

# BEHAVIOURAL AND FAMILY CHARACTERISTICS OF VIOLENT AND NON-VIOLENT ADOLESCENT OFFENDERS

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A number of studies has shown that violent adolescent offenders have serious behaviour and personality disorders, and that they live in families overloaded with problems and disturbances. The aim of this study was to compare two representative samples of adolescent offenders, 605 adolescents who committed violent offences, and 592 who committed non-violent offences, in respect of their behavioural and family characteristics. Data was collected from the court archives using a questionnaire. The results show that behavioural variables are more important in explaining differences between violent and non-violent offenders than family variables. Violent offenders commit more crimes, manifest more difficult behavioural disorders, and live in less favourable family setting than non-violent offenders. They are more aggressive and relationships between members of their families are disrupted in a greater extent, consisting in more verbal and physical aggression. In the domain of family variables, differences between samples, were significant in the variables of negative family processes (sociopathology) and not significant in the variables of family context (structure and socioeconomic status). The results provide support to the intergenerational transmission of violence hypothesis.

**key words:** violent offences, juvenile delinquency, behavioral disorders, family disorders

## INTRODUCTION

In contemporary world, we are witnesses of many forms of violence. Violence and terrorism increase every day. The reasons for this phenomena are searched for in the man's nature and his social environment. Still, there is no generally accepted aggressiveness theory which could explain violent behaviour and violent crimes. However, no one denies the influence of the child's family on behaviour. The only question is, how big is the family influence, and which parts of family life mostly influence aggressive and violent behaviour.

Violent crimes are the ones, where offender caused victim physical and/or psychical pain and injury by means of physical force or threat. Non-violent crimes do not include physical force or threat. They are mostly property crimes, except robbery. Violent crimes are more dangerous to

society; so violent offenders are considered to be more serious delinquents than non-violent offenders. The criminal carrier of violent offenders mostly start early, committing non-violent property crimes, and they are persistent in criminal activity. They are rarely focused only on violent crimes. Violent crimes frequency increases with the global crimes frequency increase. Percent of violent crimes is relatively low in total amount of crimes (Farrington, 1982). Because of this low frequency, persons who committed at least one violent crime are usually considered as violent offenders.

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The attention of researchers who deal with the causes of violent behaviour in adulthood is focused on studies of early family life disturbances. Many authors analysed the features of family life of future violent offenders. Among other unfavourable factors, often they mention parent's conflicts. The conflicts between parents are frequent in families of aggressive children - potential violent offenders. This fact stressed several authors (McCord et al., 1961; Farrington and West, 1971; Farrington, 1978, 1991; Loeber and Dishion, 1984). Many authors emphasised that family relationships have most important influence in children's development; some of them especially stress the family relationships disturbances as important factor in genesis of aggressive behaviour in children (Patterson, 1976; Patterson et al., 1984; Elder et al., 1986; Björkqvist and Österman, 1992). Patterson maintains that family is complex system in which child plays a role of the "victim", but also "architect" in building up family aggressive behaviour. There is a greater probability for child's aggressiveness in families where parents fight, or neglect and abuse their children (McCord et al., 1963; Farrington, 1978). Loeber and Dishion (1984) tested the hypothesis about more frequent antisocial behaviour in boys and adolescents who manifest physical aggressiveness both in home and school, compared to the sample of boys and adolescents who are physically aggressive either at home or in school, and to sample of boys and adolescents who are not aggressive. They also hypothesised the correlation between children's aggressive behaviour and parents' upbringing models and family relationships. Their results confirmed both hypothesis. Boys and adolescents who display physically aggressive behaviours at home and school manifest more antisocial behaviours, are more frequently exposed to inadequate parents' upbringing methods and rejection; there are more parents' fights; also, these families are less successful in problem solving.

There is high correlation between extremely bad family circumstances and possibility of children becoming serious offenders (McCord et al., 1963; Farrington, 1978, 1991). The comparison between accepted and loved children and those who were abused, rejected or neglected by their parents reveals significant differences in family circumstances; parents' aggressiveness is especially unfavourable. Children who lived in unfavourable circumstances commit more crimes when grown up (McCord, 1983).

In families with more aggressiveness, conflicts and violence between spouses, there is also greater frequency of child corporal punishment. Children often exposed to corporal punishment are more prone to the violent behaviour in adulthood (Straus, 1991). Straus maintains that corporal punishment has extremely bad influence on children development, because they accept the violent behaviour at conflict solving, and, generally, asocial and antisocial behaviour. He collected data which confirmed the hypothesis that "violence begets violence". In literature, this is known as the hypothesis of intergenerational violence transmission. Although it seems logical that children exposed to violence later manifest violent behaviour, and, as parents, continue this transmission, it is still only a hardly provable hypothesis. It is very hard to collect exact data about family violence, because it means violating privacy. There are also other findings that do not support this hypothesis; according to these, proportionally smaller number of children exposed to violence actually manifest aggressive behaviour and aggressiveness is not the only response to violence; violence can also result in withdrawal, isolation and depressiveness, especially in girls. Widom (1989a) made a broad meta-analysis about research on violence transmission and showed a number of methodological shortcomings.

Some of the best follow-up researches on this field were conducted by Huesmann et al., (1984), Widom, (1989b and c) and Dodge et al. (1990).

The study of Huesmann et al. (1984) had two basic goals: to examine a hypotheses about aggressiveness stability, and about intergenerational aggressiveness transmission. The study was conducted on the sample of 632 subjects; follow up period lasted 22 years. The data was collected about the aggressiveness of subjects, their parents and also their children. The subjects who manifested the aggressive behaviour at age of 8, also were aggressive at 30. Aggressiveness stability in male subjects was approximate to intelligence stability (.50), while in female subjects stability coefficient was .35. Subject aggressiveness found in early age was a good predictor of later delinquent behaviour, spouse abusing, violent traffic behaviour and self-reported physical aggressiveness. Intergenerational aggressiveness stability was even higher than individual stability of aggressiveness.

Widom (1989, b and c) examined a relation between child abuse and neglect and violent delinquency in adulthood. Only the subjects with official records on abuse and neglect before age of 11 were included in the sample. In such way, 908 cases were collected. Control sample consisted of 667 non-abused children of the comparable age, sex, race, and socio-economic family status. The first sample was formed approximately 20 years after abuse and neglect; at the same time the data about their criminal activity was collected. The same was done for the control sample. The subjects in the experimental sample in adulthood committed significantly more violent crimes than the control sample subjects. The same was found also for other crimes, except traffic violations and juvenile delinquency. In experimental sample it was found more crimes, more serious offenders, and their criminal careers started more early.

Dodge et al. (1990) studied a sample of pre-school children from age 4 until the end of the first school year. The sample consisted of 309 subjects of both sexes. Initially, authors made assessment of the probability of physical abuse, based on interview with mothers. There was a high probability that

about 15% of children were physically abused. At the age of 5, authors examined the children interpretation of social situations during the child play. Finally, the children aggressiveness was examined. Results showed that the probability of aggressive behaviour is almost three times higher in physically abused children. There is greater probability of physical abuse in poor families, including other deprivations, and especially those with between-parental violence. When these bad influences were partialized out, the physical abuse still remained a significant predictor of aggressiveness in children. It was also found that abused children misinterpret social situations as threatening, ascribing evil intentions to other persons without objective reasons. Therefore, they cannot develop the competent behaviour strategies, and are easily involved in conflicts with others. Physical abuse can lead to withdrawal, isolation, anxiety and depression, especially in girls. This is a result of rather different perception and interpretation of information, based on self-accusations, low self-esteem, and depression. According to Gross and Keller (1992), psychic abuse leaves more severe consequences than physic abuse. It often results in depression, low self-esteem and bad adjustment.

In contemporary literature, there are two main approaches to explaining intergenerational aggressiveness transmission: according to first, aggressive behaviour is the result of social learning (modelling); the second is based on frustration theory of aggressiveness, according to which frustration leads to aggressive behaviour. The first approach maintains that parental aggressive behaviour represents a model for child's aggressive behaviour. The second approach states that constant exposure to abuse and deprivation results in anger and aggressiveness. Also, the influence of hereditary factors in intergenerational violence transmission should not be neglected. The hypothesis (the theory) of intergenerational violence transmission is undoubtedly intriguing, and certainly will be object of many future studies.

Among many studies about influence of family variables on later delinquent behaviour the follow-up studies of McCord (1979), and West and Farrington (described for example in West and Farrington, 1971; Farrington 1978;1991) should also be mentioned. Research conducted by West and Farrington under the title: "The Cambridge Study in Delinquent Development" is described in a large number of books and papers. It can be told that this is a research with the greatest publicity.

In her research (1979), McCord tried to establish a relationship between "family atmosphere" variables and adult delinquency of children. The sample numbered 201 boys. The data were collected about their "family atmosphere" in period from their 5th to 13th year of age. 30 years after, the data were collected about their delinquent activity. Only severe crimes against property and persons were considered. "Family atmosphere" data were recorded in following 7 variables: maternal love, parental supervision, between-parental conflicts, parental aggressiveness, mother's self-confidence, father's deviant behaviour (alcoholism, crime), and father's absence. The data about socio-economic family status was collected, too. The results show the significant correlation between delinquency and all family variables, except father's absence and socio-economic status. The variables that referred to interpersonal communication (between-parental conflicts, parental supervision and maternal love) had greater predictive value in prediction of all committed crimes. Approximately one third of all subjects committed at least one severe crime. Between-parental conflicts and parental aggressiveness were significant only in prediction of crime against persons and not of crime against property.

West and Farrington study lasted 24 years, and comprised a sample of 411 boys from London densely populated working-class neighbourhoods with high percent of crime. The study comprised a period of life from their 8 to 32 years of age. Initially, the data

were collected about boy's families, their behaviour and personality. During the next 24 years, the miscellaneous data were collected about subjects, and especially about their criminal activities. Results showed that aggressiveness and proneness to delinquency are persistent personality characteristics. Boys who committed the crime before age of 15 were more frequently aggressive than other boys. Aggressive children and those who committed crime had frequently similar characteristics (behaviour disorders, school failure, lower IQ, parental neglect). The boys who at the age of 8 manifested exaggerated aggressiveness had a number of unfavourable features: parental abuse and cruelty, neglect, separation from parents, parental delinquency, low economic status, lower IQ, and they were extremely daring. Aggressiveness found in that age was very good predictor of later delinquency, and especially violent delinquency. Comparing with the non-violent delinquents in more occasions of follow-up period, the sample of violent delinquents showed generally less favourable family, behaviour and personality characteristics. Among family variables, the most significant was parental treatment of their children. Parents were more cruel towards violent delinquents. However, there was no significant differences between violent delinquents and non-violent multirecidivists. Parental conflicts found at subjects' ages 8 and 14 were significantly more unfavorable for violent offenders and non-violent multirecidivists compared to occasional non-violent offenders and non-offenders. The basic family characteristics of "real offenders" are parental cruelty and severe discipline, parental delinquency, insufficient supervision, separation from parents and between-parental conflicts.

There are two developmental paths to offending: an early and a late start. Late starters are frequently transitional delinquents or "adolescence-limited" delinquents (Moffitt, 1993). Violent offenders who tend to be early starters are more serious delinquents; they

manifest different behavioural and personality disorders from early childhood, as aggressiveness, attention deficit hyperactivity disorder including impulsivity, and learning disabilities. There is a distinction between conduct disorder and attention deficit hyperactivity disorder, but their overlap is high. These disorders are very close, but yet different. Neuropsychological deficit is a main source of attention deficit hyperactivity disorder and environmental deficit of conduct disorder (Hinshaw, 1994). Violent, chronic and multitype offenders had frequently both diagnoses when they were children, manifesting extreme aggression. Aggressiveness is a stable personality characteristic. It seems that heritability of aggressiveness taken alone is relatively low (Hinshaw, 1994), but in violent, chronic and multitype offenders aggression takes place together with other deficits and disorders which enhance aggression. For instance, it is well-known that majority of children with attention deficit hyperactivity disorder are very aggressive.

The goal of this research was testing the hypothesis about differences in behaviour disorders and family circumstances between violent and non-violent juvenile delinquents. It was hypothesized that violent offenders who committed more serious crimes have more extensive behaviour and family disorders. In the previous studies the samples of violent offenders were relatively small. Here is an attempt to analyse differences between violent and non-violent offenders on the larger samples.

## **METHOD**

The sample of violent offenders consists of 605 adolescents who were tried for violent crimes committed at the ages 14 to 17 (robbery, aggravated assault, homicide and disturbing of public order) and the control sample of 592 adolescents who were tried for non-violent crimes (theft, burglary and car stealing). In both samples adolescents may have committed other crimes before;

those in the first, violent and non-violent crimes, and those in the second, only non-violent crimes. The sample of violent offenders was formed first (covering the period of 10 years) and then the control sample was formed in the number close to that of the first sample. In both samples, there were adolescents who were or were not sentenced for committed crimes (when the public prosecutor or judge concluded that sentencing is not opportune). Data bases for this study were court archives. Data about the family and adolescent behaviour were gathered by social workers and social pedagogues trained in collecting of data; that was their routine work. From all data only data that were suitable to coding into variables were used. It is possible that in some variables the phenomenon under consideration was underestimated because of no clear evidence in the data base; we took that the phenomenon exists only in the case when it was clearly evidenced in the data base.

Seven variables of behavioural disorders in juvenile delinquents and nineteen variables of family context (structure and socioeconomic status) and negative family processes (sociopathology) were used in this research.

The variables: 1. Aggressiveness (1. no 2. yes) 2. Alcoholism (1. no 2. yes) 3. Begging (1. no 2. yes) 4. Socializing with the asocial persons (1. no 2. yes) 5. Running from home (1. no 2. yes) 6. Running from primary school (1. no, 2. yes 3. did not go to school) 7. Early criminal records (1. no 2. yes) 8. Lives with... (1. both parents 2. only with mother 3. only with father 4. in facility 5. with other persons 6. alone) 9. Number of siblings (1. single 2. one 3. two 4. three or more) 10. Number of settlement changing (1. no changes 2. one 3. two 4. three or more) 11. Education, father (1. university 2. high school 3. two years in high school 4. primary school 5. incomplete primary school) 12. Education, mother (the same) 13. Employment, father (1. yes 2. no) 14. Employment, mother (1. yes 2. no) 15. Family economic status (1. higher

than average 2. average 3. below average 4. extremely low 5. has not the family) 16. Disturbed family relationships (1. not disturbed 2. yes, without quarrels and physical fights 3. yes, quarrels 4. yes, physical fights) 17. Alcoholism, father (1. no 2. yes) 18. Alcoholism, mother (1. no 2. yes) 19. Alcoholism, others (1. no 2. yes) 20. Drifting, father (1. no 2. yes) 21. Drifting, mother (1. no 2. yes) 22. Idleness, father (1. no 2. yes) 23. Idleness, mother (1. no 2. yes) 24. Convictions, father (1. no 2. yes) 25. Convictions, mother (1. no 2. yes) 26. Convictions, others (1. no 2. yes).

The number of variables is limited. Some other aspect of behavioural disorders of adolescents and familial circumstances could also be important, or even more important. Especially, that is the case of the parenting styles.

The data was processed using the program of robust discriminant analysis (Momirović et al., 1984; Nikolić, 1992) and the one-way variance analysis.

## RESULTS

Discriminant analysis showed that differences in behavioural and familial variables between violent and non-violent offenders are significant, the centroids indicating that violent offenders have more extensive behavioural and familial disorders (Table 1.). Variable Early criminal records had the highest discriminant coefficient (Table 3.). This variable measures the amount of earlier crimes what could mean that obtained results do not discriminate violent from non-

violent offenders, but adolescents who committed more crimes from those who committed less crimes. In this way it is not clear whether obtained differences between two groups relate to violence, the main subject of this study. To exclude possible doubts, we partialized out the effects of the variable Early criminal records from the results in another discriminant analysis (Tables 2. and 3.) and analysis of variance (Table 4.).

After controlling for the influence of the variable Early criminal records, discriminant function remained significant. In general, there were no substantial changes of discriminant coefficients and correlations. Aggressiveness has distinctively the highest discriminative value. The impression that behavioural variables better discriminate two groups than familial ones is sustained by the results of the analysis of variance (Table 4.). Among familial variables, those measuring negative familial processes (i.e. familial sociopathology) have greater discriminative value than those measuring familial context (i.e. familial structure and socioeconomic status). However, the alcoholism of parents has not discriminative value.

There was not a significant difference in family economic status. The same is with educational level of parents (except the educational level of mothers, before controlling for variable Early criminal records). However, data show relatively low economic status and educational level, comparing to general population (Table 4.). Similar results about low family economic status and low parental educational level were obtained in many studies in criminology.

*Table 1. Significance of Discriminant Function and Group Centroids (Before controlling for the Early Criminal Records variable)*

Df	Eigenvalue	F	P	C <sub>v</sub>	C <sub>N</sub>
1	.4975	106.985	.0000	.493	-.504

*Table 2. Significance of Discriminant Function and Group Centroids (After controlling for the Early Criminal Records variable)*

Df	Eigenvalue	F	P	C <sub>v</sub>	C <sub>N</sub>
1	.1212	37.987	.0000	.244	-.249

Table 3. Discriminant Coefficients ( $X$ ) and Correlations ( $S$ )

	$X_1$	$S_1$	$X_2$	$S_2$
1. Aggressiveness	.43	.56	.65	.44
2. Alcoholism	.20	.41	.22	-.14
3. Begging	.28	.53	.35	.28
4. Socializing with asocial persons	.27	.60	.17	.45
5. Running away from home	.06	.54	-.17	.02
6. Truancy from primary school	.26	.64	.28	.46
7. Early criminal records	.61	.59	-	-
8. Lives with	.04	.23	.04	.08
9. Number of sibilings	.11	.28	.17	.27
10. Number of changes of residence	.06	.23	.03	.15
11. Education, father	.08	.37	.08	.15
12. Education, mother	.11	.36	.11	.14
13. Employment, father	.00	.30	-.01	-.01
14. Employment, mother	.06	.27	.08	-.04
15. Family economic status	-.07	.38	-.20	-.02
16. Disturbed family relationships	.15	.53	.11	.24
17. Alcoholism, father	.06	.42	.04	.07
18. Alcoholism, mother	-.02	.28	-.07	.13
19. Alcoholism, others	.11	.33	.16	.25
20. Drifting, father	.10	.47	.12	.26
21. Drifting, mother	.06	.39	.09	.15
22. Idleness, father	.14	.52	.17	.24
23. Idleness, mother	.09	.45	.13	.16
24. Convictions, father	.13	.38	.17	.24
25. Convictions, mother	.06	.25	.07	-.18
26. Convictions, others	.17	.45	.15	.18

$X_1, S_{1i}$ ; before controlling for Early Criminal Records variable

$X_2, S_{2i}$ ; after controlling for Early Criminal Records variable

Table 4. Relative Frequencies (Percentages) and One-Way Analysis of Variance (Category NO is omitted)

	YES violent	YES non- violent	F before cont.	P	F after cont.	P
1. Aggressiveness	35.0	16.4	61.30	.000	36.04	.000
2. Alcoholism	14.5	8.1	16.72	.000	7.43	.007
3. Begging	10.2	3.2	31.51	.000	16.46	.000
4. Socializing with asocial persons	46.1	32.9	23.88	.000	4.08	.041
5. Running away from home	22.0	19.4	2.79	0.91	3.75	.050
6. Truancy from primary school	30.9	22.8	24.72	.000	9.55	.002
6.3 did not go to school	3.0	.5	-	-	-	-
7. Early criminal records	48.1	19.3	126.80	.000	-	-
8. Lives with...	-	-	2.26	.129	1.87	.169
8.1 both parents	68.4	68.8	-	-	-	-
8.2 only with mother	17.2	19.3	-	-	-	-
8.3 only with father	6.0	4.6	-	-	-	-
8.4 in a facility	4.1	3.7	-	-	-	-
8.5 with other persons	3.5	3.0	-	-	-	-
8.6 alone	.8	.7	-	-	-	-
9. Number of sibilngs	-	-	5.22	0.21	3.50	0.58
9.1 only child	14.9	17.9	-	-	-	-
9.2 one	44.1	43.8	-	-	-	-
9.3 two	17.2	20.1	-	-	-	-
9.4 three or more	23.8	18.2	-	-	-	-
10. Number of changes of residence	-	-	1.62	.200	.75	.390
10.2 one	20.0	15.4	-	-	-	-
10.3 two	3.0	2.0	-	-	-	-
10.4 three or more	2.8	3.7	-	-	-	-
11. Education, father	-	-	3.49	.059	1.98	.156
11.1 university	8.1	7.9	-	-	-	-
11.2 high school	36.7	39.7	-	-	-	-
11.3 two years of high school	5.0	5.4	-	-	-	-

11.4 primary school	25.3	27.2	-	-	-	-
11.5 incomplete primary school	25.0	19.8	-	-	-	-
12. Education mother	-	-	4.46	-.033	1.77	.180
12.1 university	3.6	5.2	-	-	-	-
12.2 high school	26.4	28.2	-	-	-	-
12.3 two years of high school	3.5	5.1	-	-	-	-
12.4 primary school	34.7	34.1	-	-	-	-
12.5 incomplete primary school	31.7	27.4	-	-	-	-
13. Employment, father	74.9	74.8	.99	.321	1.00	.319
14. Employment, mother	61.5	64.4	2.26	.129	1.62	.200
15. Family economic status	-	-	2.23	.132	3.62	.054
15.1 above average	6.1	5.1	-	-	-	-
15.2 average	58.3	56.6	-	-	-	-
15.3 below average	21.2	22.5	-	-	-	-
15.4 iextremely low	14.0	14.7	-	-	-	-
15.5 has no family	.3	1.2	-	-	-	-
16. Disturbed family rekationships	-	-	9.11	0.003	3.13	0.73
16.2 yes, without quarrels and physical fights	19.8	26.0	-	-	-	-
16.3 yes, quarrels	9.3	2.7	-	-	-	-
16.4 yes, physical fights	14.4	11.5	-	-	-	-
17. Alcoholism, father	30.9	28.4	2.80	.091	1.80	.176
18. Alcoholism, mother	6.6	7.1	.69	.413	.89	.349
19. Alcoholism, others	6.3	3.9	7.47	.006	5.75	0.16
20. Drifting, father	10.4	7.4	6.24	.012	4.00	.043
21. Drifting, mother	5.3	4.1	3.66	.053	3.17	.071
22. Idleness, father	14.7	10.1	8.84	.003	5.24	.021
23. Idleness, mother	9.1	6.8	4.99	.024	3.92	.045
24. Convictions, father	7.1	4.1	9.67	.002	6.50	.011
25. Convictions, mother	2.0	1.2	5.47	.018	4.56	.031
26. Convictions, others	7.6	3.7	14.46	.000	7.25	.007

## DISCUSSION

Violent offenders show more behavioural disorders and family disturbances than non-violent offenders. Their dominant features are early criminal records and aggressiveness. Our findings are similar to those of Farrington and West (1971) and Hämäläinen and Pulkkinen (1995), that the childhood and juvenile delinquency is highly correlated with the childhood aggressiveness (supposing that aggressiveness is a permanent personality trait), and to results of Farrington (1978) and Pulkkinen (1983) about very good predictive value of childhood aggressiveness in prediction of violent delinquency and, generally, serious juvenile and adult delinquency (see also Magnusson et al., 1983; Roff and Wirt, 1984; Hämäläinen and Pulkkinen, 1995). Furthermore, our findings support the findings of Farrington (1978, 1982) according to which the violent delinquents are more persistent in their criminal activity and start their criminal career earlier. It can be concluded that violent offenders are more serious criminals, whose characteristics match those of non-violent multirecidivists (Farrington, 1991). These two delinquent groups are in fact the "real criminals".

Violent delinquents' family relationships disturbances are more severe, convictions of family members are more frequent and negative characteristics of parents are more emphasized. Such atmosphere facilitates the learning of aggressive behaviours (learning by model, more stressful situations). The child is from early age the witness of parental conflicts, and often a target of aggressiveness. Such atmosphere is perceived as hostile and threatening. The child generalises a negative perception of family atmosphere on wider social environment, which is conceived as unreliable and hostile what supports the aggressive behaviour (Dodge et al., 1990). Witnessing violence results in cognitive scripts for future behaviour and, at the same time, activates existing asocial cognitive scripts. If this process of cumulative learning is undisturbed, it results in persistent aggressive behaviour (Huesmann and Eron,

1984; Huesmann, 1988). Child learns these scripts early, before age of 6 (Eron, et al., 1991). The family surroundings supports violence giving positive value to aggressiveness and favouring violent behaviour in resolving problem situations (McCord, 1988). Our findings support the results of McCord et al. (1963), McCord (1979), and Farrington (1978, 1991) about the role of parental conflicts, family delinquency and parents' negative characteristics in explaining violent juvenile delinquency. Comparing violent and non-violent delinquents, we found the significant differences in negative family processes (sociopathology), but no significant differences in family context (structure and socioeconomic status). Therefore, the results suggests that the negative family processes are more relevant in learning violent behaviour forms, than the family context.

Although family has indisputably important role in learning of violent behaviour, the results show that in explaining violent behaviour the influence of behavioural variables is greater than that of family ones. Greater impact of behavioural variables could be tentatively interpreted as the consequence of greater influence of neuropsychological deficit on behaviour of violent offenders (Hinshaw, 1994).

We could agree with the statement of Lewis et al. (1989) that interaction of unfavourable personal and environmental characteristics (violence in primary family) enables better prediction of future aggressive behaviour than only early aggressiveness. Discriminant function structure showed that adolescents' behaviour and their family features are interrelated, and that therefore the causes of violent behaviour could be found in their complex interaction.

The results of our research enable the conclusion that violent juvenile offenders are more aggressive and that they live in families displaying more sociopathological behaviours and more verbal and physical aggression, what could be interpreted in support of the intergenerational trans-

mission of violence hypothesis. Limitations of these results and conclusions are twofold: first, they are founded on official records

only and second, the sample of variables is reduced.

## REFERENCES

1. Björkqvist, K., Österman, K. (1992): Parental influence on children's self-estimated aggressiveness, *Aggressive Behavior*, 18, 411-423.
2. Dodge, K.A., Bates, J.E., Pettit, G.S. (1990): Mechanisms in the cycle of violence, *Science*, 250, 1678-1683.
3. Elder, G.H., Caspi, A., Downey, G. (1986): Problem behavior and family relationships: Life course and intergenerational themes (in Sorensen, A.B., Weinert, F.E., Sherrod, L.R. (eds) *Human development and the life course: Multidisciplinary perspectives*, pp. 293-340, Erlbaum, Hillsdale.
4. Eron, L.D., Huesmann, L.R., Zelli, A. (1991): The role of parental variables in the learning of aggression (in Pepler, D.J., Rubin, K.H. (eds) *The development and treatment of childhood aggression*, pp. 169-188, Erlbaum, Hillsdale.
5. Farrington, D.P., West, D.J. (1971): A comparison between early delinquents and young aggressives, *British Journal of Criminology*, 11, 341-358.
6. Farrington, D.P. (1978): The family backgrounds of aggressive youths (in Hersov, L.A., Berger, M., Shaffer, D. (eds) *Aggression and antisocial behavior in childhood and adolescence*, pp. 73-93, Pergamon, Oxford.
7. Farrington, D.P. (1982): Longitudinal analyses of criminal violence (in Wolfgang, M.E., Weiner, N.A. (eds) *Criminal violence*, pp. 171-200, Sage, Beverly Hills.
8. Farrington, D.P. (1991): Childhood aggression and adult violence: Early precursors and later-life outcomes (in Pepler, D.J., Rubin, K.H. (eds) *The development and treatment of childhood aggression*, pp. 5-29, Erlbaum, Hillsdale.
9. Gross, A.B., Keller, H.R. (1992): Long-term consequences of childhood physical and psychological maltreatment, *Aggressive Behavior*, 18, 171-185.
10. Hämäläinen, M., Pulkkinen, L. (1995): Aggressive and non-prosocial behaviour as precursors of criminality, *Studies on Crime and Crime Prevention*, 4, 6-21.
11. Hinshaw, S.P. (1994): Conduct disorder in childhood: Conceptualization, diagnosis, comorbidity, and risk status for antisocial functioning in adulthood (in Fowles, D.C., Sutker, P., Goodman, S.H. (eds.) *Progress in experimental personality and psychopathology research*, pp. 3-44, Springer, New York.
12. Huesmann, R.L., Eron, L.D., Lefkowitz, M.M., Walder, L.D. (1984): Stability of aggression over time and generations, *Developmental Psychology*, 20, 1120-1134.
13. Huesmann, L.R., Eron, L.D. (1984): Cognitive processes and the persistence of aggressive behavior, *Aggressive Behavior*, 10, 243-251.
14. Huesmann, L.R. (1988): An information processing model for the development of aggression, *Aggressive Behavior*, 14, 13-24.
15. Lewis, D.O., Lovely, R., Yeager, C., Femina, D.D. (1989): Toward a theory of the genesis of violence: A follow-up study of delinquents, *Journal of the American Academy of Child Adolescence Psychiatry*, 28, 431-436.
16. Loeber, R., Dishion, T.J. (1984): Boys who fight at home and school: Family conditions influencing cross-setting consistency, *Journal of Consulting and Clinical Psychology*, 52, 759-768.
17. Magnusson, D., Stattin, H., Dunér, A. (1983): Aggression and criminality in a longitudinal perspective (in Dusen, K.T., Mednick, S.A: (eds) *Prospective studies of crime and delinquency*, pp. 277-301, Kluwer-Nijhoff, Boston.
18. Mc Cord, W., Mc Cord, J., Howard, A. (1961): Familial correlates of aggression in non-delinquent male children, *Journal of Abnormal and Social Psychology*, 62, 79-93.
19. Mc Cord, J., Mc Cord, W., Howard, A. (1963): Family interaction as antecedent to the direction of male aggressiveness, *Journal of Abnormal and Social Psychology*, 66, 239-242.
20. Mc Cord, J. (1979): Some child-rearing antecedents of criminal behavior in adult men, *Journal of Personality and Social Psychology*, 37, 1477-1486.
21. Mc Cord, J. (1983): A forty year perspective on effects of child abuse and neglect, *Child Abuse and Neglect*, 7, 265-270.
22. Mc Cord, J. (1988): Parental behavior in the cycle of aggression, *Psychiatry*, 51, 14-23.
23. Moffitt, T.E. (1993): Adolescence-limited and life-course-persistent antisocial behavior: A developmental taxonomy, *Psychological Review*, 100, 674-701.
24. Momirović, K., Štalec, J., Prot, F., Bosnar, K., Pavičić, L., Viskić-Štalec, N., Dobrić, V. (1984): Kompjuterski programi za klasifikaciju, selekciju, programiranje i kontrolu treninga (Computer programs for classification, selection, programming and control of training), Fakultet za fizičku kulturu, Zagreb.
25. Nikolić, B. (1992): Robustna diskriminativna analiza uz parcijalizaciju efekata smetajućeg skupa varijabli (Robust discriminant analysis along with controlling for effects of the set of disturbing variables). Istraživanja na području defektologije IV, Zagreb, 1.-3. 10. 1992.
26. Patterson, G.R. (1976): The aggressive child: Victim and architect of a coercive system (in Mash, E.J., Hamerlynck, L.A., Handy, L.C. (eds) *Behavior modification and families*, pp. 267-316, Brunner/Mazel, New York.
27. Patterson, G.R., Dishion, T.J., Bank, L. (1984): Family interaction: A process model of deviancy training, *Aggressive Behavior*, 10, 253-267.

28. Pulkkinen, L. (1983): Finland: The search for alternatives to aggression (in) Goldstein, A.P., Segall, M.H. (eds) *Agresion in global perspective*, pp. 104-144, Pergamon, New York.
29. Roff, J.D., Wirt, R.D. (1984): Childhood aggression and social adjustment as antecedents of delinquency, *Journal of Abnormal Child Psychology*, 12, 111-126.
30. Straus, M.A. (1991): Discipline and deviance: Physical punishment of children and violence and other crime in adulthood, *Social Problems*, 38, 133-154.
31. Widom, C.S. (1989a): Does violence beget violence? A critical examination of the literature, *Psychological Bulletin*, 106, 3-28.
32. Widom, C.S. (1989b): Child abuse, neglect, and adult behavior: Research design and findings on criminality, violence, and adult abuse, *American Journal of Orthopsychiatry*, 59, 355-367.
33. Widom, C.S. (1989c): The cycle of violence, *Science*, 244, 160-166.