Coll. Antropol. **30** (2006) 1: 143–147
Original scientific paper

Juvenile Perpetrators of Homicides and Attempted Homicides – A Case Control Study

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A B S T R A C T

The aim of this study was to explore the influence of certain aspects of family dynamics, as well as some behavior and psychological development disorders on the occurrence of homicides and attempted homicides among juveniles in the Split Dalmatian County over a period of 10 years (1989–1998). A retrospective case-control study was performed to compare juvenile murderers and attempted murderers with minors who committed other offences, i.e. property crimes. The subjects were paired according to demographic and socio-economic background. The data obtained from County Court's files included social anamnesis, specialists' observation and psychiatric expertise results. There was a significant difference between the study group and their controls in the frequency of physical violence and parental rejection during childhood. Neuropsychological and neurophysiological abnormalities were more frequent in the experimental than in the control group. Stealing occurred more often in the control group. No significant differences were found for other studied risk factors. There is no unique type of juvenile murderer. A juvenile homicide is committed under the influence of various developmental characteristics, family milieu, and constitution combined with environmental factors and perpetrator's perception of the victim.

***Key words**: juvenile homicide, attempted murder, psychosocial characteristics*

Introduction

Due to the seriousness of the offence and a trend of rise in homicide rates among juveniles, murders have a special significance in the broad range of criminal and socio-pathological phenomena in juvenile delinquency. Homicide or attempted homicide is the most aggravated form of criminal behavior. It seems particularly appalling when the offender is an adolescent, because of the discrepancy between the graveness of the crime and the common image of a young person, who is least expected to commit such a violent act[1,2].

A disturbing trend of rise in violence among juveniles is observed all over the world. A number of studies, some of which have transcultural character, deal with the juvenile homicides and attempted homicides[3,4]. The teenage homicide rate in Croatia is somewhere in-between the worlds highest rates, such as the one in the USA, and the lowest rates, such as those in Denmark, Japan and England[3].

Teenage murderers or attempted murderers undoubtedly make a very heterogeneous group. Many studies tried to define risk factors and psycho-social parameters that could help in detection and prevention of such tragedies. Studies also looked into the root cause of violence in the light of socioeconomic factors and family environment, and described the effects of neurophysiological, neuroanatomical and neurological abnormalities on the expression of aggression[5–9].

The aim of this study was to explore the influence of certain aspects of family dynamics, as well as some behavior and psychological development disorders on the occurrence of juvenile homicides.

Participants and Methods

A retrospective case-control study was performed to compare juvenile murderers and attempted murderers

Received for publication August 28, 2005

with minors who committed other offences, i.e. property crimes. We analyzed the factors of family dynamic, emotional and cognitive development, and behavioral characteristics of juveniles which could potentially lead to the act of murder or attempted murder.

Subjects

Study included the 19 minors (14–18 years of age), perpetrators of homicide and attempted homicides in the Split-Dalmatian County over a 10-year period (1989–1998). Control group consisted of underage delinquents who committed criminal offences of theft and were being rehabilitated in the Educational centre in Split as a part of their sentence. Each member of the control group was coupled with a peer from the study group, according to their age, gender, place of residence and parents' socioeconomic status. Eighteen members of the control group were males and one was a female; 15 of them were town residents and four lived in villages. Four of them were in the age group 14–16, and 15 in the age group 16–18.

Tests

In our research we used the following data from court files of the Split-Dalmatian County: social history, results of observation of an expert team (consisted of a psychiatrist, a psychologist and a social worker) and results of psychiatric expertise.

Collected data were entered in the structured questionnaire which contained the identification data, sociodemographic status, data from family case history (conflicts between parents, mental illness and alcoholism of parents, criminal behaviors of parents, separation from parents), personal case history (data about physical, sexual and emotional abuse, neglect, rejection, developmental disturbances and separation difficulties), indicators of deviant behavior (runaways, vandalism, thefts, consumption of alcohol and drugs, dropping out of school), and other psychological problems (self-injury, attempted suicide, neurophysiological abnormalities). IQ test was used for assessing intelligence in the experimental group. Unfortunately, these data were not presented for the control group because of different tests used for assessing intelligence.

Statistics

The study was done as a case-control study. Chi-square test was used for testing the differences between the groups. Odds ratio (OR) was calculated for the risk of perpetrating homicides if a certain characteristic was present. Software program SPSS 12.0 for Windows was used for statistical analysis. The level of significance was set at <0.05.

Results

A total of 183 homicides and attempted homicides were committed in the Split-Dalmatian County during the ten-year period 1989–1998. Out of these, 19 (10.38%) were juvenile homicides. Fifteen offenders were in the 16–18 age group, and four were younger than 16. Most of them were male, with only one female.

No statistically significant differences between experimental and control group were found in the parental psychopathology, criminal propensities, marriage status and conflicts. Conflicts between parents were present in almost half of the participants in both experimental and control groups. Calculations of odds ratio and chi-square showed a twofold increase in the risk of violent behavior among the children whose parents had a history of criminal behavior (OR=2.188). Perhaps paradoxically, minors who committed or attempted to commit a murder more frequently had a complete family (OR=2.267, Table 1).

Analysis of data from the personal case histories showed no statistically significant differences between the groups with respect to difficulties at birth, long-lasting separation from parents, parental neglecting, developmental and separation difficulties, and sexual abuse during childhood. Physical abuse in childhood occurred more often in the experimental group than in the control group ($\chi^2=3.97$, $p=0.046$). Rejection by parents was more frequent in the experimental group than in controls ($\chi^2=8.74$, $p=0.003$). High values of odds ratio are indicative of the high risk of violent behavior in children

TABLE 1
DATA FROM FAMILY HISTORY OF 19 MINORS WHO COMMITTED OR ATTEMPTED MURDER IN THE SPLIT-DALMATION COUNTY DURING 1989–1998 PERIOD, AND 19 MEMBERS OF THE CONTROL GROUP

Characteristics	Perpetrators		Controls		χ^2, p	Odds Ratio
	Yes	No	Yes	No		
Parental psychopathology and alcoholism	5 26.3%	14 73.7%	4 21.1%	15 78.9%	χ^2= 0.00 p=1.00	1.339 (0.298–6.021)
Parental criminal behavior	3 15.8%	16 84.2%	0 0%	19 100%	χ^2=1.448 p=0.229	2.188 (1.525–3.139)
Complete family	17 89.5%	2 10.5%	15 78.9%	4 21.1%	χ^2=0.198 p=0.656	2.267 (0.362–14.185)
Frequent conflicts between parents	8 42.1%	11 57.9%	7 36.8%	12 63.2%	χ^2=0.000 p=1.000	1.247 (0.339–4.589)

who were rejected (OR=11.556) and subjected to physical harassment (OR=5.156). A higher risk for the occurrence of juvenile homicides was found in the category of developmental disturbances (OR=2.727) and separation difficulties (OR=2.727, Table 2).

Neurophysiological and neuropsychological abnormalities were manifested as attention deficit hyperactive disorder (ADHD) in six participants and as dysrhythmic EEG in one. Neuropsychological and neu- rophysiological abnormalities were more frequent in the experimental than in the control group (χ^2=6.30, p= 0.012). However, we should be cautious about this result since the number of cells with the theoretical frequency lower than 5 is too high (2 cells, i.e. 50% of all cells). Therefore, it is possible that this chi-square is significant because there were too many of such cells. Results of odds ratio analysis show the increased risk of the occurrence of juvenile homicides among the participants with neuropsychological abnormalities (OR=2.583, Table 2).

Differences between the experimental and the control group were found in runaways, belonging to a delinquent group, and consumption of alcohol and drugs. These differences were not statistically significant, although odds ratio points to an increased risk for the occurrence of juvenile homicides among runaways (OR= 3.850) and drug abusers (OR=2.188).

Thefts were significantly more frequent in the control group (χ^2=14.74, p<0.001), which is an artifact resulted from the fact that the control group consisted of the perpetrators of robbery or burglary. Differences were found in the category of dropouts, but they were not statistically significant. A total of 12 juvenile murderers or attempted murderers had dropped out of the school, as compared to 6 members of the control group. Results of odds ratio show that the risk of the occurrence of juvenile homicides is three times higher among the dropouts than in non-dropouts (OR=3.714).

There was no significant difference in suicide attempts or self-injury, but the results of odds ratio showed a higher risk for juvenile homicides in those who attempted suicide (OR=2.056) and inflicted self-injury (OR=2.118, Table 3). Intelligence testing in the experimental group showed that 8 examinees were of an average intelligence, 4 on the lower average limit, 2 below the average, 3 on the upper average limit and 2 above the average.

Discussion

Results of this study show that physical abuse and rejection in the family are the high risk factors for the occurrence of juvenile homicides and attempted homicides. Other factors in family history (criminal propensities of parents, family completeness), personal history (developmental and separation difficulties, neuropsychological abnormalities), delinquent behavior and emotional difficulties (failure at school, runaway, abuse of drugs, attempted suicide and self-injury) indicate an increased risk of the occurrence of juvenile homicides and attempted homicides, although there was no statistically

TABLE 2
DATA FROM PERSONAL HISTORY OF 19 MINORS WHO COMMITTED OR ATTEMPTED MURDER IN THE SPLIT-DALMATIAN COUNTY DURING 1989–1998 PERIOD, AND 19 MEMBERS OF THE CONTROL GROUP

Characteristics	Perpetrators		Controls		χ^2, p	Odds Ratio
	Yes	No	Yes	No		
Difficulties at birth	4 21.1%	15 78.9%	6 31.6%	13 68.4%	χ^2=0.136 p=0.713	0.578 (0.133–2.505)
Long-lasting separation from parents	6 31.6%	13 68.4%	4 21.1%	15 78.9%	χ^2=0.136 p=0.713	1.731 (0.339–7.505)
Parental rejection	16 84.2%	3 15.8%	6 31.6%	13 48.4%	χ^2=8.744 p=0.003*	11.556 (2.411–55.392)
Sexual abuse in childhood	1 5.3%	18 94.7%	1 5.3%	18 94.7%	χ^2=0.000 p=1.000	1.000 (0.058–17.249)
Physical abuse	11 57.9%	8 42.1%	4 21.1%	15 78.9%	χ^2=3.965 p=0.046*	5.156 (1.234–21.554)
Negligence	5 26.3%	14 73.7%	11 57.9%	8 42.1%	χ^2=2.699 p=0.100	0.260 (0.066–1.020)
Developmental disturbances	8 42.1%	11 57.9%	4 21.1%	15 78.9%	χ^2=1.096 p=0.295	2.727 (0.652–11.400)
Separation difficulties	8 42.1%	11 57.9%	4 21.1%	15 78.9%	χ^2=1.096 p=0.295	2.727 (0.652–11.400)
Neuropsychological and neurophysiological abnormalities	7 36.8%	12 63.2%	0 0%	19 100%	χ^2=6.304 p=0.012	2.583 (1.659–4.023)

*p=0.05

TABLE 3
INDICATORS OF DELINQUENT BEHAVIOR AND EMOTIONAL DIFFICULTIES OF 19 MINORS WHO COMMITTED OR ATTEMPTED MURDER IN THE SPLIT-DALMATIAN COUNTY DURING 1989-1998 PERIOD, AND 19 MEMBERS OF THE CONTROL GROUP

Characteristics	Perpetrators		Controls		χ^2, p	Odds Ratio
	Yes	No	Yes	No		
Runaway	11 57.9 %	8 42.1%	5 26.3%	14 73.7%	χ^2=2.699 p=0.100	3.850 (0.980–15.124)
Members of delinquent groups	11 57.9%	8 42.1%	8 42.1%	11 57.9%	χ^2=0.421 p=0.516	1.891 (0.522–6.854)
Alcohol abuse	5 26.3%	14 73.7%	10 52.6%	9 47.4%	χ^2=1.762 p=0.184	0.321 (0.082–1.354)
Drugs abuse	3 15.8%	16 84.2%	0 0%	19 100%	χ^2=1.448 p=0.229	2.188 (1.525–3.139)
Thefts	7 36.8%	12 63.2%	19 100%	0 0%	χ^2=14.377* p=0.000	0.269 (0.143–0.507)
School dropouts	12 63.2%	7 36.8%	6 31.6%	13 68.4%	χ^2=2.639 p=0.104	3.714 (0.969–14.233)
Suicide attempt	1 5.3%	18 94.7%	0 0 %	19 100%	χ^2=0.000 p=1.000	2.056 (1.476–2.862)
Self-injury	2 10.5%	17 89.5%	0 0%	19 100%	χ^2=0.528 p=0.468	2.118 (1.499–2.991)

*p=0.05

significant differences between the experimental and the control groups.

The main limitation of this study is the small number of participants, which is acceptable if we take into account a relatively low frequency of the phenomenon dealt with in the research. Criticism may be also directed towards the choice of the control group. This group was chosen in order to define the characteristics which distinguish perpetrators of homicide and homicide attempts from other juvenile delinquents. Our presumption was that in this way we would be able to achieve greater sensitivity than if we took the minors without behavioral problems as the control group. Another limitation of this study is the lack of data about the intellectual status of the control group participants. Finally, there was no unique set of psychological tests applied during psychiatric-psychological expertise. Therefore this study lacks the objectivity regarding personality traits of juvenile perpetrators of homicide and homicide attempts.

The results of our study show that older and male adolescents commit juvenile homicide more often than younger and female ones, which corresponds with the results of other authors[5–7].

Families of underage perpetrators are mostly complete in quantitative sense, which does not necessarily imply the qualitative sufficiency. It is interesting to note that the families in question were originally of the lower socioeconomic status, but achieved the average standard of living by a temporary work abroad or the private entrepreneurship. A transcultural study which included 1,000 adolescents between 13 and 19 years of age in ten countries showed that low national product, low income per capita and poor educational possibilities significantly correlate with more psychopathology among adolescents[4].

A high frequency of conflict among parents in both experimental and control group is an indicator of dysfunctionality in the families of young delinquents. A previous study found that a vast majority of homicidal youths have a chaotic family background with significant conflicts among parents[5].

When looking into family-related risk factors, we found significantly higher proportion of disrupted parents-children relations with characteristics of physical abuse and parental rejection. Most studies dealing with juvenile homicides pointed out the significance of family violence, which serves as an identification pattern to the children. Physical aggression is not only directed towards a child, but is established as a way of communication and a means of achieving the position in the family. In this way it becomes an identification pattern and a behavioral model for the child. A high percentage of juvenile murderers come from families characterized by physical abuse, home violence, lack of parental care and instability[5,11–14].

To find out the predictive variables which would differentiate juvenile murderers from other underage delinquents, we tried to explore the forms and indicators of delinquent behavior which are more often represented among the examined population. In our study, values of odds ratio showed that runaway from home and school dropout were associated with a higher risk of the occurrence of juvenile murders and attempted murders, although the differences between the experimen-tal and the control group were not statistically significant.

Our results suggest that the abuse of alcohol, drugs, suicide attempts and self-injury are all associated with a

higher risk of the occurrence of juvenile murders and attempted murders. Previous studies showed the importance of factors such as runaways, belonging to a delinquent group, abuse of alcohol and drugs, and learning difficulties among juvenile murderers and attempted murderers[5,13,15,19–21].

Intelligence testing, conducted in all participants, has shown that intellectual abilities of offenders are almost identical to the general population, by both its range and distribution[17]. Significant learning difficulties in spite of average intellectual abilities point to emotional difficulties as the predominant cause of social failure.

The presence of ADHD in six participants and dysrhythmic EEG in one (it should be born in mind that only a half of the participants were subjected to EEG testing) is a sign of mild neuropsychological abnormalities. Cases of ADHD were characterized by hyperactivity, attention deficit, and dyslexic or dysgraphic difficulties. These symptoms often cause a poor adaptation to school and lead to emotional problems. Results of other studies showed a high frequency of ADHD syndrome or learning difficulties in almost a half of juvenile murderers and attempted murderers[6,18].

Prospective studies with a multidisciplinary approach could be conducted in the future to enable a detailed psychodynamic analysis of the offenders' relationships with their parents, better psychoanalytic understanding of a child's individual dynamics, and an empiric research of behavior disorders in adolescents.

The male gender, older adolescent age, physical abuse and parental rejection, neurophysiological and neuropsychological disturbances, school dropouts in spite of a normal intelligence, and a disturbed emotional development are significant risk factors for the extremely aggressive behavior of juveniles.

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MALOLJETNI POČINITELJI UBOJSTVA I POKUŠAJA UBOJSTVA – STUDIJA PAROVA

SAŽETAK

Cilj studije bio je istražiti utjecaj čimbenika obiteljske dinamike, poremećaja ponašanja i psihološkog razvoja na pojavu ubojstava i pokušaja ubojstava koje su počinili maloljetnici na području Splitsko-Dalmatinske Županije tijekom desetogodišnjeg razdoblja (1989.–1998.). Retrospektivnom studijom parova uspoređeni su maloljetni počinitelji ubojstva i pokušaja ubojstva s počiniteljima imovinskih delikata. Kontrolna skupina je formirana od maloljetnih delikvenata od kojih je svaki bio par jednom iz ispitivane skupine po demografskim podacima i socioekonomskom porijeklu. Korišteni su podaci Županijskog suda koji su sadržavali socijalnu anamnezu, rezultate obrade tima struč- njaka i psihijatrijske ekspertize. Nađena je statistički značajna razlika između ispitanika i kontrolne skupine u učestalosti fizičkog nasilja i odbacivanja od strane roditelja tijekom djetinjstva. Neuropsihološke abnormalnosti su daleko češće u eksperimentalnoj nego u kontrolnoj skupini. Krađe su češće u kontrolnoj skupini. Nisu utvrđene statistički značajne razlike među ostalim ispitivanim obilježjima. Jedinstveni tip maloljetničkog ubojice ne postoji. Maloljetnička ubojstva posljedica su utjecaja različitih razvojnih obilježja, obiteljskog okruženja i konstitucije udružene sa okolišnim čimbenicima i doživljajem žrtve.