Sociodemographic characteristics and aggression quotient among children in conflict with the law in India: A case–control study

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ABSTRACT
Background. The incidence of juvenile delinquency has increased in the past decade in India and juvenile crimes are increasingly being reported. This has been attributed to many biopsychosocial factors. It is essential to understand these issues in the context of India to determine the response of acts of children in conflict with the law. We aimed to assess the sociodemographic characteristics and the aggression quotient of children in conflict with the law (juvenile delinquents) in observation homes across India and compare them with those who were not.

Methods. We did a case–control study in five juvenile homes in the cities of Hyderabad, Lucknow and Pune. Ninety inmates (74 boys, 16 girls) were included in the study. Sociodemographic characteristics and aggression quotient of children in conflict with the law were evaluated using two separate questionnaires, i.e. a sociodemographic questionnaire and the modified Buss and Perry aggression questionnaire. These were compared with a control group of similar age, sex and income status.

Results. All the children in conflict with the law surveyed belonged to the lower socioeconomic strata, had a significantly higher chance (p<0.05) of coming from broken homes, have addictions, jailed family members and suffered physical and sexual abuse than controls. They also scored higher on all domains of the aggression questionnaire than controls.

Conclusion. A collection of sociodemographic attributes such as broken homes, addictions and abuse seem to have an important association with juvenile delinquency. Children in conflict with the law are also more likely to be associated with a higher aggression quotient as compared to children who were not.


INTRODUCTION
One of the most important issues in crime today is children in conflict with the law. A ‘juvenile’ means a boy or a girl who has not attained the age of 18 years. The Children’s Act of 1960 defines a delinquent as ‘a child who has committed an offence’.1 In a broad sense though, juvenile delinquency is not merely ‘juvenile crime’. It embraces all and any deviations from normal youthful behaviour and includes the incorrigible, the ungovernable, the habitually disobedient and those who desert their homes and mix with immoral people, those with behavioural problems and indulging in antisocial practices.2

In the USA, almost 2% of children between 7 and 18 years of age attend juvenile courts.2 In 2011, law enforcement agencies in the USA made nearly 1.5 million arrests of children under 18 years of age whereas in India this number is reported to be just under 24 000.3,4 This small number probably reflects under-reporting. Also, there is a strong urban bias as cases in rural areas are largely unreported.4

In the Nirbhaya case of December 2012, the crime committed by the child has caused much dismay and outrage because of the nature and manner of the crime.5 Our juvenile justice system, similar to that in the USA, is founded on the premise that adolescents are developmentally different from adults in ways that should affect our interpretation and assessment of their criminal acts, an issue that is being seriously debated.6

It is essential to understand the reasons for children being in conflict with the law to prevent a young person from involvement in inappropriate, harmful and illegal conduct and to determine a policy for the juvenile justice system. Four risk factors can identify young people inclined to delinquent activities: individual, family, mental health and substance abuse. Individual risk factors include impulsive behaviour, uncontrolled aggression and an inability to delay gratification. In many instances, multiple...
individual risk factors can be identified that contribute to a child’s involvement in harmful, destructive and illegal activities. Globally, it has been observed that aggression among adolescents is a powerful predictor of delinquency. Family risk factors associated with the development of delinquent behaviour in young people include a lack of proper parental supervision, ongoing parental conflict, neglect and abuse (emotional, psychological or physical). A common contributing mental health factor in children in conflict with the law is conduct disorder, defined as a lack of empathy and disregard for societal norms. Substance abuse has also been found to be associated with a majority of cases of children in conflict with the law.7

It has been hypothesized that heightened risk-taking in adolescence is the product of an easily aroused reward system and an immature self-regulatory system. It has been likened to ‘starting an engine without yet having a skilled driver’.8 Various other biopsychosocial factors, e.g. rapid urbanization with resultant migration of poor families to towns, poor law enforcement, influence of violence in cinema, parental death, or abandonment and poverty also have been known to contribute to an environment conducive to stealing and other crimes.2,3 Few studies in India have evaluated the relationship between adverse sociodemographic circumstances and aggression quotient to delinquency. We therefore studied these factors in children in observation homes across India and compared them with age, sex and demographically matched children who were not in conflict with the law.

METHODS
This case–control study was done in five juvenile homes (selected institutions run by the government/non-governmental organizations [NGOs]) that provide housing and rehabilitative services for children in conflict with the law in the cities of Hyderabad, Lucknow and Pune.

Children included in the study were those present in the observation home on the day of the interview, who had an existing criminal record, those involved in an ongoing criminal case or those undergoing rehabilitation for a proven crime committed. Children living in the observation home for welfare and protection, without any previous or ongoing criminal case, were excluded from the study.

A control group of children was selected from a government school in the vicinity in Pune who were matched for age, sex and socioeconomic characteristics with the children in conflict with the law.

The sample size was calculated assuming the proportion of children (controls) with broken homes to be 10%.8 Assuming a power of 90% and at 95% confidence with anticipated odds ratio of 4, the sample size was calculated at 79 in each arm. The sampling used was one of convenience consisting of a cross-section of children in conflict with the law present on the day of the study in the observation homes across three cities.

The study was done in June–July 2012 and was approved by the institutional ethics committee. The sociodemographic characteristics and aggression quotient of children in conflict with the law were evaluated using pretested and validated questionnaires. The questionnaire was administered in the interview format and their answers were noted. Two survey questionnaires were given, one each to assess the demographic characteristics and aggression quotient. Confidentiality was maintained regarding the identity of cases and controls.

The questions on sociodemographic characteristics covered the child’s age, education status, family conditions, and economic and environmental background. Socioeconomic class was determined using the Kuppuswamy scale.10 The questions asked were regarding factors likely to be responsible for delinquency such as history of broken family, addictions in self and in family, parents in jail and history of physical and sexual abuse. Information was also obtained as to whether the child had committed any previous crime and whether he/she felt his actions were wrong (repentance and recidivism). The modified Buss and Perry aggression questionnaire was used to assess the aggression quotient.11 This instrument has 19 questions under four heads, namely anger, hostility, physical aggression and verbal aggression. Each question is rated from 1 to 4 depending upon how characteristic or uncharacteristic the given situation is to the individual.

The sociodemographic questionnaire was modified to suit the needs of the control population (the section dealing with details of the crime in which the child was implicated was deleted). However, the aggression questionnaire was administered unchanged to both groups.

The results obtained were compiled and compared for relative aggression quotient and the sociodemographic background. Analysis was done using SPSS 17.0. Odds ratios were calculated for sociodemographic variables and other factors likely to be responsible. Unpaired t-test was used to compare means for continuous variables. A p value <0.05 was considered significant.

RESULTS
Five observation homes were visited in Hyderabad, Pune and Lucknow. Ninety inmates were studied (74 boys, 16 girls). All 16 girls belonged to the observation home in Hyderabad. The mean (SD) age of boys was 16.25 (2.21) years (range 9–18 years). The girls were slightly older with a mean age of 17.31 (3.14) years (range 13–18 years). The median education level of boys was Class VII (range illiterate to Class XII) while that of girls was Class VIII (range illiterate to Class XI). All children surveyed belonged to the lower socioeconomic strata.

The commonest crime encountered was theft (47%) followed by assault (20%) and murder (14%) with rape, gambling, eloping and counterfeiting notes forming the balance. The sociodemographic factors between the two groups were significantly different in the domains evaluated (Table I). A significantly higher number of children in conflict with the law had a history of addictions, came from broken families or had jailed family members than controls. Also, a higher proportion had been physically or sexually abused.

The aggression quotient was calculated from the sum total of scores of four factors: anger, hostility, physical aggression and verbal aggression. The mean scores for each of these factors separately for girls and boys in the two groups are shown in Table II.

<table>
<thead>
<tr>
<th>Factors</th>
<th>Cases (%)</th>
<th>Controls (%)</th>
<th>Odds ratio</th>
<th>p value</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broken family</td>
<td>31 (34)</td>
<td>7 (8)</td>
<td>6.15</td>
<td>0.001</td>
<td>2.6–15.1</td>
</tr>
<tr>
<td>Addictions</td>
<td>23 (26)</td>
<td>3 (3)</td>
<td>9.95</td>
<td>0.001</td>
<td>2.8–53.3</td>
</tr>
<tr>
<td>Jailed family members</td>
<td>5 (6)</td>
<td>–</td>
<td>–</td>
<td>0.02</td>
<td>–</td>
</tr>
<tr>
<td>Physical abuse</td>
<td>38 (42)</td>
<td>–</td>
<td>–</td>
<td>0.001</td>
<td>–</td>
</tr>
<tr>
<td>Sexual abuse</td>
<td>6 (7)</td>
<td>–</td>
<td>–</td>
<td>0.001</td>
<td>–</td>
</tr>
</tbody>
</table>
Of the 90 children in conflict with the law, 21 were known repeat offenders. While almost 50% repented their actions, many of them openly denied having taken part in any criminal activity.

**DISCUSSION**

There have been very few studies on children in conflict with the law in India (Table III). Some of these evaluated various factors associated with delinquency while others looked at specific aspects such as effect of parental deprivation, drug use, medicolegal aspects and oral health.

We assessed various social factors that can play a role in an adolescent’s life and also objectively assessed their aggression quotient based on the Buss and Perry questionnaire, which could suggest what drives a child towards crime. Interestingly, this might possibly be one of the few Indian studies to include girls, perhaps because of the noticeably low number of girls in most observation homes. According to earlier studies by Dayal et al. and Bonger et al., this is due to girls’ biological characteristics, differences in cultural training and, greater exposure of men to crime and greater leniency towards girl offenders.

The mean age of boys as well as girls in the observation homes visited was between 16 and 18 years. It is at this age that children live with a combination of well-developed physicality and immature mentality. They are easily guided by principles of pleasure and reward, which might lead them to commit a crime.

Emerging evidence suggests that the processing of emotional and social information is affected by hormonal changes at puberty in ways that make young people more sensitive to the reactions of others. Thus, brain immaturity can often result in unwise, unsafe and even illegal behaviour that a youth would ‘know better’ to not do as an adult or have the capacity to say ‘no’ to his friends. Although the justice system policy and practice cannot, and should not, be dictated solely by studies of adolescent development, the ways in which we respond to offending children should be informed by the lessons of developmental science.

**Table II. Mean (SD) scores for aggression quotient**

<table>
<thead>
<tr>
<th>Factor (maximum score)</th>
<th>Cases (n=90)</th>
<th>Controls (n=90)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anger (24)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>12.5 (3.86)</td>
<td>5.8 (1.4)</td>
<td>0.001</td>
</tr>
<tr>
<td>Girls</td>
<td>16.5 (2.31)</td>
<td>9.9 (2.58)</td>
<td>0.001</td>
</tr>
<tr>
<td>Hostility (20)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>11.4 (3.38)</td>
<td>6.3 (1.82)</td>
<td>0.001</td>
</tr>
<tr>
<td>Girls</td>
<td>10.9 (3.07)</td>
<td>7.3 (1.95)</td>
<td>0.001</td>
</tr>
<tr>
<td>Physical aggression (20)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>12.0 (3.25)</td>
<td>6.6 (1.97)</td>
<td>0.001</td>
</tr>
<tr>
<td>Girls</td>
<td>10.6 (2.68)</td>
<td>5.4 (1.15)</td>
<td>0.001</td>
</tr>
<tr>
<td>Verbal aggression (12)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boys</td>
<td>5.5 (1.32)</td>
<td>3.3 (1.55)</td>
<td>0.001</td>
</tr>
<tr>
<td>Girls</td>
<td>6.1 (1.26)</td>
<td>3.4 (0.96)</td>
<td>0.001</td>
</tr>
</tbody>
</table>

**Table III. Studies from India on children in conflict with the law**

<table>
<thead>
<tr>
<th>Author (year)</th>
<th>Number of subjects</th>
<th>Factors studied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shastree et al. (1968)</td>
<td>200</td>
<td>Yes</td>
</tr>
<tr>
<td>Tandon et al. (1978)</td>
<td>50</td>
<td>Parental deprivation</td>
</tr>
<tr>
<td>Dayal et al. (1986)</td>
<td>100</td>
<td>Yes</td>
</tr>
<tr>
<td>Ganga et al. (1989)</td>
<td>225</td>
<td>Yes</td>
</tr>
<tr>
<td>Vyas et al. (1991)</td>
<td>74</td>
<td>Oral health</td>
</tr>
<tr>
<td>Malhotra et al. (2007)</td>
<td>34</td>
<td>Drug usage</td>
</tr>
<tr>
<td>Nagarajaa et al. (2011)</td>
<td>60</td>
<td>Medicolegal aspects</td>
</tr>
<tr>
<td>Our study</td>
<td>90</td>
<td>Social factors and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>aggression quotient</td>
</tr>
</tbody>
</table>

One important finding of our study was that all children in conflict with the law we interviewed were from the lower socioeconomic strata. A similar pattern has been reported by Dayal et al. This might be because these children, because of poverty, do not mind resorting to unlawful means as long as they get what they desire. The most frequently committed crime, we found, was theft. This finding was corroborated by the statistics compiled by the National Crime Records Bureau for 2011.

A broken family indicated that the parents were either separated or divorced or unable to live in mutual harmony. They also included children with a single parent or under the care of a guardian. The proportion of children in conflict with the law hailing from broken homes was 34% as compared with mere 8% of controls. Ganga et al. and Tandon et al. also found that children in conflict with the law were four times more frequently from broken homes as compared to controls.

However, rich or poor, the same factors, such as lack of a caring adult and peer pressure, provided motivation for crime. This, we believe, is because these children are in their formative years. It is at this stage that children are in most need of love, care and security, in the absence of which they either resort to antisocial behaviour to gain attention or they grow up with an attitude that holds no respect for any rules and regulations.

The questions pertaining to addictions (tobacco, alcohol, *pan/gutkha* or any banned drugs) were initially met with hesitation. However, with a little prodding most children came forward with a history of self-addiction. These were in the form of alcohol, whitener abuse, smoking or even drugs such as marijuana (depending upon their financial resources). Almost 26% of children admitted to abuse of such substances compared with only 3% of controls. Addictions are many times an act of rebellion. However, it is also an act that catches children’s attention and quickly becomes a trend. What is not realized is that every abuse turns to addiction and every addiction needs money to sustain. To this end, the child discovers another motivation to commit crime.

In relation to previous exposure to crime and punishment, 6% of children in observation homes admitted that at least one of their caretakers was or had been in jail. It is well-known that children learn from what they see. This has been demonstrated by the Bobo Doll experiment. In our study, far more children in conflict with the law had parents who were in jail.

Nearly half (42%) the children in conflict with the law reported physical abuse while almost 7% reported sexual abuse. Physical abuse included repeated episodes of beating with sticks/lathis/stones by a parent or teacher. However, among controls no child gave any history of abuse.

Though there have been studies on aggressive behaviour disorders among children in conflict with the law in India, we compared them with controls. Using TAT analysis, Tandon et al. showed that 60 of 100 children they studied were aggressive. Longitudinal studies that relate a combination of potential childhood risk factors, including early aggression, to adult criminality are valuable in elucidating the contribution of early childhood factors. Our results showed that delinquents were almost doubly as aggressive as controls. A longitudinal study by Huesmann et al. of 856 children who were in Grade III in Columbia County, New York during 1959–60 showed that early aggressive behaviour predicts later aggressive, antisocial and criminal behaviour—how likely are they to be arrested, how many times they will be arrested, how serious will be their crimes, how many times they will be convicted and how long they will serve in prison. These results are consistent with studies that document...
continuities from childhood aggression to late adolescent delinquency to young adult aggression and antisocial behaviour.\textsuperscript{11,21,22}

We found that girls among cases as well as controls had a higher mean aggression score than boys, which was contrary to what was reported by Yeudall.\textsuperscript{23} However, this difference might be due to the Indian scenario where girls are not allowed to express themselves as much as in the West. This results in bottling up of feelings, which get expressed in activities such as running away, elopement and other violent crimes. This is reflected by the fact that girls scored significantly higher in anger whereas physical aggression was lower among girls. Most of the time, these girls can end up as victims of some scheming mind and get apprehended by the law.

Although 23\% of children were repeat offenders, 50\% repented what they did. According to them it was either unintentional, in a moment of passion or just the result of unfavourable circumstances, a view supported by every warden that we spoke to. According to wardens it was more a result of a combination of desperation and momentary lapse of reason. They strongly believed that the majority of children are not irreversibly injured by this experience and, if given a chance, can still grow up to be citizens contributing to society.

A better understanding of the nature of psychological development during adolescence can lead to improved policy-making, judicial decision-making, forensic evaluation and legal practice. It also offers strong support for the maintenance of a separate juvenile justice system in which adolescents are judged, tried and sanctioned in developmentally appropriate ways.\textsuperscript{24}

The Juvenile Justice Act in India was passed in 1986. Its amendment in 2000 increased the upper age limit from 16 to 18 years.\textsuperscript{1} The new Juvenile Justice Act, 2015, was passed recently by amendment in 2000 increased the upper age limit from 16 to 18 years. However, this difference might be due to the new Juvenile Justice Act, 2015, was passed recently by amendment in 2000 increased the upper age limit from 16 to 18 years. However, this difference might be due to the new Juvenile Justice Act, 2015.

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Many juvenile programmes, in both community and institutional settings, have a substantial effect in reducing crime. In general, successful programmes are those that take into account the lessons of developmental psychology, seeking to provide young offenders with supportive social contexts and to assist them in acquiring the skills necessary to change problem behaviour and to attain psychosocial maturity.\textsuperscript{24,25} It is in juvenile homes that society gets a chance to provide these misguided children with some profitable occupation and thereby prevent them from coming back to offences and crimes.

Conclusion

It is difficult to pinpoint a single factor responsible for juvenile crime. The factors responsible may be developmental, psychiatric, social or even genetic. They vary from child to child and from situation to situation. However, some combination of factors do seem to have an important role such as broken homes, addictions and abuse. Besides, children in conflict with the law were also relatively more aggressive than normal. Programmes in both community and institutional settings that focus on improving social development skills in the areas of interpersonal relations, self-control, academic performance and job skills have been found to be effective in reducing juvenile crime. These interventions must begin in the early years of a child’s life to prevent aggressive and antisocial behaviour. The observations support the juvenile justice system—commonly understood as a notion of fairness and justice and an alternative system of dealing with children through laws where the emphasis is protective, restorative, and reintegrative with care and rehabilitation.

REFERENCES


