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Behavioral and emotional problems of prisoners' children in the family environment

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Summary

Aim. The aim of the present study was to investigate the links between parental incarceration and the level of behavioral and emotional problems in children of incarcerated fathers, based on the information provided by parents.

Method. The subjects were a group of prisoners' children and two control groups. The criterion group consisted of prisoners' children (N = 72) brought up in families with an increased level of dysfunction and problem behaviors. The first control group (I) was composed of children (N = 76) brought up in complete families; the level of problem behavior in these families and the level of these children's resiliency was similar to that of prisoners' children (i.e., the criterion group). The second control group (II) was composed of children from complete families (N = 98). In these families, problem behaviors were not present at all or their level was very low, and the children's level of resiliency was significantly higher compared to prisoners' children and children from control group I. To measure behavioral and emotional problems, the version of Thomas Achenbach's questionnaire that is meant to be completed by parents: namely, the Child Behavior Checklist (CBCL) was used.

Results. The level of behavioral and emotional problems in prisoners' children turned out to be significantly higher in all categories of problems compared to their peers from complete families.

Conclusions. The results of the study indicate that parental incarceration is an additional factor increasing behavioral and emotional problems. The results of our study make it reasonable to suspect that parental incarceration affects girls more strongly than it affects boys.

Key words: behavioral and emotional problems, prisoners' children, parental incarceration

Introduction

Optimal and comprehensive assessment of a child's functioning includes the assessment of his or her behavior in various environments, and one of these, undoubtedly,

is the family environment, in which the child spends relatively the greatest amount of time. The research on the level of behavioral and emotional problems in prisoners' children reported in the international literature was conducted by means of Achenbach's immensely popular Child Behavior Checklist (CBCL), commonly used worldwide, which is a checklist for the assessment of a child's behavior by their caregiver [1]. The issues of emotional and behavioral problems among prisoners' children have been addressed by a number of research teams [2-6].

The studies conducted to date led to the conclusion that the children of incarcerated parents showed a higher level of behavioral and emotional problems. It must be added, however, that boys exhibited a significantly higher level of externalizing problems than girls, while girls showed a significantly higher level of internalizing behavior than boys [2]. The results of the study by Kjellstrand and colleagues [4] revealed that not all children of incarcerated parents showed an increased level of problems, as in this group there are also children and adolescents with a low level of externalizing behavior. This may suggest that the fact of parental incarceration alone does not determine the presence of behavioral and emotional problems in prisoners' children. Some authors point out that the presence of problems depends on the interaction of risk and protective factors [7], particularly on the predominance of risk factors over protective factors [8].

According to researchers, one of the most important protective factors are positive parental attitudes, particularly maternal ones [4]. Similar conclusions were reached by Vera and colleagues [6], who found that a higher level of negative parental attitudes was accompanied by a higher level of emotional and behavioral problems in children. Slaughter et al. [5] added that, apart from paternal commitment, which decreased the level of externalizing in boys and internalizing in girls, an additional determinant of the presence of problems was family socioeconomic status.

Apart from environmental factors, what also compensates for or reduces the effect of risk factors for the development of problems is individual factors, understood as a person's individual resources. They contribute to a decrease in the likelihood of problem behaviors or to minimizing their intensity [9]. Ogińska-Bulik and Juczyński [10] list the following individual factors: high self-esteem and self-efficacy, sense of coherence, some personality traits, mild disposition, coping with stress and difficult emotions, good interpersonal relations, and optimism.

To sum up, what determines the level of behavioral and emotional problems among prisoners' children is their individual resources and the characteristics of the immediate environment. The role of parental imprisonment in the emergence and level of behavioral and emotional problems in children remains an open question. It can be expected that parental incarceration will be one of the factors increasing the level of these problems.

Material and method

Our aim in the present study was to investigate the relations between parental incarceration and the level of behavioral and emotional problems in children whose fathers were in prison, based on information elicited from the parents. With this aim in

view, we formulated two research problems: P1 – What are the differences in the level of behavioral and emotional problems between (1) children of imprisoned fathers and (2) children from complete families with a level of dysfunctional/problem behavior in the family and a level of psychological resiliency similar to the levels found in prisoners' children, and (3) their peers from complete families, with a lower level of dysfunctional/problem behavior in the family and a higher level of resiliency than children from the criterion group and the first control group; P2 – What are the differences between boys and girls in the level of externalizing and internalizing behavior problems?

We formulated the following research hypotheses: H1 – The level of behavioral and emotional problems in children of imprisoned fathers is significantly higher in all categories of problems compared to their peers from both control groups. In other words, we hypothesized that parental incarceration as such constituted an additional risk factor for the emergence and intensity of behavioral and emotional problems; H2 – The level of externalizing behavior problems is higher in boys and the level of internalizing behavior problems is higher in girls.

In our study we measured the following variables and groups of variables: behavioral and emotional problems in children, children's psychological resiliency, dysfunctional and problem behaviors in the family, and demographic variables.

Behavioral and emotional problems

To measure behavioral and emotional problems, we used the version of Thomas M. Achenbach's questionnaire that is meant to be completed by parents: namely, the Child Behavior Checklist (CBCL). The measure has been adapted for Polish conditions by Wolańczyk [11]. In the research presented here we used the version in which the functioning of children aged 4 to 18, particularly their competencies and abilities (Part I) and their emotional and behavioral problems (Part II), are assessed from their parents' perspective (CBCL). The questionnaire makes it possible to assess not only the problems that are present but also the child's abilities and competencies, the scope of out-of-school activities, and peer relations. This version is completed by both parents or caregivers [11].

The reliability of the CBCL scales was assessed using their internal consistency. Cronbach's alpha coefficients were computed for each of the scales. Their values ranged from $\alpha = 0.50$ for Thought Problems to $\alpha = 0.95$ for total behavior problems score. Another other method applied to assess the reliability of the measure by analyzing its structure consisted in correlating the scores on its specific scales with the total score. In all Achenbach's measures that we used in our research (i.e., YSR, CBCL, TRF), statistically significant correlations were found between all problem scales and total behavior problems score, which attests to the reliability of these measures [11]. The CBCL scores proved to be significantly higher in the clinical sample, composed of patients with a psychiatric diagnosis, than in the control group, which confirms the acceptable criterion validity of this questionnaire [11].

Resiliency

In our study we used the Resiliency Assessment Scale for children and adolescents (SPP-18), developed by Ogińska-Bulik and Juczyński. Resiliency is the factor that enables development despite experiencing difficult situations [12-14] and can therefore act as a protective factor against behavioral and emotional problems. The inclusion of resiliency made it possible to control for this variable, which was strictly in accordance with the adopted (quasi-experimental) research design. Sampling was performed based on the mean overall resiliency score. SPP-18 allows for assessing the level of resiliency in children and adolescents aged 12 to 19. Cronbach's alpha for the whole scale was 0.82. The validity of the scale was assessed based on its correlations with other constructs. It turned out that the higher was the level of resiliency, the higher was the person's tendency to manage stress by means of active coping, planning, and—to a slightly smaller degree—seeking social support, and the lower was the tendency to choose the strategies of behavioral disengagement, self-blame, or denial [10].

Dysfunctional/problem behavior in the family

To measure dysfunctional/problem behavior in the family, we used our own survey questionnaire. Besides resiliency, this variable was an additional criterion applied in the selection of participants for the control group. First, we created a pool of items that were meant to measure dysfunctional and problem behaviors present in the family. The complete list of items was presented to competent judges ($N = 5$), who rated to what extent each item reflected a dysfunction [15]. For each item of the questionnaire we computed the content validity ratio (CVR) based on the formula proposed by Lawshe. According to Lawshe [16], when there are five competent judges the minimum value of CVR should be 0.99. This criterion was met by 46 items. We established a 3-point rating scale for each item: *often*, *sometimes*, or *never*. Specific items were phrased both in educationally desirable terms (e.g., "My mother hugs me") and in undesirable ones, which include categories such as addictions, aggression, violence, etc. (e.g., "I witness arguments between my parents"). The respondents completing the questionnaire were children and adolescents (after their parents consented to their participation in the study).

Demographic variables (sex and age) were measured using a survey questionnaire.

Sample

The subjects were a group of prisoners' children and two control groups. The criterion group was composed of children whose fathers were incarcerated in prisons or remand centers, brought up in families with an increased level of dysfunctional/problem behavior ($N = 72$). The first control group (I) was composed of children and adolescents ($N = 76$) brought up in complete families; the level of dysfunctional/problem behavior in these families and the level of these children's resiliency was similar to that of prisoners' children (i.e., the criterion group). The second control group (II)

was composed of children and adolescents from complete families ($N = 98$). In these families, dysfunctional/problem behaviors were not present at all or their level was very low, and the children's level of resiliency was significantly higher compared to children of incarcerated fathers and children from control group I.

The table below presents arithmetical means and standard deviations for the children's age, according to gender.

Table 1. **Age and gender of prisoners' children and their peers from the control groups**

Prisoners' children				Children from complete families with dysfunctions (control group I)				Children from complete families without dysfunctions (control group II)			
Girls ($N = 35$)		Boys ($N = 37$)		Girls ($N = 44$)		Boys ($N = 32$)		Girls ($N = 67$)		Boys ($N = 31$)	
M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
15.22	2.35	14.64	2.12	15.36	1.27	14.62	1.93	14.76	1.67	14.77	1.58

The group of girls from families without dysfunctions ($N = 67$) was the largest, and the smallest one was the group of boys from such families ($N = 31$). The mean age was lowest in the group of boys from complete families (control group I; $M = 14.62$, $SD = 1.93$) and the highest in the group of girls, also from control group I ($M = 15.36$, $SD = 1.27$).

Sampling

Three groups of participants took part in the study: the criterion group and two control groups. The sampling criteria are presented in Table 2.

Table 2. **Sampling criteria for the criterion and control groups**

Criteria	Groups		
	Criterion group ($N = 72$)	Control group I ($N = 76$)	Control group II ($N = 98$)
Family structure	Incomplete family Father in a penitentiary institution	Complete family Father not in a penitentiary institution	Complete family Father not in a penitentiary institution
Dysfunctions in the family	Level similar to that in control group I	Level similar to that in the criterion group	None or a low level
Resiliency	Level similar to that in control group I	Level similar to that in the criterion group	Level of resiliency significantly higher than in the remaining groups

The purpose of this way of selecting participants for the groups was to control for the variables that might confound the results: children's resiliency and dysfunctional and problem behavior in the family.

Initially, we examined inmates' children using all tools. Their means and standard deviations on dysfunctional behavior in the family and on resiliency served as the

criteria for selecting children and adolescents for control group I, which differed from the group of prisoners' children only in the fact that in this case the fathers were not in prison. Parents' criminal record is, after all, one of the factors predisposing children to behavioral problems [17]. The Kruskal–Wallis test and Dunn's post hoc test confirmed that the criterion group and the first control group did not differ in the severity of family dysfunction and in resiliency, as shown in Table 3.

Table 3. **Difference between the groups in terms of dysfunctional/problem behavior in the family and resiliency**

	Groups	*N*	M_{rank}	Kruskal–Wallis *H*	*df*	*p*	post hoc
Resiliency	Prisoners' children (1)	72	101.06	22.029	2	0.000	1>3 2>3
	Control group I (2)	76	111.68				
	Control group II (3)	98	149.16				
Problem behavior	Prisoners' children (1)	72	152.94	127.40	2	0.000	1>3 2>3
	Control group I (2)	76	175.50				
	Control group II (3)	98	61.55				

In conclusion, the first control group was composed of children from complete families whose levels of resiliency and dysfunctional/problem behavior in the family were close to the corresponding levels in children of inmates. Control group II consisted of children with a significantly lower level of problem behaviors in the family and a significantly higher level of resiliency compared to incarcerated fathers' children and their peers from control group I.

Results

First, we will present the analyses of differences between: (1) children of incarcerated fathers, (2) children from complete families with dysfunctions (control group I), and (3) children from families without dysfunctions (control group II). Next, we will present the analysis of gender differences within each group.

Between-group differences

The analysis of results will begin with the presentation of descriptive statistics. Table 4 presents arithmetic means and standard deviations in specific categories of behavioral and emotional problems for each of the groups. The presence and level of problems was assessed by parents or legal guardians of the children and adolescents making up the groups of subjects; they completed Achenbach's questionnaire for parents—the Child Behavior Checklist (CBCL).

Table 4. **Descriptive statistics for specific categories of behavioral and emotional problems in prisoners' children and in children from the control groups, measured with the questionnaire for parents (CBCL)**

		Prisoners' children				Children from complete families with dysfunctions (control group I)				Children from families without dysfunctions (control group II)			
		Boys		Girls		Boys		Girls		Boys		Girls	
		M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
CBCL	Withdrawn	2.89	2.73	4.57	3.35	2.22	2.14	2.27	2.39	0.9	1.16	1.13	1.55
	Somatic Complaints	1.92	2.11	3.26	3.42	1.75	2.08	2.54	2.76	0.97	1.22	1.58	1.72
	Anxious/ Depressed	5.0	5.46	7.06	6.43	2.87	2.85	3.54	3.38	1.35	2.18	2.04	2.23
	Social Problems	2.62	2.78	2.66	2.3	1.66	2.1	0.86	1.11	0.71	1.13	0.91	1.31
	Thought Problems	0.62	1.11	1.74	1.96	0.72	1.25	0.52	0.95	0.22	0.62	0.29	0.74
	Attention Problems	7.16	5.46	6.23	4.21	4.37	3.89	2.64	2.25	1.52	1.96	2.03	2.39
	Delinquent Behavior	6.13	6.15	6.71	7.27	3.47	4.024	1.59	1.7	1.1	2.01	0.94	1.33
	Aggressive Behavior	13.57	11.34	13.17	8.77	7.44	6.74	4.43	4.43	2.22	3.05	3.58	3.55
	Internalizing Problems	9.65	8.48	14.31	11.0	6.81	5.91	8.20	7.24	3.19	3.63	4.73	4.29
	Externalizing Problems	19.7	16.86	19.88	15.67	10.91	10.4	6.02	5.92	3.29	4.87	4.52	4.61
	Total Behavior Problems	77.22	31.02	82.03	31.97	64.34	26.04	67.29	23.67	42.1	18.99	45.33	18.94

The analysis of the descriptive statistics for each group shows that the mean score on total behavioral problems was the highest in the case of girls whose fathers were in prison at the time of the study ($M = 82.03$, $SD = 31.97$) and in boys from the same group ($M = 77.22$, $SD = 31.02$). The level of problems (i.e., the total score) was found to be the lowest in boys and girls from families where dysfunctional/problem behavior was not present or where its level was low (control group II), which seems to be a result consistent with the expectations. Interestingly, the score of girls whose fathers were imprisoned in penitentiary institutions was higher in most categories of behavioral and emotional problems than the score of boys whose fathers were in prisons or remand centers. This finding concerns the following categories of problems: withdrawn, somatic complaints, anxious/depressed, social problems, thought problems, delinquent behavior, internalizing problems, and externalizing problems. The exceptions are

attention problems and aggressive behavior. Moreover, the arithmetic means for both groups of inmates' children (i.e., girls and boys) were considerably higher than the corresponding means for the two control groups in all categories of behavioral and emotional problems.

The use of one-way analysis of variance allowed us to determine if the differences found between the means obtained for the groups were statistically significant. To make multiple comparisons possible, we used the Games–Howell post hoc test, which is applied when groups are unequal in size and when the assumption of the homogeneity of variance is not met [18]. The results of the analysis of variance are presented in Table 5.

Table 5. **Differences between boys from the three groups: prisoners' children (1), control group I (2), and control group II (3) in specific categories of behavioral and emotional problems as assessed by their parents using the Child Behavior Checklist (CBCL)**

Category	Groups	*df*	*F*	*p*	Games–Howell test
Withdrawn	1	2	7.322	0.001	1>3 2>3
	2	97			
	3	99			
Somatic Complaints	1	2	2.396	*ns*	
	2	97			
	3	99			
Anxious/Depressed	1	2	7.566	0.001	1>3
	2	97			
	3	99			
Social Problems	1	2	6.603	0.002	1>3
	2	97			
	3	99			
Thought Problems	1	2	2.003	*ns*	
	2	97			
	3	99			
Attention Problems	1	2	15.736	0.000	1>2 1>3 2>3
	2	97			
	3	99			
Delinquent Behavior	1	2	10.646	0.000	1>3 2>3
	2	97			
	3	99			
Aggressive Behavior	1	2	16.804	0.000	1>2 1>3 2>3
	2	97			
	3	99			

table continued on the next page

Internalizing Problems	1	2	8.378	0.000	1>3 2>3
	2	97			
	3	99			
Externalizing Problems	1	2	15.530	0.000	1>2 1>3 2>3
	2	97			
	3	99			
Total Behavior Problems	1	2	15.330	0.000	1>3 2>3
	2	97			
	3	99			

Boys whose fathers were incarcerated in penitentiary institutions were characterized by a significantly higher level of behavioral and emotional problems than boys from families in which dysfunctional/problem behavior was not present (control group II) in the categories of withdrawn, anxious/depressed, social problems, attention problems, delinquent behavior, aggressive behavior, internalizing problems, and externalizing problems and were higher in total behavior problems score. The exceptions were somatic complaints and thought problems, in terms of which there were no significant differences between the groups. Moreover, boys whose fathers were incarcerated in penitentiary institutions showed a significantly higher level of behavioral and emotional problems in the categories of attention problems, aggressive behavior, and externalizing problems compared to the group of boys from complete families with a similar level of dysfunctional behavior in the family and with a similar level of resiliency.

The results of analyses concerning the differences in terms of the categories of parent-assessed behavioral and emotional problems between the girls from the examined groups: prisoners' children (1), control group I (2), and control group II (3) are presented in Table 6.

Table 6. **Differences between girls from the three groups: prisoners' children (1), control group I (2), and control group II (3) in specific categories of behavioral and emotional problems as assessed by their parents using the Child Behavior Checklist (CBCL)**

Category	Groups	*df*	*F*	*p*	Games–Howell test
Withdrawn	1	2	24.614	0.000	1>2 1>3 2>3
	2	143			
	3	145			
Somatic Complaints	1	2	5.351	0.006	1>3
	2	143			
	3	145			
Anxious/Depressed	1	2	18.586	0.000	1>2 1>3 2>3
	2	143			
	3	145			

table continued on the next page

Social Problems	1	2	17.121	0.000	1>2 1>3
	2	143			
	3	145			
Thought Problems	1	2	17.458	0.000	1>2 1>3
	2	143			
	3	145			
Attention Problems	1	2	25.460	0.000	1>2 1>3
	2	143			
	3	145			
Delinquent Behavior	1	2	28.750	0.000	1>2 1>3
	2	143			
	3	145			
Aggressive Behavior	1	2	38.233	0.000	1>2 1>3
	2	143			
	3	145			
Internalizing Problems	1	2	19.904	0.000	1>2 1>3 2>3
	2	143			
	3	145			
Externalizing Problems	1	2	37.263	0.000	1>2 1>3
	2	143			
	3	145			
Total Behavior Problems	1	2	29.169	0.000	1>3 2>3
	2	143			
	3	145			

Girls whose fathers were imprisoned in penitentiary institutions showed a significantly higher level of behavioral and emotional problems than girls in both control groups. This refers particularly to the following categories: withdrawn, anxious/depressed, social problems, thought problems, attention problems, delinquent behavior, aggressive behavior, internalizing problems, and externalizing problems. The exceptions are somatic complaints and total behavior problems score, in terms of which the girls whose fathers were incarcerated in prisons or remand centers did not differ from girls whose families showed a similar level of dysfunctional/problem behavior (control group I).

Hypothesis H_1, postulating that the level of behavioral and emotional problems in prison inmates' children is significantly higher in all categories of problems compared to their peers from complete families, was supported for nearly all of the categories. This finding is true for both girls and boys.

Gender Differences

We performed the analysis of gender differences for each of the three groups separately. Detailed data are presented in the table below.

Table 7. **Gender differences in specific categories of behavioral and emotional problems in the three groups of subjects: prisoners' children (1), control group I (2), and control group II (3) (1 = boys, 2 = girls)**

	Category	Sex	*N*	M_{rank}	Mann–Whitney *U*	*Z*	*p*
Prisoners' children	Withdrawn	1	37	31.23	452.500	-2.214	0.027
		2	35	42.07			
	Somatic Complaints	1	37	33.09	521.500	-1.455	*ns*
		2	35	40.10			
	Anxious/Depressed	1	37	33.80	547.500	-1.133	*ns*
		2	35	39.36			
	Social Problems	1	37	35.18	598.500	-0.559	*ns*
		2	35	37.90			
	Thought Problems	1	37	30.36	420.500	-2.843	0.004
		2	35	42.99			
	Attention Problems	1	37	37.39	614.500	-0.373	*ns*
		2	35	35.56			
	Delinquent Behavior	1	37	37.15	623.500	-0.272	*ns*
		2	35	35.81			
	Aggressive Behavior	1	37	35.99	628.500	-0.214	*ns*
		2	35	37.04			
	Internalizing Problems	1	37	32.31	492.500	-1.750	*ns*
		2	35	40.93			
	Externalizing Problems	1	37	36.27	639.000	-0.096	*ns*
		2	35	36.74			
	Total Behavior Problems	1	37	34.91	588.500	-0.665	*ns*
		2	35	38.19			
Control group I	Withdrawn	1	32	38.80	694.500	-0.102	*ns*
		2	44	38.28			
	Somatic Complaints	1	32	34.66	581.000	-1.320	*ns*
		2	44	41.30			
	Anxious/Depressed	1	32	35.73	615.500	-0.940	*ns*
		2	44	40.51			

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Control group I	Social Problems	1	32	42.38	580.000	-1.387	*ns*
		2	44	35.68			
	Thought Problems	1	32	40.23	648.500	-0.702	*ns*
		2	44	37.24			
	Attention Problems	1	32	43.73	536.500	-1.779	*ns*
		2	44	34.69			
	Delinquent Behavior	1	32	44.44	514.000	-2.040	0.041
		2	44	34.18			
	Aggressive Behavior	1	32	44.19	522.000	-1.924	*ns*
		2	44	34.36			
	Internalizing Problems	1	32	35.89	620.500	-0.881	*ns*
		2	44	40.40			
	Externalizing Problems	1	32	44.31	518.000	-1.962	0.050
		2	44	34.27			
	Total Behavior Problems	1	32	35.80	617.500	-0.910	*ns*
		2	44	40.47			
Control group II	Withdrawn	1	31	47.19	967.000	-0.583	*ns*
		2	67	50.57			
	Somatic Complaints	1	31	43.42	850.000	-1.508	*ns*
		2	67	52.31			
	Anxious/Depressed	1	31	40.89	771.500	-2.102	0.036
		2	67	53.49			
	Social Problems	1	31	46.90	958.000	-0.686	*ns*
		2	67	50.70			
	Thought Problems	1	31	47.94	990.000	-0.576	*ns*
		2	67	50.22			
	Attention Problems	1	31	45.90	927.000	-0.878	*ns*
		2	67	51.16			
	Delinquent Behavior	1	31	48.50	1007.500	-0.258	*ns*
		2	67	49.96			
	Aggressive Behavior	1	31	41.94	804.000	-1.822	*ns*
		2	67	53.00			
	Internalizing Problems	1	31	41.24	782.500	-1.967	0.049
		2	67	53.32			

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Control group II	Externalizing Problems	1	31	43.19	843.000	-1.510	*ns*
		2	67	52.42			
	Total Behavior Problems	1	31	47.58	979.000	-0.455	*ns*
		2	67	50.39			

In the group of children of incarcerated fathers, statistically significant differences between boys and girls manifested themselves in the categories of withdrawn and thought problems. This means that, in parents' opinion, it is girls who exhibit a higher level of thought problems and withdrawal. In the case of the remaining categories of behavioral and emotional problems, differences between boys and girls turned out not to be statistically significant.

In the group of children and adolescents from complete families with a level of dysfunctional behavior similar to the families of prisoners' children, there were also only two categories that differentiated boys and girls, namely: delinquent behavior and externalizing problems. It turned out that it was boys who showed higher levels of delinquent behavior and externalizing problems. The remaining categories of behavioral and emotional problems did not differentiate boys and girls in this group.

Finally, in the group of children and adolescents making up control group II (with a low level of dysfunctional behavior in the family), statistically significant differences between boys and girls were present only in the categories of anxious/depressed and internalizing problems. In both cases, a higher level of these behaviors was found in girls. The remaining categories of problems did not differentiate boys and girls.

Hypothesis H_2 was partly supported, because it was only in control group II (from complete families without dysfunctions) that girls had a higher level of internalizing behavior than boys. In control group I (from complete families with levels of dysfunction and resiliency similar to those found in the case of prisoners' children), the level of externalizing behavior was higher in boys. There were no differences between the groups in the overall score on internalizing and externalizing behaviors; differences were found only in the case of the withdrawal variable.

Discussion

The analyses performed by the European Network for Children of Imprisoned Parents (EUROCHIPS) show that in the European Union alone the number of prisoners' children is approximately 800,000; 117,000 of them (about 15%) live in Poland. This number, however, may be much higher [19], as in Poland and in many other countries no records are kept of children whose parents are serving a prison sentence [20]. Prisoners' children are known to be a particularly vulnerable population [21], which also requires research interest. Unfortunately, these issues have not attracted much interest among researchers in Poland.

The level of behavioral and emotional problems in children of incarcerated fathers turned out to be significantly higher in all categories of problems compared to their peers from complete families. This result could be expected, as research has

shown [17] that parents breaking the law is one of the factors predisposing children to behavioral problems. Still, prisoners' children also exhibited a higher level of behavioral and emotional problems than children from families with a similar level of dysfunctional behavior and with a similar level of resiliency in the following categories: attention problems, aggressive behavior, and externalizing problems in the case of boys, and withdrawn, anxious/depressed, social problems, thought problems, attention problems, delinquent behavior, aggressive behavior, internalizing problems, and externalizing problems in the case of girls. Thus, the results of the study indicate that parental incarceration is an additional factor increasing behavioral and emotional problems. This finding is true mainly about girls, in whose case a significantly higher level of problems manifested itself in nearly every category (the exception being somatic problems). The results of our study make it reasonable to suspect that parental incarceration affects girls more strongly than it affects boys. In other words, it is girls who bear greater psychological cost than boys, though this issue undoubtedly requires further research.

The results of our study are consistent with the results reported by Kinner and colleagues [2], who also found that prisoners' children showed a higher level of internalizing and externalizing problems; they also correspond with the findings of other authors concerning the increased risk of emotional and social difficulties [22-24].

The second hypothesis postulated that boys were characterized by a higher level of externalizing problems compared to girls and that girls had a higher level of internalizing problems compared to boys. This hypothesis was partly supported. Girls from the criterion group (i.e., prisoners' daughters) were higher in withdrawal than boys from this group. In the remaining categories of problems, differences proved not to be statistically significant. Boys in the first control group were higher in delinquent behavior and externalizing problems than girls. In the second control group, girls were higher in internalizing and anxious/depressed problems than boys from the same group. Other authors reported similar findings [2].

In future research a larger number of prisoners' children should be included, as the sample size in the current project was a limitation precluding the use of more advanced statistical techniques.

References

1. Achenbach TM. *Manual for the Child Behaviour Checklist/4–18 and 1991 profile.* Burlington: University of Vermont Department of Psychiatry; 1991.
2. Kinner SA, Alati R, Najman JM, Williams GM. *Do paternal arrest and imprisonment lead to child behavior problems and substance use? A longitudinal analysis.* J. Child Psychol. Psychiatry 2007; 48(11): 1148–1156.
3. Kjellstrand J, Yu G, Eddy JM, Clark M. *Children with incarcerated parents and developmental trajectories of internalizing problems across adolescence.* Am. J. Crim. Justice 2019; 45(1): 48–69.

4. Kjellstrand J, Yu G, Eddy JM, Martinez CR. *Developmental trajectories of externalizing behavior across adolescence.* Crim. Justice Behav. 2018; 45(11): 1742–1761.
5. Slaughter J, Davis JB, Nagoshi C. *Effects of paternal incarceration on father involvement on child behavior outcomes at middle childhood.* J. Child Fam. Stud. 2019; 28(12): 2891–2900.
6. Vera J, Granero R, Ezpeleta L. *Father's and mother's perceptions of parenting styles as mediators of the effects of parental psychopathology on antisocial behavior in outpatient children and adolescents.* Child Psychiatry Hum. Dev. 2012; 43(3): 376–392.
7. Gutman LM, Sameroff AJ, Cole R. *Academic growth curve trajectories from 1st grade to 12th grade: Effects of multiple social risk factors and preschool child factors.* Dev. Psychol. 2003; 39(4): 777–790.
8. Kołakowski A. *Kliniczny obraz zaburzeń zachowania.* In: Kołakowski A. *Zaburzenia zachowania u dzieci. Teoria i praktyka.* Sopot: Gdańskie Wydawnictwo Psychologiczne; 2016. pp. 15–63.
9. Dzielska A, Kowalewska A. *Zachowania ryzykowne młodzieży – współczesne podejście do problemu.* Studia BAS 2014; 2(38): 139–168.
10. Ogińska-Bulik N, Juczyński Z. *Prężność u dzieci i młodzieży, charakterystyka i pomiar – polska skala SPP 18.* Pol. Forum Psychol. 2011; 16(1): 7–28.
11. Wolańczyk T. *Zaburzenia emocjonalne i behawioralne u dzieci i młodzieży w Polsce.* Warszawa: Akademia Medyczna; 2002.
12. Davydow DM, Stewart R, Ritchie K, Chaudieu I. *Resilience and mental health.* Clin. Psychol. Rev. 2010; 30(5): 479–495.
13. Xu J, Ou L. *Resilience and quality of life among Wenchuan earthquake survivors: The mediating role of social support.* Public Health 2014; 128(5): 430–437.
14. Ogińska-Bulik N, Juczyński Z. *Skala Pomiaru Prężności (SPP-25).* Now. Psychol. 2008; 3: 39–56.
15. Hornowska E. *Testy psychologiczne. Teoria i praktyka.* Warszawa: Scholar; 2001.
16. Lawshe C. *A quantitative approach to content validity.* Pers. Psychol. 1975; 28(4): 563–575.
17. Wasserman GA, Miller LS, Pinner E, Jaramillo B. *Parenting predictors of early conduct problems in urban, high-risk boys.* J. Am. Acad. Child Adolesc. Psychiatry 1996; 35(9): 1227–1236.
18. Field AP. *Discovering statistics using SPSS.* London: Sage Publications; 2005.
19. Martynowicz A. *Sytuacja dzieci, których rodzice odbywają karę pozbawienia wolności.* The Danish Institute for Human Rights, European Network for Children of Imprisoned Parents, University of Ulster and Bambinisenzasbarre; 2011.
20. Kacprzak A. *Dzieci osób skazanych na karę pozbawienia wolności. Przegląd badań i analiz problematyki.* In: Warzywoda-Kruszyńska W, ed. *Bieda dzieci, zaniedbanie, wykluczenie społeczne.* Łódź: Wydawnictwo Uniwersytetu Łódzkiego; 2012.
21. Johnson E, Arditti J, McGregor C. *Risk, protection, and adjustment among youth with incarcerated and nonresident parents: A mixed-methods study.* J. Child Fam. Stud. 2018; 27(6): 1914–1928.
22. Eddy JM, Poehlmann J. *Children of incarcerated parents: A handbook for researchers and practitioners.* Washington, DC: Urban Institute Press; 2010.
23. Kjellstrand JM, Eddy J. *Mediators of the effect of parental incarceration on adolescent externalizing behaviors.* J. Community Psychol. 2011; 39(5): 551–565.

24. Murray J, Farrington DP, Sekol I, Olsen RF. *Effects of parental imprisonment on child antisocial behaviour and mental health: A systematic review.* Campbell Syst. Rev. 2009; 5(1): 1–105.

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