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Research

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Some Influences on Perception and Justification of Aggression in Themselves and in their Social Environment

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ABSTRACT

The present study analyzes some factors associated with violence in pre-adolescents and adolescents, such as their self-rated aggression, the defensive or instrumental function of aggression, and the degree of violence perceived in others and their surroundings, namely family, friends and peers, neighborhood, city and world. Several self-report tests on aggression [Aggression Questionnaire (AQ), Barratt Impulsiveness Scale (BIS), State-Trait Anger Expression Inventory (STAXI-2), and an ad-hoc self-report developed by us (Self Appraisal Report (SAR))] were administered to 2110 subjects of both sexes between 9 and 17 years of age. Those subjects who perceived themselves as violent obtained significantly higher rates in aggression, impulsivity and anger, and believed that their surrounding was more violent than their self-rated non-violent ones did. Finally, they also showed a higher justification of violence, attributing it as a possible instrumental function. The best predictors of self-rated violence in the present study were the AQ physical aggressivity, the BIS motor impulse scale, and the STAXI expression index.

KEYWORDS: Adolescents; Anger; Violence; Environment; Socio-cultural factors.

ABBREVIATIONS: AQ: Aggression Questionnaire; BIS: Barratt Impulsiveness Scale ; STAXI-2: State-Trait Anger Expression Inventory; CNS: Central Nervous System; SED: Serious Emotional Disturbance; AEI: Anger Expression Index; AQ-PA: AQ subscale Physical Aggression; MI: Motor Impulsivity; GAM: General Aggression Model.

INTRODUCTION

The authors of the present study attempt to increase the knowledge of how pre-adolescents and adolescents perceive their own violence and those with whom they interact in their immediate environment: friends, family, school, neighborhood and those with more extent, unspecific, and global ranges, such as the city or the world. In this way, by understanding their mental perception of the violence in themselves and in their environments, parents and educators may be more successful in their effort to teach teenagers about how to behave in a non-violent way.

Perception can be defined as the meaning and interpretation of information. Even if it has a strong relation to the objective world, it corresponds with its interaction with the neural activity of the central nervous system (CNS) of each subject. This neural activity is unique to each person because it informs about the *Unwelt*[1] an environmental situation, specific to each individual and occasion. This explains why Mountcastle[2] said "*in certain respect, we are living amidst the world in the prison of our brain.*"

Far from being something universal, perception depends on the limitations in what and how we perceive. There is an interactive intervention of multiple factors on perception namely: a) biological factors (our knowledge is filtered through the knowing apparatus); b)

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psychological factors (our personal needs dictated by motivations and emotions); and c) socio-cultural factors (contexts shaping our knowledge with their assumptions, values, and prejudices).

Aggression should not be an exception to these assertions about perception. As any other behavior, aggression, far from being a static phenotype, is a flexible developmental process that reflects the neurobiological plasticity, open to any input experience. Its perception, therefore, is influenced in a certain way, by an interaction of different biological factors, ethnics, mental problems, and personality peculiarities, with a variety of socio-cultural factors, such as family dynamics, educational levels, cultural background, surrounding environment, closeness and familiarity of the diverse levels of our environment. Hence, there are human universals and individual differences.

Even within the typical universal trends, there are specific human ways and individual differences in the display of these universals. For instance, some situations demand a more specific approach, like young man *vs.* adult man *vs.* old man, or any other situation, as its closeness to the subject. The individual differences in the continuum of being aggressive or non-aggressive are, at least partially, a product of the interaction of a variety of bio-psychosocial factors. These factors may include different values, beliefs, and attitudes toward aggression and levels of justification of aggressive acts and feelings.

Personality can be conceptualized as "a set of stable structures that individuals use to interpret events in their social world and to guide their behavior".[3] Each individual has specific personality traits, which can be predictors of behavioral outcomes as well as of their perception. For instance, they have been used for identifying high-risk adolescents with aggression and serious emotional disturbance (SED).[4]

In the case of human aggression, one should expect a positive correlation with other related psychological constructs, such as anger, hostility, and impulsivity, as suggested by some empirical findings of our group.[5,6] Certain traits predispose individuals to higher levels of aggression. One breakthrough, for example, was the discovery that certain types of people who frequently aggress against others do so in large part because of some susceptibility towards hostile attribution, perception, and expectation biases.[7,8] Another one contradicts longstanding beliefs of many theoreticians and the lay public alike: high self-esteem (and not low self-esteem) may lead to high aggression. Specifically, individuals with inflated or unstable self-esteem (narcissists) are prone to anger and are highly aggressive when their high self-image is threatened.[9-13] Moreover, other researchers reported that people with narcissistic personalities who experience social rejection are more aggressive than those who are not so self-absorbed, a finding that may help explain why some teens resort to violence whereas others do not.[14]

Mental disorders, affecting the capability of the subject for learning, communicating, behaving, etc., can also constitute a risk for perpetrating or being victims of violence.[15] Contrary to non-psychopathic criminals and psychopaths who are not killers, psychopathic murderers fail to see violence as unpleasant.[16] The finding that psychopathic murderers had more positive reactions to violence may also help to understand some justification of aggressiveness, at least in some subjects with abnormal cognitive associations regarding violence, which may underpin their actions.[17-19] It has also been found in normal samples (i.e., subjects without any clinical abnormal diagnosis) that aggression can bring pleasure, which consequently leads to its instrumental justification,[20] usually meant as a planned, controlled, unemotional aggressive act, in contrast with the emotionally charged, uncontrolled type of aggressive display, known as hostile.[5,21]

Besides the individual psychobiological factors, we cannot forget the influence of our social context: family, peers and friends, school, and different levels of community as well as other socio-cultural factors on the perception and evaluation of an eventual risk, such as aggression might be. We all learn our adequate coping skills and behavior for living in our own environment, especially during the critical period of development.[22] For example, research shows that people who have experienced violence in early ages have a higher probability of being aggressive themselves when they become adults.[23]

The effect of family violence on childhood and personal development has become the subject of social science analysis.[24] Negative family dynamics, such as stress, conflict, or lack of communication within the family, may favor the justification of violence, and consequently its level of manifestation. The vicarious experience of violence within the family has nearly as profound an effect on children and adolescents as if they were the victims.[24] Parents who say "we don't hit our children but we smack each other around" still harm their children. Exposure to violence between parents significantly increases the risk for adult partner violence. It has also been reported that teenage girls who were the subject of violence from a parent or witnessed domestic violence engaged in riskier sexual activity at least three times more than a teenager who did not experience violence in the home.[25]

Peer-group influence on adolescent violence is also well established. Having delinquent friends or belonging to a gang often means a higher probability of committing violent acts.[26] It also extends to bullying behavior: peer groups influence early adolescent bullying behavior.[27] Besides repeated anecdotal evidence from a series of school shootings across America, some findings suggested that social exclusion or rejection by peers may indeed lead to aggressive behavior and violence, even in children who might not have been aggressive otherwise.[28] But, on the contrary, another study[29] found that aggression equals popularity among young teens: seventh- and ninth-graders perceived their relationally aggressive classmates to be more popular than meeker students.

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School is another important factor related to the expression of aggression in pre-adolescents. Between 20% and 50% of the high risk behaviors in youngsters are related to the following three aspects: poor academic performance, too much free time, and having delinquent peers.[30] Poor academic performance and dropping out of school seem to be consistent predictors of violent acts and delinquency in adulthood.[24,31] Attending low quality schools may also foment an inner sensation of being abandoned by society and, consequently, it is not surprising that they experience a surge of anger and alienation.

Our environment may also offer other risk factors, such as the deterioration of the community, abuse and misuse of mass media,[32] alcohol and illegal drugs, having suffered violence, access to weapons, and discomfort. Related to the latter one, for instance, noise may act as a stress or that causes unwanted aversive changes in an affective state, such as anger.[33] All of these, therefore, may have a negative influence, thereby reducing the desensitization towards violence.

The level of perception and justification of aggression according to its closeness or familiarity to the subject and its relationship to personality has not been totally analyzed yet. There are different levels of environment if one considers it in a closer and familiar context, such as the neighborhood or the school, or in a much wider one, such as in the world, or even just 'globally speaking'. We may call them: direct and indirect social surroundings, respectively.

It would be very useful to have a deeper understanding of the multiple risk factors that increase the level of acceptance of aggressive and violent attitudes in society, because it may help develop better ways of dealing with this social problem and reduce unnecessary human aggression. The more the adolescents are exposed to these factors, then the greater is the probability of violence.[23] Those subjects exposed to such risk factors without enough psychological protective factors may be the most vulnerable to violence.[22,34]

Consequently, the present paper will focus mainly on the consideration of how the perception of their own aggressive acts and other related phenomena may depend on how people self-report themselves, as having an aggressive or non-aggressive personality. The influence of some socio-cultural factors, which has also been studied,[3,4] suggests questions such as: a) Is there any influence of the closeness or familiarity of the environment on the perception of aggression by aggressive and non-aggressive people? b) Do aggressive and non-aggressive people justify aggression in the same manner? Findings related to important biological factors, such as age and sex, will not be addressed in this work.

The following hypotheses are put forth:

1. There is a positive correlation between the aggressive or non-aggressive personality of the subjects and their perception level of aggression and other related psychological constructs, such as anger, hostility, and impulsivity.

2. Subjects with higher aggressive personality will also show a higher justification for aggression in others.

3. It is expected that a stronger positive correlation exists between closer or more direct surroundings (e.g., school) and aggression than between wider or more indirect surroundings (e.g., world) and aggression.

METHOD

Four self-report instruments were administered to 2110 subjects of both sexes (45% males and 55% females) and different ages (9 to 17 years of age, mean 12.67, standard deviation (SD)=2.76). The subjects were pupils at public secondary schools in Madrid. Their participation in the study was voluntary and anonymous.

1. The Aggression Questionnaire (AQ), is a 29 item self-report instrument assessing aggression, anger, and hostility.[35] Each item is scored using a 5-point scale. AQ scores have a large cross-cultural validation. Originally developed for its application in the Anglo-Saxon culture, it has been used by researchers of different countries and translated into several languages, including Dutch,[36] Slovak,[37] and Spanish and Japanese.[38] In the present study, an adapted version for Spanish adolescents and pre-adolescents was administered.[32,39] The Cronbach's reliability of the overall scores obtained in the present study was α=.87 and the 95% confidence interval (CI) ranged from .86 to .88. The subscale score reliabilities were: α=.79 (CI .78, .81) for physical aggression, α=.72 (CI .70, .74) for verbal aggression, α=.66 (CI .64, .69) for hostility, and α=.68 (CI .65, .70) for anger.

2. The Barratt Impulsiveness Scale (BIS) is the first self-report measure developed to measure trait impulsiveness (Barratt, 1959). Its original version had 80 items. However, over several decades, newer versions have been developed in order to improve the construct validity of the scores. The newest version is the BIS-11, with 34 items.[40,41] It is an internally consistent measure of impulsiveness (α=.82 in non-clinical subjects, and α=.83 in psychiatric patients). A version for Spanish adolescents and pre-adolescents has been adapted and the scores have been validated by us.[42] In the present study, the reliability of the whole scale scores was α=.81 (CI .79, .82). The reliabilities for the subscale scores were; α=.66 (CI .63, .68) for motor impulse, α=.61 (CI .59, .64) for unplanned impulse, and α=.64 (CI .62, .67) for cognitive-attentional impulse.

3. The State-Trait Anger expression Inventory (STAXI-2)[42] provides a relatively brief, objectively scored measure of the experience, expression, and control of anger.[43,44] It has three parts: Anger state, anger trait, and the anger expression index (AEI). It has been shown to be useful in normal and abnormal individuals.[33,45] The reliability of the whole

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scale scores was α=.82 (CI .81, .83). The reliabilities of the subscale scores were α=.91 (CI .90, .92) for anger state, α=.83 (CI .82, .84) for anger trait, and α=.71 (CI .69, .73) for AEI.

4. Perception and justification of violence were measured by an ad-hoc self-report created by the researchers, under the acronym SAR. Subjects were asked about their own violence (the self-perception of their personality), as well as that of their peers and their environment, distinguishing different levels of closeness or familiarity. It consists of 10 questions with two possible answers, structured in three parts: a) 2 items on the consideration of themselves and their peers as being aggressive or non-aggressive (1=non-violent, 2=violent); b) 6 items on the level of aggression perceived in different social environments: world, city, neighborhood, school, their immediate friends and peers, and home (1=low, 2= high); and c) 2 items on its degree of justification of the use of violence, perceived as an instrumental tool in two contexts: for defense, and for being respected by others (1=Yes, 2=No).

RESULTS

A discriminant analysis was applied in order to determine whether the AQ, BIS and STAXI measures discriminate between violent and non-violent groups. The distribution of the test scores was analyzed using Z-scores to detect outliers (cut-off: Z=3.0, p<.0028). Moreover, the predictor variables did not show any problem of multicollinearity and the skewness and kurtosis coefficients were lower than 1.0 in all the tests, therefore verifying the assumption of normality.

The discriminant function of global scores of AQ, BIS and STAXI (Wilks' λ=.90, $\chi^2(3)=190.59$, p<0.001) resulted in a 77% correct classification in of the cases. However, in a separate analysis, when using all the subscales, the best predictors of violent discriminant function were AQ subscale Physical Aggression (AQ-PA), the STAXI (AEI) expression of anger, and the BIS motor impulsivity (MI) (Wilks' λ=.87, $\chi^2(3)=256.33$, p<0.001). This resulted in an 81% correct classification of the cases. Consequently, the latter alternative was chosen (test of independence $\chi^2(1)=186.4$, p<0.001).

The standardized canonical discrimination coefficients were .80, .28 and .09 for AQ-PA, AEI and MI respectively, and the Fisher's linear discriminant function in each group were:

Non-violent=-10.58+0.25(AQ-PA)+0.04(AEI)+0.76(MI)
Violent=-17.72+0.46(AQ-PA)+0.09(AEI)+0.79(MI)

The predictive usefulness of the discriminant analysis was high: 82% of the self-rated non-violent subjects (1389 from 1699) and 75% of the violent ones (79 from 106) were identified correctly (Odds ratio (OR)=1.53, p<.007). Table 1 shows the correlation between scale means of these measures as a function of violent and non-violent subjects.

	MI	AQ-PA	AEI	Non-violent	Violent	*t*-test
MI	1	.35***	.45***	18.77(4.52)	22.47(4.76)	-8.15***
AQ-PA	.31***	1	.47***	18.01(6.10)	27.90(7.72)	-7.87***
AEI	.34***	.55***	1	27.26(10.24)	39.24(10.19)	-11.69***

***p<.001

Table 1: Pearson correlations for the three scales of the discriminant function: scores above the diagonal belong to non-violent subjects, and those under the diagonal to the violent group. Right: Means (SD) of both groups in the three tests. The statistically significant differences were calculated by Student's *t*-test (df=1803).

Although it may have also included among the non-violent ones some self-rated violent subjects with a non-violent profile, the ratings of most of them are very close to the value 0 (Figure 1). Consequently, it would be convenient to analyze in detail those subjects with a profile near 0 in order to get a more accurate classification.

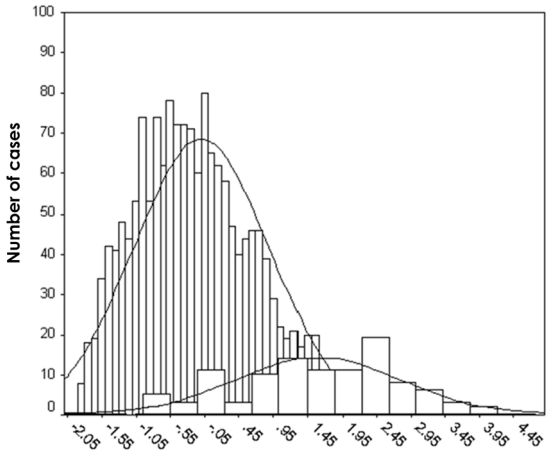

Figure 1: Number of cases in each score obtained applying the discriminant function. Thin bars represent non-violent subjects (each bar represents an interval of 0.10 points), and thick bars violent subjects (each bar represents an interval of 0.40 points).

The SAR intended to find out whether there was any relationship between the self-perceived violent personality and the perception of an aggressive environment (their world), and the justification of violence as an instrumental function, for instance as a defensive tool or for being respected by others.

Table 2 shows a positive correlation for each question of the SAR between self-perceived personalities (1=non-violent, 2=violent) and their perception of violence among their peers, (1=non-violent, 2=violent), and the amount of aggressive people in their social environment-world, city, neighborhood, school, friends and peers, and home (1=few, 2=many): the more violent you feel yourself, the higher level of aggression you perceive in your environment. This correlation is higher when the group is closer to you – for instance, peers (τ_b=.25), friends (τ_b=.23) and home (τ_b=.19) than in farther or more abstract environments, such as the world (τ_b=.07) or the city (τ_b=.07). There were sta-

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	Oneself	World	City	Neighbors	School	Friends	Home	Peers	Respect	Defense
Oneself	---	.07	.07	.11*	.10	.23*	.19*	.25*	.24*	.17*
World		---	.02	.03	-.01	-.04	-.05	.06	.06	.08
City			---	.30*	.22*	.05*	.07	.26*	.09*	.04
Neighbors				---	.20*	.16*	.12*	.19*	.09*	.01
School					---	.18*	.12*	.34*	.10*	.08*
Friends						---	.26*	.15*	.14*	.09*
Home							---	.05	.06	.05*
Peers								---	.25*	.18*
Respect									---	.31*
Defense										---

*p<.05

Table 2: Kendall's τ_b Correlations between the degree of aggressivity perceived in different environments (World, City, Neighborhood, School, Friends and Peers, and Home), the degree of violence perceived (towards oneself and towards the peers), and the justification of violence as an instrument to get respect or as a mean of defense. Given there are a larger number of correlations, a Bonferroni correction for p values were done.

tistically significant differences among the pairwise dependent correlations(Footnote 1); Peer *vs.* world or city (Z=5.7, p<.001, Z=6.4, p<.001), friends *vs.* world or city (Z= 4.8, p<.001, Z=4.8, p<.001, 5.0 p<.001), and home *vs.* world or city (Z= 3.6, p<.001, Z=3.8, p<.001).

Finally, getting respect had a significantly higher correlation with oneself (τ_b=.24) than defensive justification did (τ_b=.17). The difference between both correlations was statistically significant (Z=2.61, p=.009), even if it was considered a small effect size (Cohen's q=.07).

DISCUSSION

This study analyzed whether there was any relationship between the self-rating of having a violent or non-violent personality and their aggression, the perception of violence in their environment, and the justification of its eventual instrumental function.

One of the most interesting aspects of our findings is that the perception and justification of aggression depends on the personality of the subject. The more violent one perceives oneself, the more aggression one perceives. More specifically, the results showed that: a) those subjects who considered themselves violent express significantly higher scores in several aggression tests than those who considered themselves non-violent; b) those subjects who consider themselves violent perceive a higher aggression level based on their surroundings. That is, perceived aggression is higher in their closer and more familiar environments (such as peers and family) than in more 'unspecific' and far ones, such as the community or the world in general; and c) they feel a higher justification of aggression than the rest of people. This includes instrumental means for solving problems or for obtaining a variety of objectives, such as being respected by others.

What is the picture of the relationship revealed between aggression and other aggression-related variables? There is a consistency in the level of different types of aggression with other psychological correlates, such as anger, hostility, and impulsivity. Reports of engaging in hostile aggression are associated with expressing anger, more general irritability, and an inability to inhibit action. Aggression would be significantly related not only to the personality traits of anger/hostility but also to those of impulsiveness. The individual who uses hostile aggression might be characterized as one who is not only inhibited in social interaction but also is likely to experience and express anger. Our own research group found that aggression can be reflected in the different personality constructs, measured by self-reports in which anger and impulsiveness are positively correlated with hostile aggression, but not with instrumental aggression; non-planning impulsiveness is positively correlated with some situations related to hostile aggression, such as emotional agitation or lack of communication, but not with instrumental aggression; and hostility is positively correlated with anger and different kinds of aggression, but not with its degree of justification.[48,49] Reports of engaging in instrumental aggression show that if one wants to be really skillful in a pretended goal, then you should control anger. An aggressive act thus does not have to be necessarily accompanied by anger or by the desire to hurt.[48,50]

The traditional assumption that anger necessarily causes aggression had been already questioned.[51] Anger plays several causal roles in aggression. First, it reduces inhibitions against being aggressive in atleast two ways. Anger sometimes provides a justification for aggressive retaliation; it is part of the decision rule in the aggression script. However, anger may also sometimes interfere with higher-level cognitive processes, including those normally used in moral reasoning and judgment, which are part of the reappraisal process. Second, anger allows a person to maintain an aggressive intention over time. Anger increases attention to the provoking events, increases the depth of processing of those events, and therefore improves recall of

[1]The difference in the correlations was analyzed using a back transformed average Fisher's Z procedure.[46,47]

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those events. Thus, anger allows one to reinstate the state that was present in the originally provoking situation. Third, anger (like other emotions) is used as an information cue. It informs people about causes, culpability, and possible ways of responding (e.g., retaliation). If anger is triggered in an ambiguous social situation, the anger experience itself helps resolve the ambiguities and does so in the direction of hostile interpretations. Fourth, anger primes aggressive thoughts, scripts, and associated expressive motor behaviors. Such anger-related knowledge structures are used to interpret the situation and to provide aggressive responses to the situation. One related consequence of the many links between anger and various knowledge structures is that people frequently pay more attention to anger-related stimuli than to similar neutral stimuli. Fifth, anger energizes behavior by increasing arousal levels. Given that aggression-related knowledge structures are also primed by anger, aggressive behavior is one likely form of behavior that is energized by anger.[4] Finally, anger also plays a key role in human co-operation.[52] In contrast to the common view that negative emotions lead necessarily to pessimism, the emotion of anger might also lead to optimism. Those who experience anger are more optimistic about the future, less likely to take precautionary actions, and more likely to favor aggressive policy responses than those who experience fear. The fact that those subjects with a non-defined personality obtained intermediate scores in all the tests also suggests that they are aware that their personality does not match either with the violent or with the non-violent one.

The use of these and similar self-rating personality measures, therefore, may help to clearly differentiate aggressive subjects from 'normal' samples. They seem to be good indicators for the diagnosis of how the eventual violent or non-violent personality arises and develops. This has a consequent interest from a medical perspective because it helps to predict eventual future violent outcomes. A better knowledge about certain risk and protective factors would help to correct them, such as feasible interventions.[4]

The social perspective of aggression cannot be left aside. An individual's learning history determines to a great extent what kinds of behaviors will be linked to various threats. Nonetheless, it is striking how often aggression is the dominant response to such threats. We suggest two sources for this commonality. First, aggression frequently works in the short run, especially for more powerful people who wish to control the behavior of those with presumably less power (e.g., parents punishing children; male-on-female aggression). Second, there seems to be a "preparedness"[51,53] to emit aggressive behaviors when faced with either physical or psychological pain. Perhaps, the anger-aggression linkage is one that humans are evolutionarily prepared to learn.

Peer-group influence is well established on adolescents, which also extends to bullying and physical fighting behavior.[27] Even when individual students engaged in little or no bullying, they appeared to largely accept it as part of the culture or climate, as "just how things are." We really need to consider this tendency of children to go along with the group, even when they know it is very hurtful behavior. Moreover, children who might not have been aggressive otherwise will often become aggressive after they have been rejected by their peers. The social exclusion and rejection by peers may also lead to violent behavior. These findings fit with what researchers call the "homophile hypothesis" which suggests that individual behavior is influenced by the groups to which they belong.[28]

The perception of more violence within the family in violent children and adolescents found in our study fits with our hypothesis. This influence is not limited to those who regularly receive harsh punishment, becoming direct real victims, but the vicarious experience produced by mere exposure to violence between parents is also a risk factor that seems to predict later violence.[25] A history of physical abuse by a caretaker thus appears to increase the odds of using similar tactics of conflict resolution in adult close relationships.

We also found that the perception and justification of aggression in others depends on their physical or psychological closeness to the subject. The more violent one perceives oneself, the more aggression is perceived in closer and more familiar environments. Violent subjects perceived that there is higher aggression among their friends, peers, and family than non-violent subjects did. A possible explanation could be that living in a violent home or having aggressive friends might be the main social breeding ground for having a violent personality. These variables might have more influence than others like the aggressivity perceived within the neighborhood and school, and even more than the ones in the city or the world.

Finally, just a few comments related to the higher justification of aggression observed among violent people. Most people do not commit extreme acts of violence even if they could do so with little chance of discovery or punishment because the aggression inhibitions normally operate in them. Such self-regulation is due, in large part, to the fact that people cannot easily escape the moral standards that they apply to themselves. Self-image, self-standards, and sense of self-worth are used in normal self-regulation of behavior.[38]

It has already been mentioned that psychopathic murderers fail to see violence as unpleasant, and consequently they have no moral dilemma.[16] They are often portrayed as cold-blooded, emotionless and lacking in remorse, but they are also adept at lying and at feigning the emotions in which they are deficient. Our group has also observed how aggression elicited a higher pleasure in preventive and long-term inmates,[12,18,19] and can even bring pleasure to people with apparently normal moral standards.[20] It could be argued, therefore, that the criminal mind has abnormal cognitive associations regarding violence, which may underpin their actions.

Sometimes criminals may behave reprehensibly to-

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wards others, by committing such actions as murder, torture, and even genocide. Several research groups have independently identified and discussed how these inhibitions can be overridden.[54-57] Several factors influencing aggression may also operate by reducing inhibitions; for instance, the already mentioned pleasure. Extreme anger or agitation may also increase aggression by reducing inhibitions; similarly, some drugs can reduce aggression inhibitions. Two particularly important mechanisms that allow people to disengage their normal moral standards involve moral justification and victim dehumanization.[4]

Some arguments, which lead to an instrumental justification for extreme and mass violence, include: "it is for the person's own good,";"it is for the good of the society"; it brings pleasure or popularity; or personal honor demands the violent action.[58] These common justifications can be applied at multiple levels, from a parent's abuse of a child to bullying, a behavior which may be getting youth what they want, which is to be popular, even when they know it is very hurtful behavior.[59]

Dehumanizing the victim operates by making sure that one's moral standards are simply not applicable. War propaganda obviously fits this mechanism, but people also use it at an individual level. Potential victims are placed in the ultimate outgroup, as if they would not have enough human qualities, such as the "us" *vs.* "them" dilemma clearly shows. In essence, new knowledge structures are created that explicitly move the target group into a category for which aggression is not only acceptable but also a part of the script.

Perception and justification of aggression thus is not a context free, biology free, random process, nor the result of parental training during the first years of life. Even within the individual differences there are human universals.[60,61]

Our results appear to match quite well with the central "knowledge structures" suggested in the General Aggression Model (GAM) for guiding people's interpretations and behavioral responses to their environment: Three of which are considered important: 1) perceptual schemata, which identify phenomena including social events (e.g., personal insults); 2) person schemata, such as beliefs about a particular person or group of people; and 3) behavioral scripts, which comprise information about how people behave under certain circumstances.[3,62] Its application for the assessment of violence in people would also be promising in relation to a positive prevention and treatment of violence. The most successful interventions appear to be those that address multiple sources of potentially maladaptive learning environments, and do so at a relatively young age.[63] This can have a significant beneficial impact on violent juvenile offenders. An intervention should include a multisystemic therapy,[64,65] which is a family-based approach that first identifies the wide range of factors contributing to the development and maintenance of violent behavior: psychobiological (e.g., age, sex, personality characteristics) and social (e.g., peer-group, family, school, work, neighborhood and cultural factors). Intervention is then tailored to fit the individual constellation of major contributing factors to the violent behaviors of the individual undergoing treatment.

CONCLUDING REMARKS

The prediction of psychobiological and environmental risk factors concerning violence is central to understanding its genesis and prevention because we are social animals. From an evolutionary standpoint, our species requires not only food and shelter to survive, but also an ability and propensity to work co-operatively in social groups. Several common social needs appear repeatedly in the writings of scholars across many areas of psychology.[66] One such list might include the needs to (a) view oneself positively (self-esteem); (b) believe that others view the self positively (social esteem); (c) perceive the world or the hereafter as a just place; (d) belong to a social group; and (e) view one's group positively (group esteem). Threats to these needs are often the source of aggressive behavior. Consequently, aggression and violence should be analyzed from a wide perspective, such as the result of a multiple interaction of several variables. These factors include: 1) violent personalities; 2) high degrees of impulsivity; 3) physiological arousal related to anger and hostility; 4) a belief system or aggressive script, that excuses or justifies violence; and 5) a model or suggested course of action that may be derived from observing similar scenarios in the media or in real life,[38] especially among closer social groups, such as peers and family.

Although the exposition to those social risks as well as to stressful and conflictive situations and their interaction with some personal circumstances, such as age, sex, values, beliefs or any other psychobiological characteristic, may foment a violent personality,[4] obviously it does not mean that the subject has to be necessarily aggressive or violent, or predestined to become a delinquent, as the Seville Statement on Violence clearly stated quite a few years ago.[67]

Further research needs to be performed examining not only the change of the attitudes toward aggression throughout adult life, but also the specific characteristics of both sexes, in order to identify certain risk and protective predictors of behavioral outcomes in high-risk patients with aggression and serious emotional disturbance.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

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