

Review Article

Children and Adolescents' Violence: The Pattern and Determinants Beyond Psychological Theories

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Abstract: Background: Violence may be assimilated to actions or words that are intended to hurt. Youth violence includes a wide range of aggressive acts that may vary from bullying and physical fighting, to most serious forms such as homicide. Africa and Latin America are the continents where the highest rates of youth violence and homicide are reported. For many years in the past, media violence exposure alone was incriminated for children violence, but as time went on, it became clear that children violence is more of a resultant to a combination of factors contributing with varying degrees according to age, the intensity of exposure to a predisposing factor and the individual's predisposition or susceptibility to violence. This review aims to present in simple and accessible terms the various aspects of children and adolescents' violence. Epidemiological and psycho-pathophysiological aspects are described, with emphasis laid on the various risk factors and possible preventive measures. Method: A review based on past and recent publications treating the subject was done. The literature was screened, with relevant information critically analyzed. Results: The recurrent predictive factors for children and adolescents' violence found in the literature are: the exposure to media and community violence, drug use and abuse, neuropsychiatric and psychological disorders that manifest or worsen with violence, and inadequate parenting models. These predisposing factors are underlined by some other determinants such as gender, genetic and individual factors, culture, poverty, and peer effect or companionship principally. Conclusion: Violence in children is determined by intrinsic factors such as the developmental stage or age, individual's susceptibility or natural predisposition, and environmental factors such as media and community influences. The most essential of the preventive measures are based on the reduction of the various risk factors and their determinants which may be achieved by parental, scholar and governmental regulations.

Keywords: Children, Adolescent, Youth, Violence

1. Epidemiology

The World Health Organization (WHO) in its 2002 report on violence and health defines violence as "the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has likelihood of resulting in injury, death, psychological harm, mal development or deprivation" [1]. Youth violence includes a wide range of aggressive acts that may vary from bullying and physical fighting, to most serious forms such as homicide [1]. The highest rates of youth homicide have been recorded in the African continent and Latin America mainly [1]. Apart from the United States

of America (USA), most countries with youth homicide rates above 10 per 100 000 are either developing countries or countries facing difficulties with social and economic changes [1]. It has been reported that for every young person killed by violence, an estimated 20 to 40 other persons receive injuries that require hospital treatment [1]. Children violence has been of increasing concern for researchers over a number of years now, although more studies have been dedicated to violence perpetrated on children [2]. In all countries, young males are the principal perpetrators of violence among the pediatric population and are as well oftentimes the victims of the most severe forms of aggressions [1, 3]. Children violence appears to be a psychologically-elaborated act in response to a

socio-environmental malaise that yields to aggressive verbal or physical exteriorization [2, 4]. It may be expressed at home, in the street, at school or anywhere else. The various outcomes and explanatory theories elaborated about children violence are numerous and might seem confusing, especially for non-initiates to psychology [2]. However, a reflective analysis of various theories suggests a need for reassessment of past concepts and theories appraisal of the various risk factors and intervention measures, beyond psychological considerations [2]. In effect, the WHO has emphasized the necessity to adopt public health policies to prevent violence and reduce related morbidity and mortality in societies [1]. Relevant suggestions have been made as to the association of health services with violence prevention through family and community interventions [1].

2. Psycho-pathophysiological Background

2.1. Development of Violence

Children violence appears to vary with time and space as a significant proportion of aggressive children are likely to grow up to be aggressive adults, with levels of violence being highly dependent of their environmental context [5-7]. During childhood, there is a mechanical tendency to reproducing suggested behavior, good or bad as they may be [2]. This process of "social learning" which is important for development is the basis of the "social cognitive theory" [4]. A simplistic idealistic interpretation will suggest that good and bad habits may be learned through the same processes and perhaps at the same moment, but this does not happen in reality as there may exist a natural inclination to destructive or irresponsible behavior with anti-social learning and vice-versa [2]. This assumption is derived from and may be assimilated to the "catharsis theory" [2]. Moreover, contrarily to adults in whom satisfaction may be obtained by mere watching according to the "gratification theory", in children, instant satisfaction may go with learning and a need for action [2]. However recent findings demonstrated that even though childhood risk factors are known to predict the development of later conduct problems including aggressiveness, holistic assessment should equally consider current factors likely to exacerbate violence [8]. Adolescence is the period during which children referral to psychiatric clinic culminates, with global reports showing that the rates of violent offending are highest between 16 and 17 years of age [9, 10]. Nevertheless, the age range between 10 and 14 years is a particular relevant age to focus upon because it corresponds to the moment when children begin to seek more autonomy and control over their own choices, with a desire for auto affirmation and defiance [11]. Adolescence equally corresponds to a period during which children increasingly engage in negotiation with parents about rules and regulations, while parents gradually relax and allow them more freedom, perhaps to monitor their maturing process and

sense of responsibility [12, 13]. During adolescence, children behavior may become very suggestible with socio-environmental influences such as "peer effect" or companionship and media which act in concert with individual susceptibility, possibly determined by genetics [11]. Thus during this period, parents' rules may be less considered with corresponding risks and equivalent exposures to dangers [12].

2.2. Relative Effects of Parenting or Authority

Parental monitoring and adequate parenting styles may have significant impacts on violence control in children [14]. Parents may use four different known approaches in reducing children exposure to violence: the restrictive and the active mediations, the inconsistent restriction style, or the autonomy supportive style of mediation [15, 16]. All mediation models may have advantages and inconveniences, but their success mostly rely on the manner in which parents go about administering them [17]. Restrictive mediation consists in parents establishing strict rigid rules pertaining to a particular activity, to which the child must abide [11]. This might be the case with television, computer, video games, and other undesired distractions. The restrictive parenting model is described to be too controlling, especially in adolescents with whom there is possibility of causing reverse effects as opposition or revolt through phenomena such as the "boomerang effect" or the "forbidden fruit effect" [18-21]. Restrictive mediation may be used in last resort where other methods of mediation have failed [11].

The active model on its part consist in parents' discussion and explanation of the negative effects of a particular activity to children, with an aim to conscientize or raise awareness, so as to obtain children adhesion to rules and regulations, according to the "self-determination theory" [22]. Its success appears to be sex and age dependent, with more adhesion in boys [11] and more success with children aged above 10 years [23].

The inconsistent restriction model consists in occasional restriction while releasing or allowing at some other occasions [11]. This parenting style has been found to be associated with the greatest level of "boomerang effect" [18-20]. In effect, inconsistent restriction model of parenting may create sensations of unsatisfied needs with a desire to have more, and eventually open access [11].

The autonomy-supportive style of mediation may be considered as an ameliorated form of mediation that combines characteristics of both restrictive and active mediation styles [11]. Children are provided with justifications to the established rules and their perspectives seriously taken into consideration [11]. This model of parenting is associated with internalization and acceptance of rules and regulations among adolescents [11].

2.3. Conduct Disorder

A conduct disorder as far as violence is concerned is defined as a repetitive and persistent pattern of violent and

antisocial behavior as defined by the American Psychiatric Association [24]. Whereas a violent misconduct may be assimilated to a punctual wrongful violent behavior motivated by an intentional purpose or indifference to the consequences of one's acts [25]. There exists a reciprocal and directly proportional relationship between violent conduct in children and community exposure to violence [7]. In effect, exposure to violence through witnessing or victimization is associated with violent conduct in children [7]. In the other way round, most violent children tend to originate from violent neighborhoods [7]. Such relationships are even stronger in adolescents as they are further strengthened by the common "self-provoked situations" which is characteristic of adolescence [6, 26]. Therefore, there exist a sort of "negative spiral effect" and a "vicious cycle" between violent conduct in children and community violence exposure, which may manifest with physical or verbal aggressiveness [7].

Aggression or aggressiveness may be described as a behavior aimed at causing physical or psychological damage to someone [25-27]. It is a mode of violence expression and the two terms may be synonymous according to the context. There are two main forms of aggressive behaviors commonly described in children, which are: reactive and proactive aggressions [26]. Proactive aggression corresponds to an instrumental pre-meditated and goal-oriented form of aggression characterized by a relative low level of arousal or excitation [25, 26]. The neurobiological seat of proactive aggression is thought to be found in amygdala dysfunction and a reduced response to distress signals [28, 29]. It may be predictive of later delinquency, conduct problems and violence in mid-adolescence as well as criminal behavior later in life [30-32]. Proactive violence in children often results from greater violence exposure which causes individual's desensitization to violence effects with accommodation, habituation and eventually normalization [25, 26].

On the other hand, reactive aggression refers to an impulsive form of aggressiveness which is usually evoked by high arousal and strong emotions such as anger and fear [25-27]. It is better explained by the "frustration-anger" model characterized by an emotional response to anger, annoyance or disappointment resulting from a denied goal or will, for which the individual may cope or react with anger, aggressiveness or violence [32]. The neurobiological basis of reactive aggression has been linked to orbito-frontal cortex dysfunction and impaired emotion regulation [33, 34]. Community violence exposure, though less frequently, may give rise to reactive aggressiveness by affecting the "sensitivity in threatening" violence stimulation, or the neural arcs implicated in reactive aggression [25, 26]. More so, reactive aggression is also described to be associated with impulsivity and hostility [32-34].

A "cumulative effect" or process may be observed with time when a growing child is continuously exposed to a predisposing factor to violence, while "additive effect" or "summation" of several factors may as well enhance

externalization behaviors [2, 35, 36]. The end result is the perpetration of violence with different degrees and magnitude. A maximum level beyond which the child cannot be more violent may be soon reached, characterizing the "ceiling effect" [25-27].

3. Predisposing Factors

3.1. The "Media Violence Theory"

Exposure to media violence has theoretically been conceptualized as a modeling influence from which children can learn aggressive behaviors, especially if acted by an attractive character, rewarded or unpunished [37, 38]. There is evidence that violence viewing from television, computer, smart phones and video games produces substantial short term likelihood to aggressive conduct especially in small boys [3]. Nevertheless, long term effects may be observed with continuous exposure, as suggested by the "developmental theory" [2, 39]. About 93% of school children spend more than 50% of their leisure time watching television [3]. In 1992, the American Medical Association reported an average television viewing in children estimated at 27 hours per week and they would have seen close to 40 thousand murders by the age of 18 years [2]. Heavy television viewing participates in making children adopt virtual concepts such as violence acceptance as a societal practice which they can transpose to reality by action [39]. Children may equally interpret media violence as suggested games to play with other children [4]. It has been shown that the more children are exposed to television violence, the more aggressive they are in school, the greater they stand chances to get into troubles by the age of 19, the more likely they use violence against their children by 30 and the more they would be reported for aggression by spouses and convicted for crime [2, 40].

3.2. Community Violence

Exposure to community violence could be defined as the witnessing of violence by an individual within a community or being personally a victim, or both [27, 41]. It is a common and persistent public health issue in many city neighborhoods [42, 43]. According to the WHO, community violence exposure (CVE) is a global public health problem with highest incidences recorded in the USA, followed by Africa [1, 43]. It has been described that the association between CVE and violence in children is determined by the male sex and poverty [36, 44, 45]. Moreover, actual CVE appears to be more strongly associated with current violence in children than past exposures [27]. There exists a reciprocal relationship between CVE and the rate of delinquency in children [27]. Studies have shown that closer proximity with CVE is responsible for stronger psychological impacts in children such as emotional distress and internalizing symptoms which may serve as breeding ground for later externalization through violence [25]. Therefore, victimization in CVE accounts more than witnessing in terms

of inducing emotional arousal and violence in children.

3.3. Inadequate Parenting Models

Some parenting models such as “active mediation” may prove to be weak under certain circumstances for stubborn children, giving them excess freedom than required. This is reflected by higher rates of failure to discipline children [18, 46]. On the other hand, the too rigid restrictive mediation style may provoke the “boomerang effect” with revolted children, susceptible to engage in all forms of risky activities such as drug abuse, overexposure to community and media violence [18-21]. Furthermore, parents tolerating aggressive fantasies in children, and violence-approving attitudes could be mediators of violence [46]. It has been shown that in context of high violence, lack of parental nurturance and inadequate social emotional empathy may be associated with increased violence in children [46].

3.4. Neuropsychiatric and Psychological Disorders

A number of pathological conditions in children may manifest or get worse with violence. Mental illnesses such as conduct disorders, personality disorders, autism, attention deficit/hyperactive disorder, bipolar disorder and dysthymia, schizophrenia and psychotic disorders, posttraumatic stress disorders, intermittent explosive disorder, sexual sadism, premenstrual syndrome, and dysphoric disorders have been described as psychiatric and psychological conditions associated with violence [47]. On the other hand, neurological and metabolic conditions such as sequels of head trauma, infection, Huntington chorea, Gilles de la Tourette's disease, Cushing's disease, hyperthyroidism might give rise to externalization behaviors with verbal or physical violence [47]. In effect this phenomenon is frequently described in European countries, where close to 38.2% of the general population exhibit mental disorders every year with 5% of them manifesting with external behaviors [47]. It has been noted that adolescents with poor financial background experience more mental health problems than those living in higher income neighborhoods [27]. Moreover, the fact that children with conduct disorders experience more violence than others may equally justify high levels of violence among them [25, 27, 28].

3.5. Drug Use and Abuse

From a relapse of drug epidemic in the 1990s, D. Johnson concluded that drug use among children is a persistent and recurrent problem requiring consistent and unremitting attention [48]. Drug use and abuse among the pediatric population concerns primarily adolescents [49]. There is a “negative spiral effect” between drug use and violence in children, as victims of violence are prone to use drugs which in turn predisposes them to perpetrate more violence [48]. There is a diversity of illicit drugs used, with a continuous rise in marijuana use worldwide, though other drugs have begun to level up, notably with the “tramadol phenomenon” in the sub-Saharan African region [50]. Fatalities, accidental and intentional events associated with drug

and alcohol use in the adolescent population represents one of the leading causes of death among the 15 to 24-years-old subpopulation [51-53]. More so, drug use in adolescents is a high risk for school under-achievements, delinquency, teenage pregnancy and depression [54, 55]. The earlier a child initiates drug use, the higher is the risk for serious consequences and adult substance abuse [56, 57]. There exist an “upgrading effect” that leads to the consumption of increasing doses of the same drug or switching to stronger drugs, and a “dependence/addiction phenomenon” related to habit [56, 57]. Drug initiation in children is believed to be determined by the interaction between biological factors such as gender and genetically-inherited predisposition [58-62], cognitivo-behavioral factors including developmental and conduct disorders [49, 63-65], and socio-environmental factors such as the “peer effect” and companionship, poverty, and facilitated access to drugs [66-69]. More specifically, the factors identified as associated with drug use during adolescence include poor self-image and esteem, low religiosity, poor school performances, parental rejection, family dysfunction, abuse, under or over controlling parents and parents' divorce [66, 70-72].

4. Preventive Measures

4.1. Against Media Violence

Detailed studies might help profile the type of programs heavy television viewers watch on a daily basis, in order to enable orientation towards pro-social programming [2].

A public health perspective on media violence might be aimed at considering the effect of violent imagery on children within a broader context of child, families and communities, welfare. This would improve the habits and behaviors of children and adolescent viewers [2]. For example: the universalization of age-limiting in programing or channel access.

Parental monitoring of television, video games and computer use should be improved by reducing children access to violent imaging [2].

More attention could be directed to public health interventions to reduce the extend and effects of violence in the media for a universal intervention, and targeted interventions for high risk individuals [2].

4.2. Against Community Violence Exposure

Multisystem and multidimensional family therapy could be more effective in reducing conduct problems as opposed to programs that do not consider individuals' environments [73, 74].

There is an urgent need for the reinforcement of the role of communities and societies in providing standard guidelines and education to families [2].

Non-violent community youth competitions in sports, educational activities and other oriented occupations especially for children that do not attend school might be further encouraged and diversified.

Restriction to drug access may be further strengthened and limited with increased community police surveillance.

4.3. For Adequate Parenting

Priority should be given to an autonomy-supportive style of mediation [11].

Misconducts in children should be reprimanded with convenient punishment [47].

In context of high violence, parental nurturance and social emotional empathy is associated with reduced violence in children and should be encouraged and adopted [47].

Parent nurturing with open communication with children and positive parental support should be applied as much as possible [75-77].

4.4. Against Neuropsychiatric and Psychological Disorders

Prompt diagnosis, adequate management and follow-up may reduce complications in most cases [47].

The reinforcement of specialized education should be encouraged in order to improve on intelligence and conduct [47].

4.5. Propositions to Reduce Drug Use and Abuse

Teachers' commitment to didactics and maintenance of low dissensions, positive self-esteem, self-control, assertiveness, social competence, academic achievements, sense of morality in children may be further strengthened [77-79].

Regular church attendance should be encouraged in children [80, 81].

Life skill training should be encouraged and Social resistance skills based on culture and ethnic groups should be favored [80-82].

Normative education based on models may be used more often [48].

The institutionalization of prevention efforts against drug use with various approaches that may be universal or selective as the case may be would serve a great deal [48].

5. Conclusion

For many years in the past, media violence exposure alone was incriminated for children violence, although no scientific research work had ever shown causality links beyond exposition. As time went on, it became clear that children violence is more of a resultant to a combination of factors contributing with varying degrees according to age, the intensity of exposure to a predisposing factor and the individual's predisposition or susceptibility to violence. Five main predictive factors of children violence are frequently described in the literature. Media violence exposure is most addressed to younger children, while drug use and abuse is almost specific to adolescents. All pediatric subpopulations may however be significantly affected by community violence exposure, neuropsychiatric and psychological disorders that manifest or worsen with

violence, and inadequate parenting models. Nevertheless, these predictive factors are underlined by some other determinants such as gender, genetics, individual factor, culture, poverty, and peer effect essentially. Preventive measures are based mainly on the reduction of various risk factors and their determinants.

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Conflict of Interest

The authors declare that they have no competing interest.

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