Academy of Romanian Scientists *Volume 8, No. 1, 2019, pp. 53 - 64*
Annals Series on Biological Sciences ISSN 2285 – 4177

ORIGINAL PAPERS

Aggressiveness in Children – A Serious Problem of Nowadays' Society

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Abstract

Our society is experiencing many problems during this period, among which the worse is the increase in the number of children with aggressive behaviour. In the media, we encounter many cases of children who are aggressive at school, who join gangs committing all sorts of antisocial, even very serious, facts. The causes of this deviant deficiency in children may be innumerable: the existence of a disorganized living environment, affective defects, or too much family protection at the same time may present some metabolic imbalances that may lead to behavioural erosion. The variety of these causes makes it difficult to determine this issue exactly. It is the medical cause that generates behavioural changes in children. A series of detailed biochemical analyzes could determine what is causing behavioural modification. In boys, if the testosterone level is high, the level of aggression will increase. Also a high concentration of lead or cadmium in the blood can influence the behaviour, the person becoming more agitated, nervous and even aggressive. In conclusion, if there is collaboration between teachers, psychologists and doctors, certain solutions will be found to solve the problem of aggression in children.

Key words*:* behavior, aggression, children, future, metabolism.

Introduction

Our society is experiencing many problems during this period of which I consider one of the most serious is the increase in the number of children with aggressive behaviour. In the media there are many cases of aggressive children at school who join gangs committing all sorts of antisocial deeds, and what is worse is that most of these children commit violent acts. The causes of this deviant behaviour in children may be countless: the existence of a disorganized living environment, affective defects, or too much protection from the family, but at the same time certain metabolic imbalances may appear that can lead to the modulation of behaviour. The variety of these causes makes their exact determination difficult. It is the medical cause that generates behavioural changes in children. A series of biochemical analyses may determine the cause of

behavioural modifications. In boys, if the testosterone level is high, their aggression will increase. Also a high concentration of lead or cadmium in the blood can influence behaviour, the person becoming thus more agitated, nervous and aggressive.

In conclusion, if there is collaboration between teachers, psychologists and physicians, solutions will certainly be found to solve the problem of aggression in children. Parents should take immediate action when they notice the change in their children's behaviour to prevent these traits.

Aggressive concept – general notes

A first meaning of aggression is that of aggressive behaviour. From this perspective, aggressiveness can be defined as "a set of hostile behaviours that can manifest themselves consciously, unconsciously or fantastically in order to drive, degrade, constrain, deny or humiliate a person, an object invested with social significance (self-aggression), such as self-destructive behaviours encountered in some mental disorders or even outside of them (rational suicide)" [1].

By defining a destructive and violent behaviour, oriented towards people, objects or self, aggression has long been understood as an instinct or as a necessity, conditioned affectively, to react to excitation or frustration. Some western psychologists speak in this respect of the basic tendency of delinquency to represent a form of "adjustment" of physical infirmity that causes frustration and generates the individual's propensity to aggression. In the context of psychoanalytic interpretation, aggression is seen as a result of the "barriers" imposed on instinctual tendencies [2].

At the core of the notion of violence lies therefore the idea of force, the idea of a natural power that is exercised over a worker or another person. The notion of violence refers to the illegal and unlawful use of force and can be defined as an acute aggressive behaviour, characterised in particular by the use of physical force [3].

In this sense, violence is a particular form of force - the strong, strong form of force - which is characterised by the use of physical means to harm others. It can be exercised in a direct or indirect manner, reaches different degrees (murder, injury or just threat) and is directed to different levels, such as faith, freedom or physical integrity [4].

One of its most visible expressions is physical violence that occurs in a situation of interpersonal interaction. It can be defined as a direct, corporal attack against an individual, and it has a threefold character: brutal, external and painful [5].

Violence is, therefore, the material use of force, measured by the prejudice - more or less seriously committed to the detriment of another person. Aggressiveness, which is not synonymous with violence, is behaviour that is intended to harm another person (physically or verbally) or aims at the destruction of property [6].

During instructive activities, posture or behavioural reactions provide important clues as to their difficulties in adapting to school. The poor school situation in some instances is also due to the absence of the conjugate-conscious activity of the school environment, in 32% of the cases the pedagogues did not know any member of the minor's family with predilectional attitudes, in 53% of the cases, the teachers and the class adopted an indifferent attitude towards the delinquent minor, which led to its marginalization and isolation from the peers. Teachers can make life easier for these children, and this should always be done [7].

In terms of aggression in adolescence, R. Epstein brings a view contrary to the currently expressed opinion, considering that the specific agitation of adolescents today is due to the phenomenon of "artificial extinction of childhood" beyond puberty. In the last century, young people were "infantile" and the elders were treated as children, being also isolated from adults. That is why we do not find it surprising to find that in many Western cultures adolescents socialize almost exclusively with other teenagers. Moreover, studies on intelligence, perception and memory show that adolescents are superior in many respects to adults. In other words, adolescence's agitation is a creation of a current age (and hence the changes in neurophysiology of their brains). We must therefore remember R. Epstein's conclusion: "we must replace the myth of the immature teenage brain with a correct vision of adolescent ability and understanding in history, adolescents from other cultures, and the truly extraordinary potential of our young people today" (R. Epstein, 2007 - www.sciamind.com).

Several researchers having studied and contributed to a growing body of literature on relational aggression argue that there is still a lack of agreement on the common terminology (Archer & Coyne, 2005;Leff et al., 2010; Merrel et al., 2006) [8]. Specifically, there is currently a debate in the field regarding which term is most appropriate to be used when discussing nonphysical types of behaviours: indirect aggression (Björkqvist, 2001) [9] defined as a way to harm the target by rejection or exclusion (Archer & Coyne, 2005), social aggression (Underwood, Gaelnand, & Paquette, 2001) [10] used to describe manipulations in group acceptance aimed at damaging the victim's self-esteem or social status (Card et al., 2008), and relational aggression (Crick &Grotpeter, 1995) [11]

referring to behaviours carried out in a covert way, such as peer group exclusion or rejection, rumour spreading and embarrassment in a social setting (Griffin & Gross, 2004) [12].

Although Crick and Grotpeterfirst introduced the term of relational aggression in 1995, similar behaviour had been studied for years by researchers using the term of indirect aggression, which as Björkqvist(2001) claimed was in use prior to the term of social aggression. Underwood et al. (2001) argued in favour of using the term of social aggression, not only because it is one of the earlier terms but also because it is a comprehensive term, including behaviours encountered in relational aggression and indirect aggression while being the only term that specifically incorporated nonverbal behaviours [13].

Studies conducted by American criminologists have highlighted the fact that violent crimes are strongly associated with the identity of a young man belonging to a low income family and where parental abuse or couple dismantling are common characteristics [14].

The theories of biological factors and aggressive behavior

Theories on biochemical imbalance

The implications of balance and hormonal imbalance have deeply penetrated the language of human biology and physiology, its effects being the subject of many studies not only among biochemists but also criminologists. Biological theories consider aggression as an innate tendency for action, an instinct, a predetermined pattern of responses that are genetically controlled. One of the most famous positions was developed by Konrad Lorenz, who stated that aggression in man is a spontaneous inherited tendency, resembling thirst and hunger. Man gradually accumulates a certain aggressive energy capacity which, if not regularly discharged, increases and intensifies [15].

Researchers assume that aggressiveness acts as a hormonal stimulator and, accordingly, assures the growth of muscle and bone tissue. Thus, from an early teenage period, more aggressive boys gain a physical advantage when they compete for girls' attention and hierarchical competition. It is obvious that these mechanisms originate in the evolutionary past of the species. Hierarchical aggression among children and adolescents is accompanied by other benefits. According to human ethology research, preschool children demonstrating more initiative gain the attention of others, and if they are more aggressive than the average (but not overly aggressive) they will be perceived as leaders taking control of some processes in the group.

The only more realistic research of time was Berman's, 250 criminals, which he compared with a control group of normal, non-criminal boys in New York. Those considered criminals had a distribution of glandular defects 2-3 times higher than those in the control group. The same thing happened to a group of young delinquents, compared to another group of unmarried men of the same age. However, the most obvious difficulty that puts the test under question is that Berman does not explain in detail how he made his comparisons, how they selected those in the control group, or which were the statistical results of the study (Berman, 2003).

Other studies at a special school for young offenders showed that there was no particular difference between those who had a normal functioning of the gland. Moreover, it has become logical that there is a relationship between the normal functioning of the glands and a normal sex life that cannot be used by those who claim that glandular dysfunctions have the same direct relationship with sexual offenses or other offenses outside the law.
There seems to be a relationship between testosterone, male sex hormone, and increased levels of aggressiveness of men. Several studies have found that more violent men have higher testosterone levels. However, existing studies both in the country and abroad refer to researches that are related to the activity of endocrine glands and the changes they produce in the personality of the patient, starting from the treatment they do, and we do not meet specialists who, starting from these findings, make connections between the crime and the hormonal imbalance. When asked about this, most tend not to see any direct relationship between endocrine hormones and murder, as there is not even a person's diet and murder, although there are voices who claim nutrition therapies are the big promise for the future treatment of criminals. (www.healthline.com/health/low-testosterone/do-testosterone-supplements-work)

Chromosomal complement theory xyy and xxy

Though ruled by many scientists, the Lombrosian dream of finding a palpable proof to prove the biological substrate of the crime has never been and will probably not be completely abandoned. Along with the development of modern research techniques, the concerns to establish a relationship between the criminal behaviour and the biological structures of the individual have moved into the genetic sphere. In the sixth decade of the twentieth century, advances in genetics have prompted a revival of the interest in applying the biologic model in explaining deviance. A series of investigations have attempted to identify possible relationships between deviant behaviour and chromosomal (gene-bearing) structure. As it is known, the human body has 46 chromosomes that make up 23 distinct pairs, each matched pair having a parent chromosome and a paternal chromosome.

The normal human karyotype is therefore represented by the 46XY gene formula for male and 46XX for females. Certain genetic accidents can, however, determine either a minus or a surplus of sex chromosomes in the genetic formula. As far as the chromosome minus Sexuality in the literature shows that the percentage of offending women with 46XO karyotype is insignificant. Significant correlations would appear, in some researchers' opinion, between chromosome surplus and crime. XYY chromosome complement is such a feature, and has stimulated a vast array of research to make sure it can be associated with criminal behaviour. In women, these chromosomes are of the same size and are called "XX" by their form. One of the two male chromosomes is smaller and different in shape, so male sex chromosomes are called "XY". At the conception, an egg and a sperm, each containing 23 chromosomes, unite and form a single cell that begins to develop as an embryo. It sometimes happens that an abnormal cell division occurs prior to conception, so that the sperm or egg contains more sexual chromosomes, and the resultant embryo will contain more chromosomes than normal. This abnormality was called the XXY, that is, the syndrome of Klinefelter, after the name of the person who discovered it.

Several researchers have agreed that Klinefelter's syndrome may be associated with testicular degeneration and sterility, breast size and moderate mental retardation. At these, more recent research adds alcoholism and homosexuality. However, it was enough for criminologists to make the discovery be taken into account and investigate groups of prisoners. Because the Y chromosome determines masculinity, it has been suggested that a man with a Y chromosome more (XYY) might be more aggressive and inclined towards aggressiveness. Many valves have done so in 1960-1970 Patricia Jacobs research in the UK. The genetic test of 197 delinquents in a prison in Edinburgh found that 7 of them had the 46XYY karyotype; in another group examined, the percentage being 2.8% (in the general population the proportion is 1 to 700). Based on these researches, P. Jacobs concludes that the frequency of this anomaly among prisoners would be due to the surplus of Y chromosomes that would genetically predict the individual to the crime. Y chromosome was also referred to as the chromosome of the crime, especially the speculative advertising made around the case of Richard Speck - who killed in Chicago on July 14, 1966, 8 nurses suspected of belonging to this karyotype, the unconfirmed suspicion, and Daniel Hugon who murdered in Paris on September 4, 1956 a prostitute carrying the same chromosome. Based on a study by Sorbin and Miller, it was concluded that contrary to the expectations of some reports and the media, the studies made are rather a demonstration that it is accepted that XYY men are not predisposed to aggression. In any case, as a group, they were less aggressive than their XY type comparators. The largest study that has negated Patricia Jacobs hypothesis is the one conducted in Denmark by American researchers Herman Witkin and Sarnoff

Mednik. The study initially included all male individuals born in Copenhagen between 1844 and 1947, a total of 31,436 of which selected a sample of 4,558 people, with a final survey of 4,139 subjects. Of these, only 12 subjects were found with the formula 46XYY, 5 of them having minor problems with justice, the worst case and the only violent case being a teenage girl sentenced to 9 months in jail. As for the correlation between the 47XXY anomaly, the name of the Klinefelter syndrome, some research shows that these people are at increased risk for mental disorders, sexual disorders (homosexuality, transsexuality, paedophilia). There are multiple research reports that find a higher proportion of criminals with this genetic formula in penitentiaries. The authors of these research reports, however, mention that this genetic anomaly is always associated with disfavouring factors from the family and social environment of the individual, which is, in fact, the general conclusion of these researches. (Http://www.history-cluj.ro/SU/anuare/2003/Florea.htm)

Aggressiveness caused by lead and cadmium poisoning

- Recent research on the evolution of the human body has concluded that the level of heavy metals in the body is 700 times higher today than that of our ancestors. Lead affects the psyche and sleep. Children up to 12 years of age are the most vulnerable to lead poisoning because it can irritate their brain. Symptoms of lead intoxication include frequent headaches, sleep disturbances, aggressive behaviour and lack of concentration, and irritability, anxiety, depression, and insomnia appear in adults. Lead is absorbed in the body in a small amount of food. However, lead poisoning often occurs when exposed to a polluted environment or stainless steel cookware. The most common treatment for removing lead in the body is vitamin C that protects the central nervous system. (http://terapiialternative.ro/metalele-grele-organismul-uman)

- Cadmium is the heavy metal that increases aggression. The most exposed to cadmium effects are people who smoke because the cadmium level in the blood increases directly in proportion to the number of smoked cigarettes. At the same time, cadmium intoxication can also be obtained by inhalation of exhaust gases or by eating fast food or loose coffee. Cadmium intoxication leads to irritability, confusion and fear. People who have a higher cadmium level than admitted have said during the latest polls that they have a lot of nightmares. At the same time, this metal seems to favour the appearance of cancer (http://terapiialternative.ro/metalele-grele-organismul-uman)

- In 2018, a case study of a 14-year-old child that was very aggressive was published. After the biochemical analyses were performed, some changes were observed. The patient V.V.G. has lead intoxication. In this case, the increased level of aggression can be due to the presence well above the acceptable limit of

lead in the body. This is a widely debated theory that can be supported by the outcome of this analysis. An increased level of testosterone confirms previous researches, according to which the high level of testosterone leads to aggressiveness [16].

Aggression, in any form, affects quietness in the school environment, and students are not part of an environment conducive to proper education. When the first signs of aggression are observed in children, action must be taken to find the cause that has led to this behaviour and, at the same time, to find solutions to remedy this situation. This high aggression may also be based on medical causes. Through detailed analyses, certain abnormalities can be determined, resulting in this deviant behaviour being triggered. If there is a coalition between school, family, and why not a doctor, the aggressiveness in children will improve and perhaps disappear. It is necessary to carry out specialized programmes to solve these situations. School violence can be stopped. Teachers teaching classes with aggressive children should use those strategies to help the child control their anger.

General biological/biochemical particularities of aggressive persons

- Increased serotonin levels in the blood
- Metabolism disorders
- Very powerful functional connections in the cortex

Serotonin, which is a neurotransmitter present in various organs including the central nervous system, plays an important role in the development of depression and anxiety due to the chemical disturbances it produces.

Serotonin acts as a neurotransmitter, occurs in the production of sleep, in mental and emotional processes (depression and anxiety, obsessive-compulsive disorder), in motor functions, in thermoregulation, in regulation of blood pressure, in the act of vomiting, in hormonal functions.

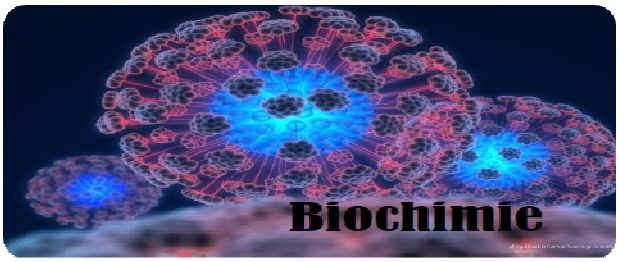
Some studies show that serotonin plays an important role in impulsivity, especially in impulsivity with aggressiveness.

Patient case Ş. I.

Ş. I. is 15 years old, is a 9^{th} grade student at an economics high school in the city of Constanta and has many active aggressions against his classmates and schoolchildren. He lives with his parents who have little time to spend with their son because of their jobs. He is a child who is not attracted to learning and hence poor learning outcomes. He has an inappropriate entourage and does not seem to be interested in his future.

At school he is very naughty because he wants to be the focus of people's attention. The father is a tough person and punishes him, but his mother always thinks her son is the best. She denies the truth by always trying to find excuses.

Teachers have big problems with him at school because of his aggressive behaviour. He does not go to the school counsellor because his mother disagrees, considering he does not need this. This is the big problem. Mother does not accept that her son has a very serious problem. The child needs specialized help to be less aggressive. If parents accepted the involvement of specialists such as school and medical psychologist, the child would have a chance for a normal future.



Hormonal analyzes

After performing the medical tests, we found that the patient had a high testosterone level of 3.21 (0.03-0.86), which influences his behaviour.

Generally, men are more prone to violent aggression than women. They are also more prone to violent crime. Male hormone, testosterone, is clearly related to aggression in all species of primates, including humans.

• Testosterone is the main male hormone. It is mostly secreted by the testicle under the action of luteinizing hormone (LH). LH is secreted in turn by the pituitary gland under the influence of another luteinizing hormone releasing hormone (LHRH) regulator produced by the hypothalamus. Controlling testosterone secretion is primarily through a negative feed-back system controlled by oestrogen levels (female hormones) and by androgen levels. (Www.hormone.org/hormones-and-health/hormones/testosterone)

• Haematology (method of impedance variation, spectrophotometry and flow cytometry

Mean erythrocyte volume -94.08 (77.00 -93.00) Other Laboratory Normal Values (73.00-88.00)

The mean red cell volume (VEM) is the volume occupied by a single erythrocyte. VEM is a useful index for anaemia classification and may suggest the pathophysiological mechanism of erythrocyte damage.

Together with other red blood cell indices, it can allow the early detection of processes that cause anaemia. VEM depends on plasma osmolarity and number of red cell divisions.

Increases RBCs - VEM:

Macrocytic anaemia.

Causes of macrocytic anaemia: in megaloblastic anaemia, vitamin B12 deficiency or malabsorption; pernicious anaemia (autoimmune disease), restrictive vegetarian diets, genetic diseases, dialysis, neoplastic diseases, intestinal diseases, aclorhidria, herpetiform dermatitis, medical treatment, leukaemia. Haematocrit - 46.6 (35-45) Haematocrit represents the mass of red blood cells (red blood cells) of a certain volume of blood. The process consists in harvesting the blood from a vein, then combining it with an anticoagulant and dispensing into a very narrow glass tube that is highly centrifuged in a centrifuge. Following this surgery, the separation of the blood in the upper layer (plasma) and the lower layer of red blood cells, which is the haematocrit, is observed. Haematocrit can be defined as the volume of red blood cells (in percentage) relative to the total volume of blood in the glass tube.

Conclusions

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Conclusions

Over-the-counter red blood cell volume may represent the presence of a macrocytic anaemia that has one of the causes of vitamin B12 deficiency or malabsorption. Research has been conducted that showed that vitamin B12 deficiency influences behaviour, making it more agreeable.

It can also be a lead intoxication. In the case of people with an increased level of aggression, the presence of heavy metals in the body is a widely debated theory that can be supported by the result of this analysis.

The increased testosterone level confirms previous research that high testosterone levels lead to aggressiveness. Researchers find that the level of testosterone can be altered by observing a fight for ascendancy.

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