

## **Psychosocial Background in Incarcerated Adolescents from Austria, Turkey and Former Yugoslavia**

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**Abstract**

Adolescents with migration background account for a substantial proportion of juveniles in custody. Psychosocial adversities pose a significant risk for criminal behavior. So far, the nature of psychosocial adversities experienced by migrant youth is understudied. The aim of this study was to explore differences in psychosocial background in three ethnic groups (Turkish, Former-Yugoslavian, Austrian) of detained juveniles in Austria. A semi-structured interview (Multidimensional Clinical Screening Inventory for delinquent juveniles, MCSI) was used to assess psychosocial background (e.g. trauma, family background, forensic and psychiatric family history, school history, psychiatric treatment received, criminal history) in juveniles entering an Austrian pre-trial detention facility. Of the 370 eligible participants, the final study sample consisted of 278 juveniles. The ethnic distribution was as follows: 55.4% Austrian (mean age 16.88, SD=1.52), 14% Turkish (mean age 16.28, SD=1.23), 30.6% Former-Yugoslavian (mean age 16.47, SD=1.41). In the Austrian sample family dysfunction was significantly more prevalent than in the Turkish or Former-Yugoslavian samples. Mental health services were significantly less used by juveniles with migration background. Turkish juveniles had a significantly poorer school performance than Austrians. Juveniles from Former-Yugoslavia had significantly less often attended schools offering secondary education. The results suggest that detained juveniles with migration background are poorly integrated into the educational and mental health system of the host society. Family systems, even if substantially dysfunctional, seem to be perceived as more stable by migrant youth than by Austrian youth.

**Key words:** ethnicity, delinquency, adolescents, psychosocial background

## **1. Introduction**

In most Western European countries, rates of youth violence have increased since the 1980s while overall crime rates were stable or slightly declined (Stanton et al., 1998; Pfeiffer, 1998).

In a parallel vein, rates of migration have grown steadily leading to ethnic diversity in the juvenile population in most European countries (Vermeiren, 2003; Vermeiren et al., 2006; Oswald, 2007). Migration appears to influence the phenomenon of youth criminality:

Whereas in Austria conviction rates of juveniles decreased since the 1980s, juveniles with migration background account for a substantial proportion of juveniles in custody (Pilgram, 2004). Similarly an over-representation of migrants in detention has been observed in Greece and the Netherlands (Mandiadaki and Kakouros, 2008; Colins et al., 2009). In the US, juvenile arrests disproportionately involved minorities (Snyder, 2006). Juveniles with minority status have been found to display early conduct problems, low academic achievement, experience poor parenting and grow up in troubled neighborhoods, which increases their risk for juvenile arrest (Chung, 2006; Fite et al, 2009). A study in Germany showed that Turkish and Russian students committed bodily harm significantly more often than Germans (Baier and Pfeiffer, 2008). The authors linked violent behavior to harsh parenting styles, the use of violence in upbringing and “violence-legitimizing norms of masculinity”. Furthermore they point out that juveniles with migration background face numerous challenges in adolescence being torn between the culture of their parents and the dominant norms of the absorbing culture. Discrimination in the host society, a lack of ancestral identity, delinquent peers and poor family functioning can lead to social disintegration and involvement in behavior, which violates the social norms of both the parents and the host culture (Mesch et al., 2008).

There is general consensus that adversities in psychosocial background have a developmental impact on criminal and deviant behavior in children and adolescents (Rutter, 1979; Fergusson et al., 1996; Tyler et al., 2007). Family background and dysfunctional family structures are

considered to play an important role in the etiology of delinquency (Erickson et al., 2000; Stompe et al., 2006). Weak attachment to parents is seen to increase the probability of delinquent behavior: Children perceiving their parents as part of their social and psychological field, are bound to their parents' expectations and to conformity with legal norms respectively (Hirschi, 2002). This phenomenon seems to show universality across gender and ethnicity (Eichelsheim et al., 2009). Abuse and neglect, especially when the perpetrator is a family member, are highly associated with delinquent behavior (Widom, 1989; Plattner et al., 2003). Additionally parental criminality is a strong predictor for juvenile delinquency suggesting intergenerational transmission of offending (Farrington et al., 2001; Slomkowski et al., 2001; Ozen et al., 2005; Murray and Farrington, 2005; Isir et al., 2007). Peer rejection and failure in academic and vocational settings serve as marker of risk for antisocial behavior (Steiner and Cauffman, 1998). Low socio-economic status and low parental educational level have been associated with delinquent behavior as well as growing up in troubled neighborhoods and unstructured leisure activities with delinquent peers (Chung and Steinberg, 2006; Maniadaki and Kakouros, 2008).

Besides psychosocial risk, psychopathology is another important factor associated with criminal behavior in adolescents. High prevalence and comorbidity rates of mental disorders have been found in delinquent populations (Teplin et al., 2002; Abram et al., 2003; Gosden et al., 2003; McClelland et al., 2004; Vermeiren et al., 2006; Maniadaki et al., 2009). In accordance with other international studies, high rates of psychopathology have been found also in a sample of 328 juveniles incarcerated in Austria including major depression in 15.9%, separation anxiety disorder in 20.4%, posttraumatic stress disorder (PTSD) in 29.3%, generalized anxiety disorder in 15%, substance dependence in 54%, attention deficit hyperactivity disorder (ADHD) in 38.1%, conduct disorder (CD) in 68.3%, and oppositional defiant disorder (ODD) in 43.9% (Plattner et al., 2009).

Increasing numbers of crime among minority youth lead to the question whether offsprings of minorities are more likely to experience psychosocial adversities (Tonry, 1997; Ozen et al., 2005; Davalos et al., 2005; Isir et al., 2007). As above-mentioned it is well known that immigrants in general are confronted with psychosocial stress, nevertheless the question at hand is whether the psychosocial challenges experienced by delinquents with migration background differ from those faced by native delinquents. So far, the psychosocial background of delinquents from ethnic minorities in Europe is understudied. This study was performed to determine differences in psychosocial background among adolescents with migration background and Austrian adolescents.

## **2. Methods**

### **2.1. Participants**

The study was performed at the Vienna County jail (Justizanstalt Josefstadt) which is the sole detention facility for juveniles awaiting trial in Vienna. According to the Austrian law, juveniles aged 14 to 21 years who are accused of illegal activities are under the supervision of the Austrian juvenile court and can be held pretrial in secure detention centers. Juveniles who were admitted to this specific correctional facility between March 2003 and January 2005 comprised the general study sample. Both, boys and girls, between the ages 14-21 years were included. Inclusion criteria were sufficient reading and writing skills to complete self-rating measures, and sufficient command of the German language to fully comprehend the questions of a semi-structured interview. Exclusion criteria were significant medical conditions (i.e. acute state of human immunodeficiency virus, hepatitis or other infectious disease) and/or neurological disorders (i.e. epilepsy, significant head trauma, other chronic or acute neurological disorders such as multiple sclerosis or cerebral neoplasia), mental retardation and psychotic symptoms present at the time of the study. Each juvenile admitted to the detention facility went through clinical examination as part of the intake procedure. Inclusion and

exclusion criteria were assessed as part of the clinical routine (assessment of medical history, internal and neurological examination, psychiatric assessment).

## **2.2. Procedures and Measures**

### **2.2.1. Intake data**

Juveniles were approached within 4 days of admission and invited to participate in the study. The study was explained and confidentiality was assured with the exception of acute suicidal or homicidal risk. Participants signed an assent form, if they were younger than 18 years or consent form, if they were 18 years or older. The study was reviewed, approved and supervised by the ethics committee of the Medical University of Vienna.

We obtained general demographics such as age, gender, ethnicity, and self-reported level of completed education. Ethnicity was defined by ethnic origin of the parents.

### **2.2.2. Multidimensional clinical screening inventory for delinquent juveniles (MCSI)**

Our group designed a semi-structured interview in order to assess the psychosocial background of delinquent juveniles - The Multidimensional Clinical Screening Inventory for delinquent juveniles (MCSI). The MCSI is conceptualized like and derived from state of the art clinical history at intake to most clinics for child and adolescent psychiatry (school and work history, behavior problems at school, history of psychiatric disorders, prior psychiatric, psychological, psychotherapeutic treatment, somatic history, psychiatric and neurological family history, marital status of parents, socio-economic status of parents). Topics which are relevant in the clinical assessment of delinquent populations were added (forensic information concerning present incarceration, motivation for criminal behavior, forensic family anamnesis, placement in foster care institutions, intra and extrafamilial trauma). In order to assure that all relevant psychosocial risk factors were included, the MCSI was presented to and discussed with various international experts on juvenile delinquency at the American Academy of Child and Adolescent Psychiatry 50<sup>th</sup> Anniversary Meeting (Florida, Miami Beach, 2003) and the International Association for Child and Adolescent Psychiatry and

Allied Professions 16<sup>th</sup> World Congress (Germany, Berlin, 2004). The MCSI is attached in annex 1.

### **2.3. Data analysis**

Data were analyzed using the statistical package for social sciences (SPSS) version 13.0 (SPSS Inc., Chicago, Ill). Descriptive statistics, Chi-square tests, Mann-Whitney U tests were used to examine differences between groups. In addition to chi square tests, phi coefficients were used to test the strength of relationship. Two-tailed tests were used with a significance level set at  $p < 0.05$ .

## **3. Results**

### **3.1. Age and Gender**

Of the 370 individuals, who fulfilled the inclusion criteria, eight refused to participate in the study, 54 left the detention center before the MCSI could be administered (NA – group), and 308 juveniles completed the MCSI. We performed analyses of attrition to test for differences between the MCSI group and the NA group. There was no statistical difference in age between the MCSI group and the NA group (Mann-Whitney test:  $U = 7732.0$ ,  $p < 0.441$ ).

However, there was a significant gender difference between the two groups ( $\chi^2 = 5.558$ ,  $df = 1$ ,  $p < 0.033$ ), indicating that in the NA group there were significantly more girls than in the MCSI group.

The sample that completed the MCSI ( $n = 308$ ) comprised 50% ( $n = 154$ ) Austrians, 12.7% ( $n = 39$ ) Turkish, 27.6% ( $n = 85$ ) Former-Yugoslavians, 1.6% ( $n = 5$ ) Russians and adolescents from the Former Soviet Republics, 2.9% ( $n = 9$ ) from other Balkanian countries and Romania, and 5.2% ( $n = 16$ ) from other nations. For the present study only the three main ethnic groups were included: Austrian, Turkish and Former-Yugoslavian. The final study sample consisted of 278 juveniles (84.9% male, 15.1% female, mean age 16.67 ( $SD = 1.47$ )). Sample characteristics are summarized in table 1.

-----Insert table 1 about here-----

The Austrian sample was significantly older than the Turkish sample (Mann-Whitney test:  $U=2289.5$   $p<0.019$ ) and the Former-Yugoslavian sample (Mann-Whitney test:  $U=5531.0$ ,  $p<0.043$ ). There was no significant difference in age between the Turkish and Former-Yugoslavian samples (Mann-Whitney test:  $U=1539.5$ ,  $p<0.482$ ).

Table 1 also shows the types of crimes that the participants were accused of and lead to pre-trial detention. Austrian juveniles were significantly more often accused of violent assault than Turkish juveniles ( $\chi^2=5.375$ ,  $df=1$ ,  $p<0.015$ ) and were significantly more often accused of burglary ( $\chi^2=4.122$ ,  $df=01$ ,  $p<0.52$ ) and attempted murder ( $\chi^2=4.630$ ,  $df=1$ ,  $p<0.053$ ) than Ex-Yugoslavian juveniles. Ex-Yugoslavian juveniles were significantly more often accused of violent assaults than Turkish juveniles ( $\chi^2=5.609$ ,  $df=1$ ,  $p<0.016$ ) and were significantly more often accused of robbery than Austrian juveniles ( $\chi^2=7.346$ ,  $df=1$ ,  $p<0.007$ ).

### **3.2. Family background, trauma and ethnicity**

Table 2 shows family background and trauma history among the three ethnic groups: Austrian juveniles reported significantly more often than Turkish or Former-Yugoslavians that their parents were separated, that they had been placed in foster care institutions, that they had experienced intrafamilial separation and loss and had been victims of abuse committed by extrafamilial and intrafamilial perpetrators.

-----insert table 2 about here-----

### **3.3. School and work history and ethnicity**

Table 3 presents the results on school and work history in the three ethnic groups. Juveniles from all three ethnic groups reported high levels of conduct problems and problems with authorities and structures at school. Austrian juveniles reported significantly more often than juveniles originating from Former-Yugoslavia that they had experienced peer conflicts at school. Turkish juveniles reported significantly lower school performance and less attendance

of apprenticeship programs when compared to the Austrians. The latter reported significantly more often that they attended schools of higher education than Former-Yugoslavians.

-----insert table 3 about here-----

### **3.4. Psychiatric treatment and ethnicity**

Austrian juveniles reported significantly more often than Turkish or Former-Yugoslavian juveniles to have received psychiatric treatment, particularly, outpatient treatment, counseling, psychopharmacologic medication and psychotherapy as outlined in table 4.

### **3.5. Psychiatric and forensic family history and ethnicity**

Table 4 also shows the frequencies of reported history of psychiatric disorders in family members in the three ethnic groups: All three ethnic groups reported that their family members had psychiatric disorders. Austrians reported significantly more often than Turkish or Former-Yugoslavians that their family members suffered from psychiatric disorders, especially substance abuse disorders. Mood disorders within the family (mostly mothers) were reported significantly more often by Turkish youth when compared with Former-Yugoslavians.

-----insert table 4 about here-----

Table 5 shows that juveniles from all ethnicities reported incarceration of family members. According to the reports, fathers of Austrian juveniles were significantly more likely to have a history of incarceration than fathers of Former-Yugoslavian juveniles.

### **3.6. Motives for delinquency and ethnicity**

Motives for offending in the three ethnic groups are outlined in table 5, too. Overall criminal behavior related to drug abuse was highly prevalent in all ethnic groups. Austrians reported significantly more often than Former-Yugoslavians that criminal behavior was drug-related or impulsive. Juveniles from Former-Yugoslavia reported significantly more often that criminal behavior was targeted to support a better “lifestyle” and to enable them to pay off debts than

Austrian juveniles. Turkish juveniles reported significantly more often than Austrians that they were motivated by peer pressure.

-----insert table 5 about here-----

An overview about main differences between the three ethnic groups is given in Figure 1.

-----insert figure 1 about here-----

#### **4. Discussion**

In this study on psychosocial background in delinquent adolescents we found high rates of psychosocial adversities: broken homes, psychiatric morbidity within the family, parental criminality, trauma and difficulties with conduct and performance at school. The distribution of adversities experienced seems to be influenced by ethnic background and differences in socialization.

Austrian juveniles grew up in morbid and criminogenic environments and were significantly more often placed in foster care institutions than the other ethnic groups. An explanation for the observed phenomena might be that family structure is impacted by ethnic influences: Ethnic minorities tend to establish extended families as an adaptive strategy and the family represents a problem-solving and stress-coping system and provides social regulation (Harrison et al., 1994). Secondly, Austrians reported significantly more often to have been victims of abuse. Possibly abuse remains underreported in migrant juveniles for cultural reasons. Interestingly, none of our Turkish participants reported intrafamilial sexual abuse. In contrast, a survey in Turkish criminal courts found a high percentage of child abuse cases mostly perpetrated by relatives or close neighbors (Egemen, 1992). Similar results on sexual abuse in Turkish populations have been found in a study on dissociative identity disorders (Sar et al., 1996). As a consequence one has to anticipate a high number of unreported cases due to cultural taboos within this ethnicity (Celbis et al., 2006). In adolescents from Former-Yugoslavia we would expect a higher proportion of juveniles that were either directly or

indirectly affected by war. Therefore extrafamilial traumatization could be expected to be highly prevalent. On the contrary in this sample, juveniles from Former-Yugoslavia reported the lowest frequency of extrafamilial trauma. One might speculate that this phenomenon is observed due to PTSD after the recent Balkan war resulting in avoidance to report on traumatic events (Hasanovic et al., 2005).

Regardless of ethnicity, high percentages of conduct problems and difficulties accepting authorities and structures were reported. It is striking that 36% of Austrians, 46% of Turks and 42% of juveniles from Former Yugoslavia reported to have failed positive school graduation. These results are in line with data of a previous study investigating educational issues in samples of delinquent youth (Moldavsky et al., 2002). However, minority juveniles significantly more often reported a poor school performance and significantly less attendance of apprenticeships or higher education than Austrian juveniles. These findings suggest that juveniles with migration background per se seem to be exposed to inequalities in the school system, possibly receiving less advancement and post school education. Reasons of this educational disadvantage might be multi-factorial: language barriers complicate integration in the school system (Kohte-Meyer, 2006), academic achievements in general on the one hand might be of minor importance in traditional families and moreover gainful occupation is an essential element of male identity in patriarchal societies as described by Spindler (Spindler, 2007). But on the other hand graduating from school is a precondition to attend an apprenticeship. The failing of school graduation and the resulting unemployment can then frequently result in the start of a criminal career.

Although the overall psychiatric morbidity in juveniles incarcerated in Austria is high (Plattner et al., 2009), only 48% of the Austrian juveniles, 23% of the Turkish juveniles and 12.5% of the Former-Yugoslavian juveniles reported to have received psychiatric treatment prior to incarceration. Minorities have utilized psychiatric services significantly less often when compared with Austrians. One possible explanation might be that under-utilization of

psychiatric facilities might originate from cultural mistrust in “Western” facilities and in a tendency to consult traditional healers as described by Assion and colleagues (Assion et al., 2007). Additionally, a study of children with Turkish backgrounds at an Austrian outpatient clinic showed that the parents exhibit fear of contact with psychiatric institutions, mostly because of language barriers, fear of stigmatization and potential loss of their resident permit (Akkaya-Kalayci et al., 2006). Furthermore a study in the Netherlands showed that migrants were less likely to be referred to mental health systems (Murad et al., 2003).

In line with the literature, parent psychopathology and criminality were reported in all ethnical groups of our sample (Farrington et al., 2001; Slomkowski et al., 2001; Ozen et al., 2005; Isir et al., 2007). Austrian juveniles reported the highest number of parental psychopathology (predominantly substance abuse) and imprisonment of a family member (predominantly fathers). Interestingly, Turkish juveniles reported significantly more often than Former-Yugoslavians that their parents (predominately mothers) suffered from mood disorders. These findings are in accordance with recent studies that investigated rates of psychiatric disorders in Turkish as well as in Moroccan migrants (Haasen et al., 1996; Van der Wurf et al., 2004). Finally, we asked the juveniles to report on their motivation for criminal behavior. Reported substance abuse disorders and impulsive violence posed a significant risk for drug-related crime, predominantly in the Austrian sample. The so-called “lifestyle-factor” played an important role in offending in our migrant sample: juveniles reported to offend against the law in order to provide status goods for themselves that their parents might not be able to otherwise afford. This might be interpreted as a “forced integration” into a culture perceived to be predominantly driven by consume. Notably, migrant juveniles might face a double burden during adolescence. Firstly, like all other juveniles of this age group, they have to develop an adult gender identity, but secondly they are forced to integrate their ethnic identity into cultural patterns of the host culture and bridge the gap between two cultures. If this enormous intrapsychic effort fails and other protective factors like strong attachment to

parents or good school performance are missing, entry on to criminal pathways becomes more probable (Hirschi et al., 2002; Weine et al., 2004). The socio-economic gap between migrants and nationals as well as acculturation processes may account for these results. Difficulties in integration in the host culture might also heighten the influence of peers - resulting in a personal perception that acceptance might only be gained by participating in delinquent behavior (Le et al., 2005).

#### **4.1. Limitations**

However, due to some limitations of the present study the results should be interpreted with some caution. The study was cross-sectional and the applied methods had not been used before. Particularly in delinquent populations and different ethnic groups, the reliance on self-report data may have contributed to a response bias in terms of a culturally motivated under and or over reporting (Farrington et al., 2001; Murad et al., 2003). We were not able to rule out untruthful answers or answers that did not openly reflect the opinions of the youth while answering the MCSI, as we did not have access to the participants files. Nevertheless the participants showed the necessary social acceptance towards the questions directed at them. The inclusion criteria and the study design implicated that juveniles needed a sufficient command of the German language to participate in the study. This might have excluded juveniles who had been migrating only recently to Austria. Assessment in the native language might be of advantageous in studying minorities and migrants.

Finally, the composition of our sample might have caused several limitations: The group size of the ethnic sub-samples differed significantly so that smaller sample sizes could have decreased power to detect associations. Furthermore, the three groups differed in terms of gender distribution. However, gender might have influenced the quantity and quality of psychosocial adversities experienced by adolescents. Finally, the age range in our sample was large (14 to 21 years) and the Austrian sample was significantly older than the Turkish or Former Yugoslavian sample.

## **4.2. Clinical implications and future research**

Our study has numerous clinical implications: First, it confirms the fact of high rates of psychosocial adversities experienced in delinquent populations. Secondly, our results suggest that juveniles with migration background are prone to experience adversities in the educational and health care system, whereas juveniles from Austria are prone to experience gravely dysfunctional family systems. In many European countries efforts have been made to enhance integration of migrant youth. Our results draw attention to the point that in educational and mental health settings integration might have failed in high risk migrant youth. Furthermore, our results suggest that given the alarming prevalence of child maltreatment and family dysfunction in our sample, child welfare institutions tend to miss out on high risk juveniles, especially those raised by criminal and mentally ill parents.

Considering the complexity of acculturation and its impact on psychosocial development of adolescents, our findings raise important questions concerning ethnicity and delinquency.

Longitudinal studies are needed to outline the developmental nature of psychosocial adversities and define their impact on criminal behavior in delinquents with migration backgrounds. Multi-informant studies should rule out the bias of self-report questionnaires and enhance our understanding on culturally motivated under and over-report.

Finally, due to the differences in gender distribution in our sample, we were not able to separately test for psychosocial adversities experienced by delinquent girls. However, this issue would be an important field for future research, because very little is known about female offenders with migration backgrounds.

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Table 1: Sample characteristics of the three ethnical groups

	Austrian	Turkish	Former-Yugoslavian
% (n) of study sample	55.4% (154)	14% (39)	30.6% (85)
Gender distribution	77.3% (119) male 22.7% (35) female	100% (39) male 0% (0) female	91.8% (78) male 8.2% (7) female
Mean age (SD)	16.88 (1.52)	16.28 (1.23)	16.47 (1.41)
Type of accused crimes (pre-trial detention)	% (n)	% (n)	% (n)
Robbery	46.4% (71)	59% (23)	64.7% (55)
Theft	33.3% (51)	23.1% (9)	22.4% (19)
Burglary	26.8% (41)	17.9% (7)	15.3% (13)
Drug Related Crime	14.4% (22)	10.3% (4)	14.1% (12)
Violent Assault	12.4% (19)	0% (0)	13.1% (11)
Murder attempted	5.3% (8)	5.1% (2)	0% (0)
Crime against property	3.3% (5)	0% (0)	2.4% (2)
Other	10.4% (16)	7.7% (3)	13.0% (11)

Table 2: Self-reported family background and trauma in the three ethical groups

	<b>Austrian</b>	<b>Turkish</b>	<b>F-Yugoslavian</b>	Austrian (a) vs Turkish Chi-square (p) (two-sided)	Austrian (b) vs F-Yugoslavian Chi-square (p) (two-sided)	Turkish (c) vs F-Yugoslavian Chi-square (p) (two-sided)
<b>MCSI</b>	(n=154) % (n)	(n=39) % (n)	(n=85) % (n)			
Parents separated	72.0% (111)	28.2% (11)	32.9% (28)	<b>25.8 (&lt;0.001)</b> <sup>1</sup>	<b>34.47 (&lt;0.001)</b> <sup>1</sup>	0.28 (0.680)
Placement in foster care	41.6% (64)	5.1% (2)	8.2% (7)	<b>18.4 (&lt;0.001)</b> <sup>2</sup>	<b>29.17 (&lt;0.001)</b> <sup>2</sup>	0.38 (0.72)
Intrafamilial sexual abuse	11.8% (18)	0% (0)	1.2% (1)	<b>5.06 (0.027)</b> <sup>3</sup>	<b>8.34 (0.002)</b> <sup>3</sup>	0.46 (1.001)
Intrafamilial physical abuse	44.8% (69)	33.3% (13)	30.6% (26)	1.68 (0.210)	<b>4.62 (0.038)</b> <sup>4</sup>	0.09 (0.836)
Intrafamilial emotional abuse	43.1% (66)	20.5% (8)	24.7% (21)	<b>6.72 (0.010)</b> <sup>4</sup>	<b>8.00 (0.005)</b> <sup>5</sup>	0.26 (0.656)
Intrafamilial separation and loss	83.0% (127)	61.5% (24)	72.9% (62)	<b>8.53 (0.007)</b> <sup>5</sup>	3.39 (0.094)	1.63 (0.215)
Extrafamilial sexual abuse	17.6% (27)	5.1% (2)	1.1% (1)	3.80 (0.076)	<b>14.28 (&lt;0.001)</b> <sup>6</sup>	1.77 (0.233)
Extrafamilial physical abuse	35.3% (54)	30.8% (12)	23.5% (20)	0.29 (0.707)	3.53 (0.079)	0.73 (0.388)
Extrafamilial separation and loss	41.2% (63)	25.6% (10)	24.7% (21)	3.18 (0.096)	<b>6.49 (0.011)</b> <sup>7</sup>	0.01 (1.00)

(a) <sup>1</sup>phi=-.37, <sup>2</sup>phi=.31, <sup>3</sup>phi=-.16, <sup>4</sup>phi=-.19, <sup>5</sup>phi=-.21; (b) <sup>1</sup>phi=-.38, <sup>2</sup>phi=.35, <sup>3</sup>phi=-.19, <sup>4</sup>phi=-.14, <sup>5</sup>phi=-.18, <sup>6</sup>phi=-.25, <sup>7</sup>phi=-.17

Table 3. Self reported school and work history in the three ethnic groups

	<b>Austrian</b>	<b>Turkish</b>	<b>F-Yugoslavian</b>	Austrian (a) vs Turkish Chi-square (p) (two-sided)	Austrian (b) vs F-Yugoslavian Chi-square (p) (two-sided)	Turkish (c) vs F-Yugoslavian Chi-square (p) (two-sided)
	(n=154)	(n=39)	(n=85)			
<b>MCSI</b>	% (n)	% (n)	% (n)			
Conduct problems	72.1% (111)	71.8% (28)	72.6% (61)	0.00 (1.00)	0.01 (1.00)	0.01 (1.00)
Problems authorities	59.7% (92)	58.9% (23)	52.3% (44)	0.01 (1.00)	1.20 (0.277)	0.47 (0.562)
Problems peers	48.7% (75)	35.9% (14)	34.5% (29)	2.05 (0.208)	<b>4.44 (0.041)</b> <sup>1</sup>	0.02 (1.00)
Problems structures	66.2% (102)	61.5% (24)	59.5% (50)	0.30 (0.578)	1.06 (0.325)	0.05 (1.00)
Poor school performance	50.6% (78)	69.2% (27)	52.4% (44)	<b>4.33 (0.047)</b> <sup>1</sup>	0.07 (0.892)	3.10 (0.116)
Positive graduation	63.6% (98)	53.8% (21)	57.6% (49)	1.26 (0.274)	0.83 (0.406)	0.16 (0.701)
Higher education	22.7% (35)	17.9% (7)	10.7% (9)	0.42 (0.665)	<b>5.37 (0.023)</b> <sup>2</sup>	1.29 (0.263)
Apprenticeship	56.5% (87)	30.8% (12)	43.5% (37)	<b>8.24 (0.007)</b> <sup>2</sup>	3.68 (0.060)	1.82 (0.235)

(a) <sup>1</sup>phi=.15, <sup>2</sup>phi=-.21; (b) <sup>1</sup>phi=-.14, <sup>2</sup>phi=-.15

Table 4: Psychiatric treatment and psychiatric family history of parents in the three ethnic groups

	<b>Austrian</b>	<b>Turkish</b>	<b>F-Yugoslavian</b>	Austrian (a) vs Turkish	Austrian (b) vs F-Yugoslavian	Turkish (c) vs F-Yugoslavian
	(n=154)	(n=39)	(n=85)	Chi-square (p)	Chi-square (p)	Chi-square (p)
<b>MCSI</b>	% (n)	% (n)	% (n)	(two-sided)	(two-sided)	(two-sided)
Psychiatric treatment	48.0% (74)	23.0% (9)	12.5% (11)	<b>7.92 (0.006)</b> <sup>1</sup>	<b>29.46 (&lt;0.001)</b> <sup>1</sup>	2.03 (0.190)
Inpatient treatment	20.1% (31)	7.7% (3)	4.7% (4)	3.32 (0.097)	<b>10.42 (0.001)</b> <sup>2</sup>	0.45 (0.677)
Outpatient treatment	35.7% (55)	17.9% (7)	7.0% (6)	<b>4.50 (0.036)</b> <sup>2</sup>	<b>23.66 (&lt;0.001)</b> <sup>3</sup>	3.38 (0.110)
Drug counselling	29.2% (45)	12.8% (5)	9.4% (8)	<b>4.36 (0.041)</b> <sup>3</sup>	<b>12.45 (&lt;0.001)</b> <sup>4</sup>	0.33 (0.545)
Psychother. intervention	44.8% (69)	17.9% (7)	14.1% (12)	<b>9.40 (0.002)</b> <sup>4</sup>	<b>23.02 (&lt;0.001)</b> <sup>5</sup>	0.30 (0.598)
Psychopharm. treatment	32.0% (49)	7.7% (3)	5.8% (5)	<b>9.32 (0.002)</b> <sup>5</sup>	<b>21.29 (&lt;0.001)</b> <sup>6</sup>	0.15 (0.706)
Psychiatric Family History	70.6% (108)	48.7% (19)	47.1% (40)	<b>6.64 (0.014)</b> <sup>6</sup>	<b>12.87 (&lt;0.001)</b> <sup>7</sup>	0.03 (1.00)
Psychotic Episode	6.5% (10)	0% (0)	5.9% (5)	2.71 (0.218)	0.05 (1.00)	2.39 (0.324)
Mood Disorder	27.5% (42)	43.6% (17)	23.8% (20)	3.80 (0.079)	0.37 (0.643)	<b>4.96 (0.035)</b> <sup>1</sup>
Substance Abuse/Dependence	61.4% (94)	15.4% (6)	31.8% (27)	<b>26.41 (&lt;0.001)</b> <sup>7</sup>	<b>19.25 (&lt;0.001)</b> <sup>8</sup>	3.67 (0.079)

(a) <sup>1</sup>phi=-.20, <sup>2</sup>phi=-.15, <sup>3</sup>phi=-.15, <sup>4</sup>phi=-.22, <sup>5</sup>phi=-.22, <sup>6</sup>phi=-.19, <sup>7</sup>phi=-.37; (b) <sup>1</sup>phi=-.35, <sup>2</sup>phi=-.21, <sup>3</sup>phi=-.32, <sup>4</sup>phi=-.23, <sup>5</sup>phi=-.31, <sup>6</sup>phi=-.30, <sup>7</sup>phi=-.23, <sup>8</sup>phi=-.28  
(c) <sup>1</sup>phi=-.20

Table 5: Forensic family history and motives for criminal behavior in the three ethnic groups

	<b>Austrian</b>	<b>Turkish</b>	<b>F-Yugoslavian</b>	Austrian (a) vs Turkish	Austrian (b) vs F-Yugoslavian	Turkish (c) vs F-Yugoslavian
	(n=154)	(n=39)	(n=85)	Chi-square (p)	Chi-square (p)	Chi-square (p)
<b>MCSI</b>	% (n)	% (n)	% (n)	(two-sided)	(two-sided)	(two-sided)
Imprisonment of father	35.9% (55)	20.5% (8)	17.6% (15)	3.36 (0.085)	<b>8.82 (0.003)</b> <sup>1</sup>	0.15 (0.804)
Imprisonment of mother	7.1% (11)	2.6% (1)	4.7% (4)	1.14 (0.465)	0.57 (0.582)	0.32 (1.00)
Imprisonment of sibling	17.6% (27)	17.9% (7)	21.1% (18)	0.00 (1.001)	0.44 (0.496)	0.17 (0.811)
Imprisonment of other family members	3.9% (6)	7.7% (3)	3.5% (3)	0.99 (0.391)	0.02 (1.00)	1.01 (0.378)
Financing of drugs	41.3% (50)	28.6% (10)	21.1% (15)	1.87 (0.236)	<b>8.15 (0.005)</b> <sup>2</sup>	0.71 (0.468)
Peer pressure	12.4% (15)	37.1% (13)	19.7% (14)	<b>11.29 (0.002)</b> <sup>1</sup>	1.87 (0.211)	3.75 (0.062)
Debts	0% (0)	2.8% (1)	8.5% (6)	3.48 (0.224)	<b>10.55 (0.002)</b> <sup>3</sup>	1.19 (0.421)
Impulsive violence	14.0% (17)	5.7% (2)	4.2% (3)	1.76 (0.248)	<b>4.63 (0.048)</b> <sup>4</sup>	0.12 (1.00)
Lifestyle	8.3% (10)	20.0% (7)	21.1% (15)	3.85 (0.065)	<b>6.54 (0.014)</b> <sup>5</sup>	0.02 (1.00)
Influence of substances	16.5% (20)	11.4% (4)	6.9% (5)	0.54 (0.599)	3.68 (0.075)	0.62 (0.470)
Risk behavior	6.6% (8)	11.4% (4)	8.3% (6)	0.89 (0.469)	0.20 (0.776)	0.27 (0.762)
Maintenance	15.7% (19)	8.6% (3)	7.0% (5)	1.14 (0.410)	3.07 (0.113)	0.08 (1.00)

(a) <sup>1</sup>phi=.27; (b) <sup>1</sup>phi=-.19, <sup>2</sup>phi=-.21, <sup>3</sup>phi=.23, <sup>4</sup>phi=-.15, <sup>5</sup>phi=.19