

Aetiology of Minor Crimes - Are Individuals Committing Minor Crimes Influenced more by Environmental Factors or Genetic Traits?

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Abstract

The present work describes empirical underpinning of the contribution of genes and environmental factors in minor (petty) crimes such as theft, pick pocketing, shop lifting, mugging, fraud, embezzlement, bootlegging etc. This work considers the factors that influence motivation to commit petty crime. Fifty subjects of varied ages were interviewed determining the external influences that they were subject to and whether members of their immediate family had committed crimes similar or otherwise. Results suggest that environmental factors have more influence on participants displaying anti-social behaviour (non-serious, misdemeanour crimes) or committing minor crimes than genetic predisposition. In this article petty crime committed within varied age groups and the possible aetiology of reported crimes has also been investigated.

Keywords: Crime; Criminal behaviour; Anti-social behaviour; Petty crimes; Minor crimes; Aetiology of crime

Introduction

Anti-social behaviour is any aggressive, intimidating or destructive act that destroys another individual's life [1]. Crime is against the public law that has been laid for everyone's safety, but there have always been people who try to breach these laws. As criminal behaviour is problematic to an individual as well as to society, it is discouraged by setting punishments as a consequence of the breach.

It is still not clear that even with strict laws to govern right and wrong; why some people still indulge in unlawful acts? Why some individuals shape their life excellently, whereas some doom it forever by indulging in crimes. So, are the people who indulge in crime, the victims of society or is it variation in genes or variation in environment that influence the behaviour? The incomplete answer to this question has attracted many researchers to try to determine the cause behind this problem.

Genetic explanation for anti-social behaviour

Genes are the basis of heredity and regulate traits like skin colour, eye colour, stature etc. What is less clear is whether genetics has an influence on a personality trait or whether it is nature rather than nurture that determines the result. Is this because the individuals were born with the predisposition to behave in an anti-social or criminal manner or has the environment they have been brought up in been the main cause. To understand this, the biological aspect of anti-social behaviour was studied. Various biological strategies were adopted including family, twin and adoptive studies [2-6] and many researchers revisited and reviewed this battleground between nature and nurture war to estimate the contribution [7-9]. The early attempts to understand the correlation between genes and criminal behaviour was made by Goring in 1913. He conducted family studies on known criminals and came to a conclusion that production of criminals is influenced by genes [2]. These findings promoted other researchers to search for genes responsible for criminality. Many attempts were made to find genes for anti-social behaviour [10-12] but as far as we are aware, no single gene has been identified that expresses anti-social behaviour.

Studies have suggested that there is a correlation between genetics and criminal behaviour but none of these could prove that nature prevails completely over nurture. Goring in his book stated "this fact does not argue absence of influence of environment in development of human being" [2] which clearly shows that genes play role in regulating behaviour but they are not solely (predominantly) the regulators of anti-social behaviour.

Neurobiological (Neurocognitive/Neurotransmitters) explanation for anti-social behaviour

It was felt that there was a need for more research to assess whether genetics can provide a partial explanation for the criminality. The genes associated with various aspects of criminal behaviour (attention deficit hyperactivity disorder, impulsivity, aggressive behaviour etc.), and neurotransmitter systems were studied. It was found that there are some of the pathways, which have correlation with behaviour. Neurotransmitters like Serotonin, Dopamine, Noradrenalin and the enzyme MAOA (Monoamine oxidase A) are critical to many of the vital functions of thought like behaviour, emotional response and the control of cognition [13,14]. Any abnormality with the genes regulating these neurotransmitters and enzymes can lead to anti-social behaviour [9,10,15].

Serotonin (5- hydroxy-tryptamine or 5- HT) helps in regulating a vast range of psychological functions like mood, arousal, anxiety, aggression, impulsivity and sexual behaviour [16]. Abnormal levels of the neurotransmitter may lead to impulsive and aggressive behaviour [13]. In addition it has been shown that behavioural disorders

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are linked to a considerable proportion of heritable components including a dysfunction in central serotonin pathways [17]. Other neurotransmitters that regulates vital functions like emotional response, the control of cognition, attention, aggressive and impulsive behaviour are Dopamine and Nor-adrenaline [14,18,19]. Change in brain dopamine levels can lead to many behavioural changes like aggressive and impulsive behaviour [20,21]. Dysregulated functioning of Nor-adrenaline can lead to impulsive and hostile behaviour [22].

There are some enzymes like MAO - A and Dopa decarboxylase that are reported to be involved in more than one pathway and disorder in genes that code for these enzymes may also lead to antisocial behaviour [13,23].

This suggests that there is not only one factor which contributes to antisocial behaviour. A single gene responsible for antisocial behaviour could not be identified, as personality is much more complex and cannot be a result of any single gene [24].

Sociological explanation for anti-social behaviour

From time to time crime sociologists have tried to prove that it is not the constitution of the criminal alone; it is the adverse social and economic environment that made them criminals. As Moosajee [8] correctly remarked, "All of us have the capacity to be violent, but most people can control this force." which suggests that other factors such as environment also influence the criminality. It has been proposed that there are many social and economic factors that help in developing anti-social behaviour. It is true that genes regulate traits, however any individual exposed to a different environment may result in a different person with different personality. It became apparent that negative parenting, low affection and cohesion with family, high conflicts in family [25,26], cultural differences, delinquent peers [27,28], religious issues, economic development, economic inequality [29], education such as, poor academic performance, dropouts, poor academic quality [25,30] employment, post-war freedom [31] and drug addiction have influences on criminality [29,31,32].

Aetiology of petty crimes

It became apparent from the studies that there are biological and sociological (familial, economical, cultural, educational, neighbourhood, religious, political, law enforcement) factors that frame an individual's personality. Most of these studies were focused on serious and violent crimes. Moreover, the account of criminal behaviour (petty crimes) in developing countries like India is very limited. There is a dearth of literature to identify contribution of genes and environment in minor crimes like fraud, embezzlement, theft, shop-lifting and other similar crimes. This attracted authors to carry out this research to resolve the mesh woven by these 2 variables (nature and nurture) and the current study is a step forward to explore the causal factor of minor crimes.

Hypothesis for aetiology of indulgence in petty crimes

In the present investigation an attempt has been made to understand the aetiology that has forced the subjects to get involved in crime. For this purpose, the data was collected from convicted subjects by the means of face-to-face interview. Based upon all the possible contributing factors towards developing anti-social behaviour that leads to committing petty crimes, certain hypotheses were developed.

1. Anti-social behaviour with context to petty crimes run in families
2. Poor sociological conditions/status encouraged involvement in petty crimes

Another objective set in this study was that if sociological factors contribute (which is evident from literature) towards developing anti-social behaviour then which sociological factors contribute towards minor crimes in an Indian context. The results of this study are expected to provide an insight of the aetiology of minor crime in an Indian context.

Method

Subjects

Fifty subjects involved in minor (petty) crimes, who were either under trial or serving sentence in jail (in India) in 2008, were selected. Subjects were selected on the basis of the type of crime they had committed. Those involved in non-serious, petty crimes such as theft, shop lifting, pick pocketing, fraud, fights, mugging, drug use, preparing alcohol for personal use, bootlegging (inter-state smuggling of alcohol) and illegal border crossing were included in study. All of the subjects selected for this study were males, however their age and regional background varied. These variations were recorded but not used to select or reject subjects.

Questionnaires

The questionnaires were designed with a view to gather demographic characteristics, type of crime committed, family size, financial condition, family and subject's history with regards to motivation to commit crime, literacy level, preferences and behavioural traits during childhood and at the time of this study, type of peers and society they have grown up in, any life changing event including any physical or mental injury or illness, feeling just before committing crime, any addiction, bond with family members, respect for law, awareness of the consequence of being caught for the crime. This was carried out with a view to ascertain family history and possible influencing environmental factors.

Interviews

Permission was sought from the Senior Superintendent of a prison in India. Before interviewing, the records of each subject were accessed to gather information on the type of crime and history of the subject. Rapport was developed with the subjects and the purpose of this study was discussed before starting interviews. Set questions were asked and the subjects were given complete freedom to refuse to answer any questions they did not want to disclose the answer to. Every attempt was made to gather correct information (checking their crime records) but false information provided or false accusations made by the prisoner cannot be ignored. Yet, this approach appears to be a good starting point for exploring the causal factors behind petty crimes.

Subject information collected was kept confidential. The data was analysed to explore the causal factors.

Results and Discussion

After data analysis, crimes were categorised into five main categories. These categories are

1. Theft and pick pocketing,
2. Fights
3. Bootlegging
4. Frauds
5. Illegal border crossing.

The cases reported and studied in the present investigation, under theft and pick pocketing were vehicle theft, burglary, shop lifting and pick-pocketing. Results revealed that theft and pick-pocketing are one of the most commonly committed crimes, constituting 52% of all minor crimes encountered in the present study. Our findings are in accordance with the report published by Viju in 2010 [33]. However, our study, unlike Viju, 2010 encapsulates subjects from different states of India. Under 25 year olds make up the largest proportion of this type of criminal. 44% of the total crimes recorded in this study was theft and/or pick pocketing committed by under 25 year olds (Table 1). The data published by National Crime Records Bureau (NCRB) for 2008 revealed that theft is one of the most common crimes in India [34] and our results are in agreement with NCRB statistics for 2008.

Bootlegging is another petty crime that has reached alarming proportion in India [35-38]. Excise department regulates import and supply of liquor in India. As India has 28 states and 7 union territories (UT) and there are regional difference in alcohol prices in different states and UT. This attracts bootlegging which is punishable under law. In the present investigation, 28% of total cases studied fall under this category and upon further analysis it has been noticed that it is more common in the age group of 25-40 years (Table 1).

Fraud is defined as when someone deceives anyone to obtain goods, services or money [39]. Fraudulent acts like embezzlement, counterfeiting, forgery, tax fraud, billing fraud and cheating are also not uncommon in India. As per the figures published by NCRB, fraud (criminal breach of trust and cheating) contributed a total of 4% under different (serious and non-serious) crime heads [34]. In the present investigation this type of petty crime accounted for 14% of the total cases studied and it was found that among the subjects interviewed in this study, it was prevalent in the over 25 year old age group. The cases encountered in the present study were embezzlement and property fraud.

Fights in public places are often disturbing for society and dangerous for people involved. This disturbs the peace in society and may lead to loss of property and harm to individuals. These are more common in some states of India than others. The cases reported in the study are non-life threatening fights. After data analysis, 4% of cases were recorded under this category which indicates that it is not a very common type of anti-social behaviour. After further scrutiny, it came to light that all of these cases were by youths who were in the under 25 years age group (Table 1).

Another crime which is common in developing countries is illegal border crossing. This is a crime as it violates immigration laws of the destination country. Due to unemployment and high desires, people try to migrate from developing countries to developed countries and if they do not succeed, some of them try to opt for anti-social means to cross the borders. There has been an increase in illegal immigration from India in last decade [40]. In the present study, 1 case of this type was recorded and the subject was caught with fake passport (Table 1).

Information was sought from the convicted subjects about the factors that forced them to indulge in anti-social activities. As mentioned above (in Methods), questionnaires were designed to gather family history, and sociological information including the economical condition and literacy levels of the subjects. After data analysis, we are now in a position to comment upon the objectives set out in the present study. The first hypothesis developed in the current study was the contribution of genes in developing anti-social behaviour with context to petty crimes. From the results obtained it became apparent

that petty crimes do run in families but it has less influence (6%) contribution (Table 2). It cannot be ignored that although there is a 6% genetic contribution in developing anti-social behaviour (minor crimes) or committing petty crimes, these subjects were also exposed to poor sociological status of their families. The information gathered from the subjects revealed that because of poverty and illiteracy, their family had an element of criminal behaviour and this influence them in developing similar attitudes. Therefore out of this 6%, genes cannot be solely attributed as there is an element of the environment where child is brought up and developed his behaviour. Regarding the second hypothesis drafted in this study to explore the sociological contribution towards the behaviour of committing petty crimes, it can be proposed with confidence that sociological factors have a strong influence on behaviour with respect to minor crimes. After developing an understanding that sociological factors are the main contributors towards developing anti-social behaviour (petty crimes), these factors were further studied and data analysis revealed that poverty and addiction were the major factors that forced the subjects to commit the crimes. It became apparent from the results of the current study that committing petty crimes just for the sake of easy source of income was third major factor ranked before the influence of delinquent peers and unemployment in the list of aetiological factors. Illiteracy, feeling of revenge, influence of media was also acknowledged as causes of committing petty crimes (Table 2).

India is a diverse society with different castes, creed and cultures. Its economic growth is extremely impressive with a real gross domestic product (GDP) growth rate increased from 3.9% in 1960-62 to 9.3% in 2006-08 but at the same time the evidence suggests that economic inequality has also increased in India in the post-reform period [41]. India has the fourth largest economy in world, with technology developing at a very fast pace but still there are people who cannot even afford to pay for basic food, clothing and shelter. There are not enough educational facilities to the poor section of the society [42]. The results from the present study revealed that this economic inequality breeds crime and it became apparent that poverty is the main cause that forced more than 25% of subjects to commit crime.

Crime and drug abuse go side by side. Several studies have reported the association between drug dependence and crime [43-46]. Drug users have been recorded to be more involved in criminal acts than

Age (years)	Theft and pick pocketing	Bootlegging	Fraud	Fight	Illegal border crossing
Under 25	44%	4%		4%	
25-40	8%	14%	8%		
Above 40		10%	6%		2%
Total	52%	28%	14%	4%	2%

Table 1: Different types of crimes in different age groups.

Causes	Percentage
Poverty	26%
Addiction	24%
Easy money	14%
Influenced by friends (Delinquent peers)	12%
Unemployment	10%
Criminal behaviour runs in family	6%
Miscellaneous	8%

Table 2: Different causes of criminal behaviour (petty crime).

non-drug users [45]. Most of these studies have covered vast ranges of crimes (violent, prostitution, theft, robbery and other property crimes) but as far as we are aware there is not much data available to prove association of drug abuse as a primary factor of indulging in petty crimes. Results from current study suggest that addiction is the second most common factor influencing the commission of petty crimes with a 24% contribution, which proves that there is very strong association between drug addiction and petty crimes. Drug addicts may commit crimes to obtain money for the drugs and they may also commit crime under the influence of drugs [45] and after data analysis in the present study it became clear that these were the main factors that forced drug dependent subjects to commit crime.

Crimes like fraud, theft and bootlegging were committed as subjects felt it is easy way to make money. Based on participants' response, it was recorded that motivation of making easy money is the third most common cause of committing petty crimes in India. Studies in the 50's showed that young people who associate with delinquent peers are much more likely to get involved in crime [47]. A phenomenon reported by Bruinsma [28] whose study states delinquent peers as a valuable source of information on techniques and opportunities for committing crime. It was reported by 12% of total subjects interviewed in the current study that because of their delinquent peers they learnt how to committed crime.

Unemployment is a very serious problem in developing countries. A lack of employment opportunities is recorded as a reason subjects are attracted towards anti-social means to earn money. It is evident in literature [48,49] that there is a positive relationship between unemployment and anti-social behaviour. A study carried out in UK has shown a correlation between increase in male unemployment and high crime rates [50]. A more recent study over a ten year period in Sweden also concluded a positive relationship between unemployment and crimes such as burglary, car and bike theft [51]. Our results are in agreement with these studies as this factor made up 10% of the reported causes in this study. Without employment the subject had no form of income, leading subjects to commit crime to generate a means of finance.

There are other miscellaneous factors like feeling of revenge, influenced by media, illiteracy and subject being unaware of the consequence, contributing the final 8% of reasons for developing anti-social behaviour in current study (Table 2). It is suggested in literature by Verma and Kumar [42] that feelings of revenge can be one of the reasons to commit crime though their study was on a range of crimes covering major and minor crimes, however the subject pool was similar. It is interesting to see the impact of media on crime pattern. Srivastva and Agarwal [52] explored the influence of media in developing anti-social behaviour and proposed that the media holds a highly influential role in gang wars (anti-social behaviour) and in the present study it was gathered with evidence that fighting amongst youths can be influenced by media.

After further analysis of data collected in the present study, it was noticed that there is a regional variation in crime patterns. Some crimes are nearer to inter-state borders such as, bootlegging and others are predominant in cities than rural parts. Bootlegging is more common in adjoining states where alcohol is sold at lower prices. Pick pocketing and burglary are more common in cities than villages and preparing alcohol for personal use was noticed to be more in rural population of subjects.

Conclusion

From the findings it became clear that circumstances/environment contribute a strong influence on anti-social behaviour. It has also been found that specific environmental factors give rise to different anti-social behaviour. For example fraud and bootlegging are mainly committed to make easy money. Crimes like theft and pick pocketing are reported as being committed because of poverty and addiction. Fights mainly occur because of feelings of revenge, influenced by friends and media. There is evidence that petty crimes run in families but the percent contribution is low and it has not been possible to clearly define how much is due to genetics and how much the family's environmental influence in these cases.

The present study has led to a conclusion that there is a contribution from both genetics and environment with respect to the reasons why non-serious (minor) crimes are committed. There is no doubt that genes play a vital role in regulating personality traits, anti-social behaviour being no exception but this study has found that environmental factors have more influence on non-serious (minor) crimes than genetic factors.

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