Original Article

A Study on Association of Heinous Offences with Demographic, Socio-economic Factors and Personality Traits among the Children in Conflict with Law Staying in Juvenile Justice Homes

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Background : Children in Conflict with Law (CCL) are those children between 7years to 17years who have committed some offence and have been placed in Juvenile Justice (JJ) Homes. Heinous offences are the most severe among all the offences committed by those CCLs. For prevention of those types of crimes by CCLs, some data were required on the demographic, Socio-economic and personality traits of those JCLs to find any association between heinous crimes and those factors. This study was undertaken to do that.

Materials and Methods : The study was a descriptive epidemiological study with cross-sectional design undertaken among 125 inmates staying in JJ Homes of West Bengal, India, between August, 2017 to October, 2018. Each of the 125 inmates were interviewed with a predesigned and pre-tested questionnaire and also with the Junior Eyesenck Personality (JEP) questionnaire and analysed by appropriate statistical methods.

Results : Significantly more Indian heinous offenders were males demographically and significantly more of them were either student or employed as child workers socio-economically. Most of the Indian heinous offenders were neurotic with strong association. Significantly more of them were introvert and the association was also strong. Most of the heinous offenders had average or low social desirability. Recidivism was significantly associated with absence of substance abuse and absence of gangsterism. Watching adult movies or pornography, had no association with sexual offences.

In the Juvenile Justice (Careand Protection of Children) Act, 1986 (JJ Act), which was amended in 2000 and 2015, the term "Child in Conflict with Law (CCL)" or "Juvenile in Conflict with Law" was used, for children above 7 years and below 18 years committing some offence classified as petty, serious and heinous offence by the court of law resulting in difference in duration of imprisonment for punishment. For heinous offences, the most severe type of offences, they are tried like adult heinous offenders and are sentenced for seven years or more[1]. A statistic published in India by National Crime record Bureau showed that in 2005, about 18939 juveniles were in conflict with law but the

Editor's Comment :
- It is seen from this study that among CCLs, boys, especially of higher age-group, originating from nuclear families, having lower education levels, either student or employed as child labourers, with neurotic and introvert personality mostly commit heinous offences.
- Recidivism of offences has no significant association with substance use, gangsterism or nature of offence.
- Watching pornography or adult movies isn't associated with sexual offences.

number had increased upto 35849 in 2016[2]. It was also seen that sexual offences like rape were also on the rise and was more in number than other heinous crimes. So, there must have been some factors behind it. If any association could be established between juvenile delinquency with any modifiable factor, then those factors could have been controlled. There was paucity of scientific data in this field in our country. That was the reason behind undertaking the present study.

MATERIALS AND METHODS

It was a descriptive study with cross-sectional design undertaken among the inmates of five juvenile justice homes of West Bengal, run by Government of West Bengal from 10th August, 2017 to 31st October,

2018. The sample size was calculated using the formula $(Z_{\alpha/2}^2 PQ)/L^2$ where, $Z_{\alpha/2}$ = Standard normal deviate and has a value of 1.96 at 95% confidence level; P= Expected proportion of juveniles committing a particular crime (rape) among accused of that age group, Q=100-P; L= allowable error. According to National Crime Records Bureau (NCRB), India, data in 2016, total number of juveniles in conflict with law (JCL) in India was 44171 and 2054 were accused of rape[3]. Therefore, P=4.65%, Q=95.35% +and $Z_{\alpha/2}^2$ =3.84. Considering the allowable error as 5 percentage points, a design effect of 1.16 [based on the formula, DEFF = 1+(m -1)*ICC] and a non-response rate of 14% (based on a pilot study), the sample size was calculated to be 125. Capacity of the JJ Homes situated in 14 districts of West Bengal, ranged from 25 to 250. Out of 14 districts with JJ Homes, 20% were selected by simple random sampling technique at first stage. From the observational homes and special homes (separate enclosures in a JJ Home) of selected three districts, inmates were selected following probability proportionate to the size principle. JJ Homes of selected three districts were visited fortnightly till desired sample size of a particular home was reached. In a particular JJ Home, list of inmates used to be prepared afresh with the help of officials for each day of visit as new inmates were being placed in those homes and old inmates were being released on completion of their tenure of stay there on a regular basis. On each day of visit to the JJ Home, six inmates could be interviewed taking time required to complete an interview of an inmate into account. From the prepared list of the inmates, six were to be selected by systematic random sampling technique. Informed consent for the study was sought from the legal guardians of the juvenile inmates. Study subjects who had completed 18 years of age but not yet shifted to adult correctional homes, physically ill inmates, inmates summoned to attend court of law on the day of interview and inmates already interviewed during previous visits to that particular home, were excluded from the list. Before undertaking the study, permission from Director, Child Rights and Trafficking, Government of West Bengal (GOWB), a State Government under the Indian Union, was obtained to visit five JJ Homes. Approval for the study was obtained from the Institutional Ethics Committee of RG Kar Medical College and Hospital (RGKMC&H), Kolkata, West Bengal, India. Necessary permission from EdITS, P O BOX 7234, San Diego, CA92167, US, (copyright owner) was obtained on procurement of the study tool, Junior Eyesenck Personality (JEP) questionnaire for assessing the personality trait of the inmates.

On each day of visit, responses from inmates were recorded in the predesigned, pretested questionnaire framed by the investigators and in the JEP questionnaire. Psychological analysis of the respondents was carried out subsequently based on the scoring system of JEPQ. Collected data were compiled in MS-excel spread sheet and analysed using SPSS version 26, Jamovi. Qualitative variables were expressed as frequencies and percentages. For summarization of quantitative variables mean± Standard Deviation/median with inter quartile range were used. Chi square test, Fisher Exact test, Mann Whitney U test was used to find out association along with Logistic Regression analysis. A p-value <0.05 was considered as statistically significant.

OBSERVATIONS

From Table 1, demographically, it was seen that among the respondents of the study, 100 (80%) were Indians and 25 (20%) were foreign inmates. Among the Indian respondents, 77 (77%) were involved in heinous offences whereas only 3 (12%) of their foreign counterparts committed heinous crimes. Heinous offenders were mostly from higher age group. Heinous offences were significantly (p=<0.05) higher among Indian males, 74(84.1%) in number, compared to females, 3(25%) in number. More heinous offenders came from rural areas and nuclear families.

Socio-economically, it was seen that very few among the Indian heinous offenders passed secondary level (class 10 standard) of education. Proportion of heinous offenders, 74 (79.6%) among students or children employed in any work as child labourer was significantly higher compared to 3(42.9%) among beggars or ragpickers. Among all Socio-economic classes according to the classification of modified BG Prasad scale[3], applicable only in Indian context, proportions of heinous offenders were much higher compared to non-heinous offenders in class II (upper middle) and III (middle). Heinous offenders were found to be more among inmates living in kutcha houses, without any previous history of substance use or without any history of physical abuse but number of heinous offenders were significantly (P = <0.05) more among inmates without major familial or personal problem like broken homes, death or separation of parents compared to those inmates having such type of family problems.

Regarding the association of personality trait evaluated by JEP questionnaire it could be observed that, in terms of psychoticism, most of the Indian inmates who were either emotionally well-adjusted or emotionally constricted were heinous offenders, whereas

Table 1 — *Association of Socio-demographic, Economic factors and Personality traits with heinous offences (n=125)*						
		Indian Inmates (n=100)			Foreign Inmates (n=25)		
		Number of heinous offenders (%)	Number of non-heinous offenders(%)	P-value (DF)	Number of heinous offenders (%)	Number of non-heinous offenders (%)	P-value (DF=1)
Age in years	7-12	8(88.9)	1(11.1)	0.68*(1)	0	1(100)	1.00*
	13-17	69(75.8)	22(24.2)		3(12.5)	21(87.5)	
Sex	Male	74(84.1)	14(15.9)	<0.05@(1)	3(21.4)	11(78.6)	0.23*
	Female	3(25)	9(75)		0	11(100)	
Area of Residence	Rural	53(76.8)	16(23.2)	0.947@(1)	2(15.4)	11(84.6)	1.00*
	Urban	24(77.4)	7(22.6)		1(8.3)	11(91.7)	
FamilyType	Nuclear	60(82.2)	13(17.8)	0.06@(1)	3(12.5)	21(87.5)	1.00*
	Joint	17(63)	10(37)		0	1(100)	
Education level	Illiterate/Just Literate/Primary	68(78.2)	19(21.8)	0.85@(1)	3(12.5)	21(87.5)	0.22*
	Secondary	9(69.2)	4(30.8)		0	1(100)	
Occupation	Student/Employed	74(79.6)	19(20.4)	<0.05* (1)	2(9.5)	19(90.4)	1*
	Beggars/Ragpickers	3(42.9)	4(57.1)		1(25)	3(75)	
Social Class# (BG Prasad scale only for Indians)	I	7(77.8)	2(22.2)	0.84@(2)	NA	NA	NA**
	II & III	48(78.7)	13(21.3)		NA	NA	
	IV & V	22(73.3)	8(26.7)		NA	NA	
Housing	Pucca	37(78.7)	10(21.3)	0.70@(1)	3(20)	12(80)	0.53*
	Kutcha/ Mixed	40(75.5)	13(24.5)		0	10(100)	
Substance use/ Addiction	Present	24(82.8)	5(17.2)	0.38@(1)	2(33.3)	4(66.7)	0.13*
	Absent	53(74.7)	18(25.3)		1(5.3)	18(94.7)	
Major family/ personal problems	Present	26(61.9)	16(38.1)	<0.05@(1)	2(18.18)	9(81.82)	0.53*
	Absent	51(87.9)	7(12.1)		1(7.1)	13(92.9)	
Physical abuse	Experienced	6(75)	2(25)	1*(1)	0	2(100)	1.00*
	Not experienced	71(77.2)	21(22.8)		3(13)	20(87)	
Psychoticism	Psychotic	8(57.1)	6(42.9)	0.08*(1)	1(20)	4(80)	0.50*
	Emotionally well-adjusted/ constricted	69(80.2)	17(19.8)		2(10)	18(90)	
Extroversion	Introvert	53(86.9)	8(13.1)	<0.05@(1)	1(14.3)	6(85.7)	1.00*
	Ambient/ Extrovert	24(61.5)	15(38.5)		2(11.1)	16(88.9)	
Neuroticism	Neurotic	23(62.2)	14(37.8)	<0.05@(1)	2(11.8)	15(88.2)	1.00*
	Emotionally stable/constricted	54(85.7)	9(14.3)		1(12.5)	7(87.5)	
Lie Scale	High Social desirability	14(82.4)	3(17.6)	0.75*(1)	1(33.3)	2(66.7)	0.33*
	Average/Low Social desirability	63(75.9)	20(24.1)		2(9.1)	20(90.9)	

* By Fisher's exact test; @ By chi-square test; **NA= Not applicable; DF = Degree of Freedom;
 # I=upper, II=upper middle, III=middle, IV=lower middle, V=lower. (Figures in parentheses indicate row percentage)

a few psychotic inmates committed such crime. Regarding extroversion, significantly (P = <0.05) more heinous offenders, 53(86.9%) in number, were seen among introvert Indian inmates. Only 24 (61.5%) of the inmates were extrovert or ambient in nature. Based on lie scale, which judged social desirability of inmate's responses, it could be said that Indian inmates committing heinous offences, mostly had average or low social desirability. All foreign heinous offenders hailed from nuclear families, were males, were in the age group of 13-17 years, were educated below secondary level. Majority of the heinous offender foreign inmates came from rural area, were either student or employed, had history of substance use, had major familial or personal problem, were emotionally well adjusted or constricted, were ambient or extrovert, were neurotic and had average or low social desirability but the sample size of foreigners was too small for any proper statistical evaluation.

Table 2 shows different factors found to be significantly associated with heinous crime among Indian inmates. It was observed that odds of committing heinous crime was significantly higher among males, among student or employed, among introvert inmates and among neurotics assuming that there is no change in other predictor variables.

From Table 3 it was observed that, absence of substance use and also absence of gangsterism were significantly associated with recidivism. Adjusted odds ratio revealed that both of these two factors independently retained their significant association with recidivism in assumption of no change in other predictor variables.

From Table 4, It was observed that, there was no significant association between viewing adult movies or pornography and committing heinous offences.

DISCUSSION

The findings of the present study was supported by a research work which also showed that CCLs of

higher age group were involved in heinous offences[4]. The large scale Denver, Rochester and Pittsburgh longitudinal studies, also supported the findings of the present study[5].

Among JCLs heinous offences were found to be significantly higher among boys compared to girl inmates with strong association. This was also supported by the data published in National Crime Records Bureau (NCRB), India, both in 2016[2] and 2021[6].

In this study, more Indian heinous offenders came from rural areas than urban areas but that was to be considered as a reflection of normal population distribution of India according to census data in 2011[7].

The observation that more Indian inmates involved in heinous crimes came from nuclear families than from joint families was clearly in excess of the normal proportion of nuclear families in our country as evident by the data collected in India between 2019 to 2021 through National Family Health Survey 5 (NFHS 5).

The observation in this study that most of the heinous offenders were either illiterate or just literate or educated up to primary level (class IV standard) but did not pass secondary (class X standard) board examination was supported by a study in Netherlands[9].

It was also seen that heinous offences were significantly higher among inmates who were either student or employed as child labourer and the association was also strong. This was supported by a study in UK[10].

The observation that most of the heinous offenders came from social class II (upper middle) and III (middle) followed by IV (lower middle) and V (lower) and then by I (upper) according to the BG Prasad scale based on Indian context[11] was supported by a study in UK[12].

The observation that substance use were absent among majority of heinous offenders was supported by a study on JCLs in Sweden[13] and another study in UK[14].

Table 2 — Measuring Strength of the Association of Significant Factors with Heinous Offences only among Indian Inmates (n=100)		
Factors	P-value	Adjusted Odds Ratio (with 95% confidence interval)
Sex [Male (as reference) & Female]	<0.05	0.111 (0.022-0.555)
Occupation [Student/Employed (as reference) & Beggars/Ragpickers]	<0.05	0.048 (0.004-0.541)
Major family/personal problems [Present & Absent (as reference)]	0.07	3.151 (0.923-10.757)
Extroversion [Introvert (as reference) & Ambient/Extrovert]	<0.05	0.242 (0.0903-0.546)
Neuroticism [Neurotic (as reference) & Emotionally stable/constricted]	<0.05	0.279 (0.104-0.722)

Table 3 — Association of Recidivism with Nature of Offences and Different Factors (n=125)					
Recidivism among inmates		Present (%)	Absent (%)	P-value	Adjusted Odds Ratio (with 95% CI)
Substance use/Addiction	Present (as reference)	8(22.9)	27(77.1)	<0.05	0.220 (0.059-0.828)
	Absent	5(5.6)	85(94.4)		
Nature of Offence	Heinous (as reference)	10(12.5)	70(87.5)	0.62	0.679 (0.149-3.093)
	Non-heinous	3(6.7)	42(93.3)		
Gangsterism	Present (as reference)	10(31.3)	22(68.8)	<0.05	0.078 (0.019-0.323)
	Absent	3(3.2)	90(96.8)		
(percentage calculated as row percentage)					

Table 4 — Association of sexual offences with viewing adult movies/ pornography by Indian inmates (n=100)			
	Sexual Offences (%)	Other Offences (%)	P-value
Viewed adult film/pornography	14 (45.2)	17 (54.8)	0.32[@]
Did not view adult film/ pornography	24 (34.8)	45 (65.2)	
@ By Chi-square test; (percentage calculated as row percentage)			

The observation that, heinous crime was significantly more common among inmates not having history of major familial or personal problems was partially supported by a study in Carolina, US[15].

Regarding personality trait, in terms of extroversion, significantly more heinous offenders from India were introvert in comparison to extrovert and ambient inmates and the association was also strong. Heinous offences were significantly more among neurotics and this also showed strong association. In a study among the JCLs in Sweden in 2008 it was seen that, those who were in judicial custody, suffered more from depression and childhood developmental disorder but with lower rates of psychosis and bipolar disorder than adult forensic psychiatric examinees[13]. In another study among JCLs in UK, it was found that 7% of them had some psychiatric problem necessitating further treatment[14].

Recidivism was significantly associated with absence of substance use and absence of gangsterism among inmates and the association was also strong. But in a study, it was observed that there is a possibility of a positive substance use and recidivism among incarcerated delinquents[16]. Another study in US showed that gangsterism had increased the proportion of juvenile delinquency specially among younger juveniles[17].

From the present study, no association could be established between committing sexual offences and viewing sexually explicit materials which was supported by a study in India[18].

CONCLUSION

From this study, it can finally be concluded that among CCLs, boys were significantly more involved in heinous offences. CCLs of higher age-group, belonging to nuclear families and educated below secondary level were more involved in heinous offences. Significantly more heinous offenders were found among students or inmates employed as child labourers previously. Inmates without the history of major familial or personal problems and belonging to upper middle and middle social class were also involved in heinous offences. Recidivism of any type of offence was found to be significantly associated with absence of any substance use and absence of gangsterism also. Majority of CCLs committing heinous offence did not experience any physical abuse.

By psychological evaluation of the CCLs, it was seen that regarding extroversion, inmates with introvert personality had a significantly strong association with heinous crime. Regarding Neuroticism, neurotics also had a significantly strong association with heinous crime. Regarding psychoticism, most of the Indian heinous offenders were either emotionally well-adjusted or emotionally constricted. Most of the Indian and foreign heinous offenders had average or low social desirability according to the lie scale.

No significant association was found between watching adult movies or pornography with involvement in sexual offences among the JCLs.

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