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**Parental rearing and problem behaviours
in male delinquent adolescents versus controls in northern Russia**

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Abstract The purpose of this study was to investigate possible relationships between parental rearing practices and problem behaviours in a sample of male delinquent adolescents versus controls. A total of 133 subjects from a juvenile correction centre and 108 matched schoolchildren in the Arkhangelsk region, Russia, were assessed by means of the EMBU questionnaire and Youth Self-Report. Delinquents were more severely treated by parents and had more pronounced problem scores. Furthermore, problem scores were found to be highly correlated with parental rejection and lack of emotional warmth in both delinquents and controls. Parental rearing practices may influence the development of problem behaviours. The implications of these findings with regard to preventive measures are discussed.

Introduction

Early childhood experiences have frequently been suggested as causal factors in the development of psychopathological manifestations in adulthood. At the same time, in many studies it seems difficult to draw conclusions about causal relations between childhood experiences and later psychological outcome [1]. The critical issue is that simple linear causal models seem untenable. However, the general conclusion to be drawn from a review of the literature is that childhood experiences contribute greatly to maladaptive psychological adjustment as an adult.

In particular, dysfunctional rearing practices appeared to be highly correlated with different types of psychopathology or psychological problems developed later in life. Difficulties in expressing emotions were related to dysfunctional affective involvement in the family [2]. In studies on the aetiology of depression and alcoholism, maternal overinvolvement [3], inconsistent and harsh discipline by parents [4] and parental rejection [5] were shown to represent important psychological risk factors. A study performed on schizophrenic patients [6] revealed that their parents showed much less warmth compared to those of controls, and the severity of current symptoms was associated with perceived parental rearing attitudes. In particular, parental rejection and overprotection were associated with more severe symptoms.

Reported lack of maternal warmth, harsh discipline in the family and poor care by the father were associated with suicidal ideation in adolescents and young adults [7, 8]. Moreover, among adolescents who attempted suicide, a large number described their families as disengaged and maladaptive [9].

Parents of depressed/anxious children were less disclosing and expressive [10], more likely to have communication difficulties in the family and more apt to undermine the child's learning [11]. On the other hand, children of depressed parents had significantly more symptoms of emotional, somatic and behavioural impairment [12].

Furthermore, somatization was shown to be specifically related to deprivation [13]. In a study of children with Crohn's disease, ulcerative colitis and functional recurrent abdominal pain syndrome, Wood et al. [14] found that laboratory scores of disease activity were associated with marital dysfunction. A link between family factors and recurrent stomachache and headache was obtained by Stevenson et al. [15] in a sample of 189 3-year-old children.

It is often assumed that differences between youngsters in their ability to learn from experience are related with certain individual traits. However, there is little

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evidence to confirm this assumption. The possibility cannot be excluded that youngsters' failure to modify their behaviour in the face of punishment is more likely to occur when physical punishment by parents is common and erratic [16]. Since non-contingent physical punishment elicits aggression, rather than serving as a contingent response to children's actions, contingency learning might be impaired. Adolescents from more punishing and less supportive families were characterized as having significantly more developmental problems (both internalizing and externalizing) [17]. Dysfunctional parenting, characterized by teenagers' perception of conflict, criticism, negative behaviour management and exaggerated dependency during childhood, was shown as significantly associated with emotional, behavioural and somatic symptoms experienced as adolescents [18].

Parker et al. [19] found that parental care influences attachment and socialization. Parental overprotection and perceived lack of parental care were considered as predisposing factors for the development of conduct and oppositional disorders [20] and delinquent behaviour [21]. Childhood abuse and neglect were also shown to increase the risk for the development of later delinquency [22, 23]. Furthermore, juvenile delinquency was reported to be associated with parental aggressiveness and conflict, poor parental supervision, neglecting attitudes and harsh discipline [24, 25].

Nevertheless, despite an increasing number of studies, the results were generally criticized as rather inconsistent and as not providing valid information on this matter [26]. This partly could be explained by the fact that many of the studies used different instruments, which covered diverse aspects of the topic. Furthermore, retrospective approaches to the assessment of parental rearing styles were criticized for possible subjective deformation of data by the respondents, on the grounds that social desirability may have influenced the subject to report their parental rearing in a more positive light than it has been in reality [26, 27], or that the time lag might distort recall.

At the same time, there is still a lack of information about the role of parental rearing in the development of behaviour problems in children and adolescents. Do the same factors of parental rearing influence the development of similar problems in diverse groups of adolescents in the same way? Are different problems related to the same factors of parental rearing?

The present study was aimed at investigating parental rearing factors that might be related to behavioural problems in delinquent adolescents versus controls.

Method

Subjects

This study was performed on two ethnically homogeneous samples of male adolescents from the Arkhangelsk region of northern Russia, matched by sex, age and socio-economic status. The de-

linquent subjects were voluntarily recruited from the only juvenile correction facilities (about 200 detainees) in the Arkhangelsk region, which covers a catchment area with a population of 1.5 million inhabitants. All delinquents were referred to this institution by a court decision. The reasons for correction were repeated thefts (about 50%), hooliganism, robbery and, in some cases, rape and murder. It should be mentioned that generally in the case of theft youngsters are referred to for correction only if they have committed another theft during the period of probation. The terms of confinement in correction ranged from 6 months (in the case of theft) to 8 years (in the case of murder). No separation between violent and non-violent offenders is provided. Data were obtained during winter and spring 1996, from the total population of the institution, (excepting refusals and adolescents with mild cases of mental retardation, about 8% of the population), a total of 192 youths. In addition, 59 juveniles who came from single-parent families were excluded from the present analysis, leaving 133 youths. The age of the present group ranged from 15 to 18 years (mean age 16.6 year, SD 0.8).

Comparative data were obtained from a group of 121 male schoolchildren from secondary schools in the same area. The age in this group ranged from 14 to 18 years (mean age 15.0 years, SD 0.9). For the present analysis only adolescents having two-parent families were selected (108 youths).

Both samples can be regarded as representative for the catchment area.

All subjects were informed that participation in the study is voluntary. Furthermore, they were assured that the staff would not obtain any information about the results. The investigation was individually performed by paper- and pencil-tests, in several small-group sessions (5–7 subjects), conducted by the first author.

Instruments

EMBU (a Swedish acronym for "Own memories of parental rearing")

This inventory assesses an individual's own memories of perceived parental rearing behaviour [28]. It comprises 81 questions grouped in 15 subscales, with two additional questions referring to consistency and strictness of parental rearing behaviour, to be answered on a four-point Likert scale (1 = No, never; 2 = Yes, but seldom; 3 = Yes, often; 4 = Yes, most of the time), separately for the father and for the mother. The subscales cover such rearing practices as overinvolvement, affection, overprotectiveness, guilt engendering, rejection and abusiveness. From factor analysis three factors were derived: rejection, emotional warmth and overprotection. These proved in a large transcultural study comprising 14 countries from various parts of the world [29], to be generalizable across cultures. The first factor, rejection (26 items), is characterized by physical punishment, rejection of the subject as an individual, hostility, lack of respect for his/her point of view and ridiculing and/or criticizing his or her inadequacies and problems in front of others. The second factor, labelled emotional warmth (18 items), represents warmth and loving attention, giving help without being intrusive, respect for the subject's standpoints and intellectual stimulation. The third factor, defined as overprotection (16 items), appears to reflect an attitude of parental protection of the subject, although in an exaggerated way – a comparatively high level of intrusiveness, high standards of achievement, imposition of strict rules, and a demand for indisputable obedience. It was demonstrated that the retrospective nature of the inventory did not affect the reliability and validity of data, due to recall errors [30]. Moreover, partial correlations were calculated in order to control for a possible influence of social desirability.

Youth Self-Report

This instrument was designed to obtain standardized self-reports on youth's competencies and behavioural/emotional problems [31].

The problem scoring part contains 112 items that describe specific behavioural/emotional problems. Items are scored 0 if they are “not true” of the child, 1 if they are “somewhat or sometimes true” and 2 if they are “very true or often true”. A total problems score is computed, with higher scores indicating endorsement of greater behavioural and emotional problems. The Youth Self-Report has been widely used in research and mental health practice [32].

Marlowe-Crowne Social Desirability Scale

A 33-item true-false scale was developed by Crowne and Marlowe [33] to measure social desirability, defined as a need of subjects to respond in culturally sanctioned ways. In the present study six items not relevant for this age group were excluded from the instrument.

The translation of these scales into Russian followed established guidelines, including appropriate use of independent back translations [34–36].

Data analysis

The data were analysed using the Statistical Package for Social Sciences (SPSS-Mac) [37]. Means and standard deviations were calculated for describing the variables under investigation. The differences between variables were tested by two-tailed *t*-tests for independent samples. When testing for relationships between problem scores and parental rearing factors, partial correlation coefficients were calculated in order to control for social desirability. Multiple regression analyses were carried out with somatic complaints and problem scores as dependent variables and parental rearing factors as independent variables.

Results

In our study, the delinquents scored significantly higher in almost every aspect of parental rearing, with the exception of Paternal Emotional Warmth (Table 1). They also scored higher on problems scores (Table 2).

The delinquent adolescents did not differ significantly from controls in their tendency to give socially desirable responses (as measured by the Marlow-Crowne Social Desirability Scale). At the same time, in both groups significant negative correlations were obtained between social desirability and thought problems ($r = -0.18$, $P = 0.040$ and $r = -0.26$, $P = 0.006$, for delinquents and controls, respectively), aggressive behaviour

($r = -0.23$, $P = 0.008$ and $r = -0.34$, $P = 0.000$), delinquent behaviour ($r = -0.24$, $P = 0.006$ and $r = -0.36$, $P = 0.000$) and externalizing problems ($r = -0.26$, $P = 0.003$ and $r = -0.39$, $P = 0.000$). Furthermore, social desirability in delinquents was positively correlated with parental emotional warmth ($r = 0.25$, $P = 0.004$ for fathers and $r = 0.23$, $P = 0.007$ for mothers). Consequently, to exclude its influence on the results, social desirability was partialled out when testing for relationships between parental rearing and problem scores (Table 3). For controlling the possibility of chance relationships, a more conservative level of significance ($P < 0.01$) was adopted.

Our findings show that parental rejection had a significant influence on problem behaviours, measured by Youth Self-Report. In delinquents paternal rejection was correlated with attention problems and total problems score. Maternal rejection was found to be related to somatic complaints. Furthermore, paternal overprotection was related with social problems. No significant correlations were found between maternal overprotection and behavioural problems (Table 3).

Although we obtained relatively pronounced negative correlations between parental emotional warmth and both thought and attention problems, these correlations did not reach the chosen level of significance ($P < 0.01$) and were excluded (Table 3).

In controls, maternal rejection was related to withdrawn and anxious/depressed scores, social problems, attention problems, internalizing problems and total problems score. Maternal emotional warmth was negatively correlated with delinquent behaviour. Neither paternal rearing practices nor maternal overprotection were significantly correlated with problem scores (Table 3).

Performing multiple regression, paternal rejection in delinquent adolescents was related with anxious/depressed score, attention problems, delinquent behaviour, internalizing problems and total problems score. Furthermore, maternal rejection was correlated with somatic complaints, paternal emotional warmth was negatively correlated with thought problems, and both paternal overprotection (positively) and maternal emotional warmth (negatively) were correlated with social

Table 1 Scores of delinquents and controls on the EMBU (Own memories of parental rearing) questionnaire. Mean (SD) for “father” and “mother” separately

	Delinquents (<i>n</i> = 133)	Controls (<i>n</i> = 108)
Father		
Rejection	43.65 (12.93)***	35.53 (8.64)
Emotional warmth	43.97 (12.66)	45.76 (11.11)
Overprotection	35.31 (8.03)***	31.24 (5.44)
Mother		
Rejection	40.25 (9.32)***	36.33 (7.37)
Emotional warmth	53.99 (8.92)**	50.37 (10.48)
Overprotection	40.17 (6.85)***	36.75 (5.54)

*** $P < 0.001$; ** $P < 0.01$

Table 2 Results of the Youth Self-Report of behaviour/emotional problems for delinquents and controls

	Delinquents	Controls
Withdrawn	5.05 ± 2.5**	4.1 ± 2.4
Somatic complaints	4.9 ± 3.2***	2.8 ± 2.5
Anxious/depressed	10.0 ± 5.6***	5.9 ± 4.7
Social problems	4.5 ± 2.5***	3.6 ± 2.2
Thought problems	3.5 ± 2.6***	1.8 ± 2.0
Attention problems	7.6 ± 3.0***	5.7 ± 3.0
Delinquent behaviour	9.4 ± 3.7***	3.7 ± 2.9
Aggressive behaviour	13.8 ± 6.1***	10.5 ± 5.3
Internalizing	19.5 ± 9.1***	12.5 ± 8.0
Externalizing	23.3 ± 8.9***	14.2 ± 7.3
Total problems	66.6 ± 23.4***	42.6 ± 20.4

*** $P < 0.001$; ** $P < 0.01$

problems. In controls, a major role was played by maternal rejection, which was correlated with withdrawn, anxious/depressed score, social problems, attention problems, aggressive behaviour, internalizing and externalizing problems and total problems score. Maternal emotional warmth was negatively correlated with delinquent behaviour, exclusively (Table 4).

To determine whether group differences in parental rearing affect behaviour/emotional problems, maternal and paternal rearing practices were compared separately on level of problems by performing multivariate analyses of variance (MANOVAs). A significant effect was found only for paternal rearing practices [Hotelling's $t(3, 141) = 1.74, P < 0.05$], whereas for maternal rearing neither the main effect nor the interaction was significant. Subsequent univariate analyses of variance (ANOVAs) confirmed previous findings of significant intergroup differences on Youth Self-Reports.

Discussion

The present study sought to demonstrate possible relationships between parental rearing and behavioural problems in delinquent adolescents versus controls.

In order to avoid problems related with recall bias, we preferred in this study to use the EMBU questionnaire (as we described earlier, Arrindell et al. [30] have shown that the retrospective nature of this inventory does not impact on the reliability and validity of data). Moreover, to diminish a possible influence of the respondents' wish to answer in a more socially accepted way (social desirability), this was controlled for by calculating partial correlations.

As could be expected, we found a significant difference between delinquents and controls concerning almost all factors of parental rearing as well as concerning problems scores. Delinquents were more severely treated by parents and had more pronounced problem scores, which is partly reflected in previous studies [38, 39]. Nevertheless, the fact that they scored significantly on all scales indicates a wide range of overrepresented psychopathology and raises the question of whether symptom states and problem behaviours are two independent processes or whether they contribute to each other. Unfortunately, this question cannot be answered in a single cross-sectional study design and consequently deserves further investigation. It should also be mentioned that the range of the problem scores in both groups under investigation was within the limits of

Table 3 Partial correlation coefficients (controlling for social desirability) between parental rearing practices and problem scores in delinquent adolescents and controls (*F* paternal rearing practices, *M* maternal rearing practices)

	Rejection		Emotional warmth		Overprotection	
	Delinq. F/M	Controls F/M	Delinq. F/M	Controls F/M	Delinq. F/M	Controls F/M
Withdrawn	0.09/0.04	0.04/0.27**	-0.10/-0.04	0.05/-0.14	0.08/0.09	0.08/0.05
Somatic complaints	0.21/0.29***	0.15/0.07	-0.06/-0.09	-0.13/-0.10	-0.08/0.05	-0.02/0.05
Anxious/depressed	0.21/0.14	0.01/0.35***	-0.03/-0.04	-0.01/-0.16	0.15/0.15	-0.05/0.09
Social problems	0.12/0.10	0.09/0.29**	0.07/-0.08	-0.16/-0.04	0.23**/0.14	0.08/0.15
Thought problems	0.09/0.17	-0.02/0.16	-0.20/-0.18	-0.05/-0.07	-0.05/0.08	0.01/-0.09
Attention problems	0.23**/0.15	0.08/0.25**	-0.13/-0.17	-0.07/-0.03	0.13/0.09	0.00/0.17
Delinquent behaviour	0.16/0.10	0.10/0.21	-0.05/0.03	-0.05/-0.26**	0.05/0.09	0.02/0.03
Aggressive behaviour	0.10/0.12	0.10/0.23	0.02/-0.03	-0.19/0.02	0.18/0.15	-0.12/0.05
Internalizing	0.22/0.20	0.06/0.30**	-0.07/-0.06	-0.03/-0.17	0.08/0.12	-0.01/0.08
Externalizing	0.14/0.12	0.11/0.26	-0.01/-0.01	-0.16/-0.09	0.14/0.14	-0.08/0.05
Total problems	0.23**/0.20	0.10/0.33***	-0.08/-0.09	-0.09/-0.15	0.14/0.16	-0.02/0.08

*** $P < 0.001$; ** $P < 0.01$

Table 4 Results of multiple regression analysis ($R^2/\beta/P$) with problem scores as dependent variables and parental rearing practices as independent variables in delinquent adolescents and controls

	Delinq.	Controls
Withdrawn	-	Mrej (0.07/ 0.27/ 0.004)
Somatic complaints	Mrej (0.08/ 0.29/ 0.001)	-
Anxious/depressed	Frej (0.04/ 0.21/ 0.016)	Mrej (0.12/ 0.35/ 0.000)
Social problems	Fover (0.08/ 0.29/ 0.002)	Mrej (0.08/ 0.29/ 0.003)
	Memw (0.08/ -0.19/0.041)	
Thought problems	Femw (0.05/-0.22/0.009)	-
Attention problems	Frej (0.05/ 0.23/ 0.009)	Mrej (0.06/ 0.25/ 0.009)
Delinquent behaviour	Frej (0.03/ 0.17/ 0.048)	Memw (0.08/ -0.29/ 0.003)
Aggressive behaviour	-	Mrej (0.05/ 0.23/ 0.019)
Internalizing	Frej (0.05/ 0.22/ 0.011)	Mrej (0.09/ 0.30/ 0.002)
Externalizing	-	Mrej (0.06/ 0.24/ 0.011)
Total problems	Frej (0.05/ 0.23/ 0.008)	Mrej (0.10/ 0.32/ 0.001)

(*Frej* paternal rejection, *Mrej* maternal rejection, *Femw* paternal emotional warmth, *Memw* maternal emotional warmth, *Fover* paternal overprotection)

normal values for American adolescents according to the manual of Youth Self-Report [30], with the exception of delinquent behaviour, which reached a borderline level in our delinquent group.

Furthermore, our results show that most of the psychological problems in both groups under investigation were related to the psychological "climate" in the family. The present findings indicate that, in spite of different levels of problems, some specific correlational patterns between rejecting rearing practices and problem scores could be observed. Based on these results, we suggest that parental rejection, as described by the EMBU, in terms of physical punishment, rejection of the subject as an individual, hostility, lack of respect for his/her point of view, and ridiculing and/or criticizing his or her inadequacies and problems in front of others, may contribute to the development of various psychopathological manifestations, irrespective of the study group.

In contrast to previous findings [21] and to our own data on the prevalence of maternal overprotection in delinquents, we found it unrelated to any of the problem scores and consequently we would not consider it as a predisposing factor for later delinquency. Rather we would consider it as the mother's attempt to "keep a balance" in the family [40].

The more pronounced correlations between paternal rejection and problem scores obtained in delinquents after performing multiple regression could be attributed to the prevalence of rejective rearing practices, especially on the part of the father, among delinquents compared with controls. These findings are in line with previous studies and provide us with a basis for the further development of preventive programmes directed towards families, e.g. programmes on expressed emotions in family therapy.

However, since the reported correlations represent a small effect size, we do not consider it legitimate to conclude from our data that parental rearing practices play a causal role in the development of the above-mentioned problems. We would rather emphasize that parental rearing represents just a small piece of the mosaic, which has to be further elucidated in terms of a multifactorial interactive framework comprising biological characteristics of the individual and cultural and psychological variables [41].

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