [2,9,10]. The profiles seem to stimulate the representation of men's superiority over Brazilian women, thus reinforcing men's role of "consumers" [2,9,10]. Another study that analyzed the content of 40 sites also identified that representations about women by men from developed countries, seem to be significantly related to the commercialization of women [34]. The images on websites show young women whose bodies show attributes that put them in an advantageous condition for establishing romantic relationships [2].

Data obtained in a study carried out in Spain allowed to verify that the number of marriages between Spanish men with foreign women is greater than the number of Spanish women with foreign men [34]. This study suggests that Spanish men may be showing some resistance to Spanish women who are more financially independent and demand equal treatment [34]. Another study on romantic relationships also carried out in Spain suggests that Spanish men seek women from developing countries because they are in a condition of "crisis of masculinity"; therefore, they make a kind of attempt to return to the family model with typical characteristics of patriarchal society, with inequalities between men and women [35].

There are two configurations of culture associated with the socioeconomic level: the culture of low context, characterized by individual interests above collective interests, and the configuration of high context, marked by the valuation of collective interests over individual interests [36]. In a high context culture, the individual wills predominate over the collective wills; independence and self-confidence are most valued; the feeling of responsibility for other people is neglected [36]. Also, there is a greater tendency to assume responsibilities, whereas there is a fear of losing respect for oneself [36]. In the low context culture, individuals show a more significant appreciation of collective interests. Personal identity seeks to correspond to the group's typical values and customs; social control is exercised by fear or shame,

and relationships are more valued than rules or laws [36]. According to these configurations, when two people of different nationalities come to live together, each with their different cultural aspects, they must negotiate a mixture of their cultural aspects. Otherwise, rigidity can cause feelings that compromise the stability of the relationship [36].

4.3 Domestic violence

Violence by an intimate partner is defined as any act of aggression directed at the partner, and not just the extremes of physical aggression [37]. Most studies on domestic violence are focused on hetero-affective relationships, and there is little knowledge about domestic violence in homo-affective couples [37]. Many women who immigrate come from patriarchal societies or from low-context cultures. Ideological devices or religious groups intensely disseminate this type of culture, all acting towards preserving the superiority of men [36,38]. When women admit that the distribution of power is unequal between genders, or when they define themselves much more by their relationship with a man than by their own achievements, they become more vulnerable to domestic violence [8,13,17,18,37]. A study reports that many women learn to attend to men's will without question and accept that domestic violence is an issue or problem that should be resolved only between husband and wife [39]. Immigrant women also report that when they comment with their relatives about the violence, they receive in response suggestions that the best thing to do is to bear, wait, say that this is something momentary and that there is a family to be maintained or children who need their parents [39]. When reporting that domestic violence is only a form of physical violence due to stressful situations between couples, women prove that they know little about the set of behaviors typical of domestic violence [39].

A research study on the global prevalence of violence against women, including 79 countries, showed that 30% of women suffered violence by their partner [40]. A study carried out in Canada showed that the rates of violence against immigrant women from developing countries are higher than those found for women immigrants from industrialized countries [41]. Women victims of domestic violence are more likely to suffer physical injuries, post-traumatic stress disorder, depression, and anxiety than their male partners [42]. Another study reported that immigrant women who have spent more than 20 years in developed countries are more likely to report abuse experiences [43]. A study in Sweden showed that some women from Thailand are abused and mistreated by their partners, and sometimes these mistreatments also include children. In this study, the authors suggest that women from

developing countries often see the social acceptance of violence as way to resolve family conflicts [44].

A study that used criminal data showed that men are more likely to have a recurrence and to violate a protection order [45]. Criminal men were more likely to increase the frequency and / or severity of conflict with death threats and substance abuse [45]. There are reports that abusive husbands threaten to stop being financially responsible for their wives, which is a requirement of many countries. Thus, they force their wives to remain in an abusive relationship, even if this is not legally possible [39,44]. The World Health Organization examined 1,121 criminal data estimates of homicides related to domestic violence in 65 countries, from 1982 to 2011. Of these homicides, the average prevalence of women killed by their partners was 38%, while the rate for murdered men was 6 % [46].

4.4 Aggression

When comparing studies on aggression, we find that there is little knowledge about aggression in women. For many years, aggression and violence were considered male problems. The reason for this is that men demonstrate more violent behavior than women [46]. An integrated review study showed that men tend to express physical aggression while women express relational and indirect aggression more [47]. Another study on cross-cultural aggression did not find the same evidence [48]. In an experimental study with men and women's exposure to a stressor, aggressiveness in men increased and, in women, it decreased. These results suggested that women should assume a reaction of resistance to aggression in the face of stressful situations, while men show little resistance to an approach response [49]. Women seem to be more afraid than men when considering an aggressive behavior initiative [49]. The levels of anger show no difference between men and women, and there is also little evidence of sex differences in reactive aggression when the conflict is mild, while for conflicts with risks of physical damage, men appear to be more aggressive [50]. A study that seeks to associate biosocial factors and aggressive behavior suggests that physical (not gender's) differences, as well as cultural values and customs, affect the behavior (including aggression) [51].

Social norms have a relevant role in this topic because most cultures are patriarchal, and aggression is a value or way of obtaining status [52]. In most cultures, men are more valued for being aggressive and, on the other hand, there is repudiation for women who show aggression [52]. When women behave aggressively or are dominant, they can be intensely criticized or repudiated [52]. Two meta-analysis studies on gender differences and aggression reported that women are less aggressive than men because

social roles encourage aggression in men, but not in women [53,54]. There may be an interaction between biologically specified gender differences and socio-cultural influences in the manifestation of aggression. Given the knowledge of neurobiology in recent decades, researchers have used electroencephalography (EEG), brain stimulation, physical body manipulations and functional magnetic resonance imaging (fMRI) to examine the neural mechanisms related to aggression. A study that used the Event-Related Potential (PRE) showed that men and women exhibit highly impulsive aggression and hostility, reducing the amplitude of nervous signals in the parietal and central regions [55]. Another study using PRE equipment and lumbar puncture with removal of cerebrospinal fluid did not identify any gender difference in neurophysiological responses (i.e., frontal negativity) [56]. A study that evaluated alcohol's influence on aggression in men and women, using fMRI, did not identify differences between genders, either [57].

A study that used EEG was able to identify that the frontal alpha asymmetry during rest and the increase of slow-wave activity during different emotional levels can be related to the individual's low sociability and aggressiveness [58]. A meta-analysis study conducted using electrocardiogram (ECG) data suggested that a low heart rate during rest is a marker of aggression in men and women [59]. Finally, both the results obtained by EEG and ECG were not able to confirm any difference in aggressiveness between genders. Results from a meta-analysis study showed that gender differences in response obtained via ECG seem to be determined by situational provocations, including verbal abuse, whereas those obtained by EEG seem to be determined by simple aversions, such as scratching a blackboard with nails. Accordingly, in relatively neutral conditions, men are more aggressive than women, however, the difference decreases as provocations increase, such as insults or physical attacks [59]. Assessing the role of biology in aggression is somewhat tricky because there is a wide variation in its manifestation according to social contexts and biological changes in different age groups [60].

4.5 Exclusion

For the World Health Organization, social exclusion occurs when there are differences in power that permeate economic, political, social, and cultural relations [61]. Exclusion begins with the difficulty of cultural acceptance of the immigrant by the partner, or it may be in the immigrant himself who maintains rigidity about his cultural aspects [62]. It is natural that, over time, the immigrant's experience in another country produces the desire to remain connected to his social group in the

country of origin [62]. The fact is that living in another country seems to include an inevitable discontinuity that can be less destabilizing only if aspects of the "new culture found" mix with aspects of "culture brought" [62]. Therefore, Winnicott's "potential space" or "transition space" must emerge, an intermediate space, between creativity and the objective perception of reality, between the subjectively conceived and the objectively perceived [62]. In addition, the society that receives the immigrant may not be adept at cultural assimilation and the immigrant feels that he is a true deserter of his culture [62]. There is a report that immigrant women are very vulnerable to social exclusion and are at risk of physical integrity [63]. These conditions seem to increase the risk of schizophrenia by two or even three times more [12]. A study with immigrant women and on mental health care showed that immigrants are at greater risk than natives of acquiring mental health problems. However, few studies have addressed the importance of socioeconomic status, gender and romantic relationships [64].

A study that is part of the cooperative work "The state of mental health in Europe" (European Commission, DG Health and Consumer Protection), which addressed mental health and migration in Europe, published a list of the most common health problems in some groups of immigrants: schizophrenia, suicide, alcohol abuse, drugs, anxiety and depression [65]. The study also showed difficulties in accessing psychiatric services [64]. In Norway, a study demonstrated that about 27% of young immigrants, participants, reported suffering some type of discrimination; however, there was no association with mental health problems, socioeconomic status, and gender [64]. This study also suggested that other immigrants support could maintain the feeling of belonging and trust, helping in the sensitivity to the rejection found in the new society [64]. Besides, a study in Canada demonstrated failures in support services for immigrant women who experienced domestic violence [66]. The study evidenced the following situations: resistance to immigrant women in attendance at public support services, intransigence about the cultural values of immigrants based on patriarchy or collectivism, absence of confidential interpretation services, and difficulties in receiving security or financial guarantees [66]. Thus, these difficulties further increase women's insecurity and feeling of powerlessness in the face of violence or exclusion [66,67].

V. CONCLUSION

Studies on the origin of the romantic relationship, both those that involve theories considering social and methodological aspects and those that use the

neurobiology knowledge, have contributed to a better understanding of this phenomenon's complexity. Although these studies present considerable divergences or gaps, there is at least a point of consensus: unanswered speculations should be elucidated through new studies on the origin of romantic relationships and the reasons that lead to maintain or to resign the relationship. Children's experience of romantic relationships between their parents and other close contacts might contribute to their manifestations of the need for this type of relationship in adulthood. On the other hand, according to the neurobiology knowledge, a romantic relationship is the product of biological mechanisms that have undergone changes over time, favoring reproduction and care for children. Moreover, a romantic relationship is associated with a specific nervous system's activity, accompanied by neurotransmitters release. The brain areas most related to attraction and choice for maintaining the romantic relationship are the ventral tegumentary areas, hypothalamus, the caudate nucleus, and the prefrontal cortex. Dopamine, glutamate, and norepinephrine are the most common areas involved. We assume that the emergence of space for meeting and cultural negotiation is essential for an intercultural relationship. Moreover, depending on the couples' ability to deal with these dynamic spaces, they can overcome conflicts or challenges that occasionally appear. Flexibility for cultural integration or acceptance of intercultural diversity must be taken into consideration.

On dating websites, profiles are made up to satisfy the men's demand for standardization of gender roles in the domestic environment. Besides, profiles featuring "docile and loving" women overestimate the well-being of the family and the husband's will. Many intercultural romantic relationships that emerge through websites show an attempt to return to the patriarchal order while neglecting rights achieved by feminist movements. The patriarchal society's values encourage violence against women. In this model of society, gender superiority causes severe losses that hinder women's autonomy and freedom.

The literature shows more similarities than differences between the motivations and risk factors that lead to domestic violence in both men and women, however, violence has caused more physical and psychological damage in women. Immigrant women who suffer domestic violence and seek public services find it difficult to receive any support. That might be due to inexperience in these services, the absence of interpreters, and lack of flexibility regarding ethnocultural aspects.

Investigations on gender differences in aggression are still very inconclusive. New studies using different stimuli

or including new behavioral, psychological, or neurobiological methods may bring significant knowledge on this topic.

According to the World Health Organization, social exclusion occurs when there are differences in power in economic, political, social, and cultural relations. This imbalance of power means that some people have less access to resources, capabilities, and rights. Social exclusion can result in damage to mental health.

Through our study it was possible to better understand the reasons for migratory flows, in the context of intercultural romantic relationships with their social and biological aspects. We were able to recognize how couples conduct their subjectivities. This study brought together social and biological factors seeking to demonstrate the importance of integrating these approaches in future studies.

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