

Traumatic Experiences and Juvenile Delinquency Relationship as Moderated by Sociodemographic Factors

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Abstract

The aim of this study was to explore the relationship between previous traumatic experiences of juvenile delinquents and their crimes against their sociodemographic backdrop. A representative sample of incarcerated male juveniles was surveyed. A sociodemographic questionnaire and the Life Events Checklist were administered. Moderating effects of sociodemographic factors on the link between previous trauma experiences and crime types were examined. Repeated physical assault was the most common traumatic event reported. Trauma experience level differentiated between crimes against life and crimes against property. Deliberate human caused trauma was significantly associated with serious delinquency. Moderating effects of sociodemographics was negligible. Largely, delinquents were above the age of 16 and were from low-income households in which they lived together with their parents and numerous siblings. Findings support social learning and social control theories in explanation of the liaison between early traumatic experiences and later criminal behavior.

Keywords: *Trauma, PTSD, Life Events Checklist, Juvenile Delinquency, Polyvictimization*

Travmatik Yaşantılar ile Çocukluk ve Ergenlik Suçları Arasındaki İlişkinin Sosyodemografik Faktörlere Göre Farklılaşması

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Öz

Bu çalışmanın amacı suç işlemiş ve cezaevinde bulunan çocukların önceki travmatik yaşantıları ile işledikleri suçlar arasındaki ilişkilerin araştırılmasıdır. Çalışmada bir sosyodemografik anket ile travmatik yaşantıları ölçmek üzere tasarlanmış geçerli ve güvenilir uluslararası bir skala olan Yaşam Olayları Kontrol Listesi kullanılmıştır. Tekrarlanan fiziksel saldırı en çok raporlanan travmatik yaşam olayı olarak ortaya çıkmıştır. Maruz kalınan kümülatif travma düzeyi kişinin yaşama karşı suçlara mı mala karşı suçlara mı karıştığını ayırt edebilmiştir. Diğer insanların kasten neden olduğu travmalar çocukların/ergenlerin karıştığı en ciddi suçları yordayabilmiştir. Sosyodemografik etki ciddi değildir. Genel olarak örneklemin çoğu 16 yaş üstü, düşük gelirli, çok çocuklu ve anne babanın birlikte yaşadığı ailelerden gelmektedir. Sonuçlar suçun sosyal olarak aile içinde öğrenildiğini, dolayısıyla ailede verilen disiplinin suç davranışının önlenmesinde önemli rolü olduğunu ve farklı suçlara karışmanın farklı tiplerde travmatik deneyimlerden etkilendiğini desteklemektedir; ailede suç kariyeri destekleniyor, suça karşı normlar yok sayılıyor ise aile bütünlüğünün suça karışmaktan koruyucu bir rol oynamadığının altını çizmektedir.

Anahtar Kelimeler: *Trauma, PTSD, Yaşam Olayları Kontrol Listesi, Çocuk Suçluluğu, Çoklu Mağduriyet*

Introduction

Since traumatic events are pervasive in the lives of the juveniles who find themselves in the juvenile justice system, childhood trauma is regarded as a catalyst for criminal activities in many theoretical models of developmental psychopathology of delinquency (Becker & Kerig, 2011; Cicerali & Cicerali, 2018). Several epidemiological studies have pointed towards an important association between previous exposure to trauma in childhood and involvement in criminal behavior later in life (Fagan, 2005; Farrington & Welsh, 2007; Ford, Chapman, Hawke, & Albert, 2004; Kerig & Becker, 2010; Wolpaw & Ford, 2004). This research is intended to provide an insight into how the impact of previous traumatic experiences on crime types might have been molded by a range of sociodemographic factors in the lives of a representative sample of juvenile delinquents who are currently incarcerated.

Basically, traumatic *experience* is an instance that threatens one's life, well-being, and safety. Traumatic experiences contain events such as loss of loved ones, abandonment, separation, being the victim of or witnessing abuse, neglect, assaults, violence, war, terrorism, bullying, serious accidents, grave injuries, and invasive painful medical operations (Buffington, Dierkhising, & Marsh, 2010). Psychological trauma can be dichotomized as *deliberately inflicted, human caused trauma* (e.g. physical attack, terrorist assaults, injuries), versus *non-deliberately caused trauma* (e.g. natural disasters, accidents, fatal illnesses).

Post-Traumatic Stress Disorder (PTSD) is one of the most debilitating psychological disorders caused by traumatic life events. In some people with low psychological resilience, the intense stress of a terrifying event which threatens the physical integrity of self or others may not dissipate in time and turns into a chronic constellation of symptoms (Cahill & Foa, 2007; Pynoos, Steinberg, & Wraith 1995). In particular, PTSD in early childhood can have a strong negative effect and it may distort the juvenile's social, emotional, neurological, physical and sensory development (Moser, Hajcak, Simons, & Foa, 2007). This is particularly true for children who have experienced numerous recurring interpersonal adversities from their caretakers, a condition called *developmental trauma disorder* (van der Kolk, 2005). There seems to be a difference between exposure to one and

the same traumatizer multiple times and several different traumatizers in terms of creating a potential for aggression in children (Buffington et al., 2010; Ford, Elhai, Connor, & Frueh, 2010; Ford, Wasser & Connor, 2011). According to Finkelhor, Ormrod, and Turner (2007), as the number of exposure to different victimizations (i.e. polyvictimization) increases, trauma symptoms increase predictably. For example, Heide and Solomon (2009) analyzed three cases involving female adolescents who committed homicide. Being both neglected and abused repeatedly during childhood turned out to be the most critical factors in their criminal behavior. These three girls were diagnosed with PTSD, which was thought to be the cause of their delinquency under intensive stress.

Delinquency is defined according to acts forbidden by the criminal law, such as homicide, theft, burglary, robbery, vandalism, becoming a member of terrorist organizations and selling narcotic drugs. In forensic research, such criminal acts are classified into two groups in terms of severity: *Crimes against life and health*, and *crimes against property*. Psychosocial theories, which try to account for juvenile delinquency, delve into how environmental factors (e.g. family and peer circle, economic conditions and education level) may lead to criminal activities through psychological pathways. The current study is based on a psychosocial approach. Therefore, literature on the links between traumatic experiences and juvenile delinquency will be framed from a psychosocial perspective.

One of the major theories under this umbrella, namely *social learning theory*, underlines how the family and the environment in which an individual is raised may affect his/her behavior. The environment provides individuals with direct and indirect learning opportunities. Witnessing the experiences of others by seeing, hearing and reading might be as effective as personal involvement for learning new behaviors (Zimmerman & Schunk, 2003). This theory can explain the relationship between being interpersonally traumatized in childhood and later involvement in criminal behavior, which traumatizes others (i.e. cycle of violence). Briefly, family violence may traumatize a child either directly or indirectly: Violence may be directed to the child or any of the family members. In both cases, the child becomes traumatized and may simultaneously learn how to traumatize others.

Another theory, which complements the social learning theory, is the *social control theory*, which says that people have a natural tendency for aggression, violence and crime. This innate tendency is normally blocked by the formation of healthy social bonds between the child and the caretakers (Apel & Kaukinen, 2008; Hirschi, 2002). Abuse of children (i.e. emotional, physical, sexual and verbal) or neglect by caretakers is disruptive for these healthy bonds. As a result, abused or neglected children are at greater risk of getting involved in criminal behavior than children raised in a caring and loving environment (Finkelhor, 1987; Hirschi, 2002). In a recent retrospective study on 107 incarcerated adolescents in a juvenile detention facility, it was revealed that abusive parenting breaches these healthy social bonds, in turn the children get reinforced to *convert shame to blaming others*, and finally they get involved in violent delinquent activities (Gold, Sullivan, & Lewis, 2011). Researchers claim that abusive parenting impacts delinquency directly and indirectly through the effects of converted shame.

Sarchiapone, Carli, Cuomo, Marchetti, and Roy (2009) found a high positive correlation between scores on the Childhood Trauma Questionnaire and Brown-Goodwin Lifetime History of Aggression in their study of 540 male convicts. In their study, particularly being exposed to physical, emotional and sexual abuse during childhood was found as being meaningfully related with high aggression levels in adulthood. In a recent study, Topitzets, Mersky and Reynolds (2011) revealed that ill-treated boys tend to develop into criminal adults. This finding can be explained based on Perry's biopsychosociological model. Perry (2001) has claimed that the neurodevelopmental influence of long term, ongoing or severe exposure to or observation of violence in childhood is the *transformation of state dissociation and arousal into trait form*. This model conceives that biological dispositions and sociocultural milieu put juveniles at risk in adolescence, but that life experiences with parents, friends, and society mediate this risk (Perry, 2001).

These two complementary theories (i.e. social learning theory and social control theory) have long been in the limelight for explaining the effects of negative child-rearing practices (e.g.. employment of emotionally, physically, sexually or verbally abusive behavior as disciplinary strategies) on the development of child externalizing behavior (Bower-Russa,

Knutson, & Winebarger, 2001; Hill, 2002; Mulvaney & Mebert, 2001; Patterson, 2002; Rydell, 2010; Taylor, 2010).

So far, we have concentrated on the link between traumatic experiences and juvenile delinquency. However, it is a fact that when evaluating attitudes, opinions and behavior, sociodemographic background factors are of crucial importance (Hoffmeyer-Zlotnik, 2008). Therefore, previous research on the moderating role of sociodemographic variables on trauma-delinquency link was also reviewed.

Terzi (2007) found that in 77% of cases, intra-family violence and a disadvantaged financial background were interactive drivers of juvenile delinquency. In a recently published longitudinal study (Ou & Reynolds, 2010), 1539 children who were born between 1979-1980 in Chicago were followed-up until they reached the age of 24. Of this sample, 1404 had a history of exposure to childhood abuse coupled with criminal behaviors towards others. The authors found that low parental education level, being raised by a single parent, having several siblings, coming from a socioeconomically disadvantaged environment, and having an old mother were risk factors, which predisposed children to criminality. Likewise, in the cross-sectional study by Kierkus and Hewitt (2009) on a nationally representative sample of adolescents (N =3,499) between the ages of 12-17, living in a large (i.e. many siblings), non-traditional family (i.e. not intact or intact but only cohabiting/not-married), and being an old adolescent were found to be criminogenic. In their study, gender, race, SES, and place of residence did not moderate the family structure and delinquency relationship.

According to the *cumulative developmental model of serious delinquency*, sociodemographic factors are so important in explaining juvenile delinquency that the more sociodemographic factors stack together, the greater the risk of criminality (Cicerali & Cicerali, 2018; Loeber, Slot, & Stouthamer-Loeber, 2006). Spohn and Kurtz (2011) proposed that different family types are best thought of as contexts in which youth experience and interpret discipline, punishment, and abuse. Therefore they argued that a juvenile's perceptions of concepts such as justice would depend on his/her past and current experiences. These perceptions were thought to be related with later criminal behavior.

Aim of study and research hypotheses

The aim of this study was to delineate the relationship between previous traumatic experiences of juvenile delinquents and the crimes they had committed, while controlling for their sociodemographic background. Although there is substantial literature on the relationship between trauma and delinquency, hardly any empirical research integrates both sociodemographic factors and trauma for explaining juvenile delinquency and resulting crime types. Besides, there is no study comparing the effects of deliberately inflicted (e.g. violence) and non-deliberate (e.g. traffic accidents) trauma on juvenile involvement in different types of crimes. Thus, this research makes a novel contribution to the literature, particularly by touching upon these issues. Null hypotheses:

1. Level of traumatic experiences cannot differentiate between different crimes (i.e. twelve crimes, such as usurpation, homicide, terror etc.); and between crime types (i.e. crime dichotomy: crimes against life and health versus crimes against property)
2. There is no difference between the effects of deliberately inflicted (e.g. assault with a weapon; combat or exposure to war-zone; sudden violent death) and non-deliberate (e.g. natural disaster, transportation accident, life-threatening illness/injury) trauma on juvenile involvement in different types of crimes.
3. Demographic factors in terms of education level, parental status, number of siblings, cohabiting with family, and family income do not moderate the relationship between traumatic experiences and crime type.

Method

Participants

A sample of 214 detainees representative of a large male detention house in Istanbul (accommodating 950 juveniles) participated in this study. At the time of data collection (i.e. 2010), the total number of detained male juvenile delinquents across Turkey was 1649 (Turkish Ministry of Justice,

Directorate of Prisons and Houses of Detention Report 2011, January). Prior to the study, required responding sample size was calculated as being 211 at a 90% confidence level with a 5% margin of error.

The detention house administration arranged the participation of juveniles according to the availability of responsible social workers on the dates permitted for data collection (i.e. Tuesdays and Fridays throughout March 2010 during handicraft sessions). Therefore, the resulting sample was a non-probability convenience sample.

Although participation was on a voluntary basis, all children agreed to participate. However, 69 of the response forms could not be included in the statistical analysis due to high rates of invalid responses (i.e. multiple and missing answers such as checking all response options or none of them throughout the form) pointing toward involuntary participation due to cultural expectation of strict obedience to authority. Therefore, the data from 145 participants were analyzed.

Procedure

Responses of illiterate participants were recorded by social workers in confidential rooms. Other participants filled in the questionnaires themselves in their classes or dormitories under social worker supervision.

Data collection tools

Delinquency is usually measured by either official arrest records and convictions, or self-reports of offending. Overall, official records include the most serious offenders and offences, while self-reports typically embrace moderately delinquent acts (Huizinga & Elliott, 1986). The present study included official records of current arrest and previous arrests. Two types of questionnaires were included in the battery. The first one inquired sociodemographics (e.g. age, education level, parental status, family income, number of siblings) and previous incriminations. The information provided by the juveniles was matched with their formal social investigation reports (i.e. official records of current arrest and previous arrests) as a check for accuracy.

The second form included the Life Events Checklist (LEC) developed by the National Centre for Posttraumatic Stress Disorder (Blake et al., 1995). It assesses exposure to 16 events known to potentially result in PTSD. Items from the scale include: (q.2) Fire or explosion; (q.7) Assault with a weapon (for example, being shot, stabbed, threatened with a knife, gun, bomb); (q.11) Life-threatening illness or injury; (q.15) Serious injury, harm, or death you caused to someone else.

Half of the items in the LEC are about traumatic events which are not purposefully and voluntarily made by other humans, for example, natural disasters (e.g. earthquake, flood), accidents (traffic accident, home accident, poisoning), or fatal illnesses/injuries. The other half is about traumatic actions committed purposefully and voluntarily by other humans (e.g. rape, armed attack, physical attack).

Data analysis

The data was analyzed by the SPSS 17.0 software. The scores on LEC were summed up to get a composite trauma score for each respondent. The score range of LEC was 0-16. For each item, the participant responded whether (a) the event happened to her/him personally, (b) he/she witnessed the event (c) he/she learned about the event from another source (d) he/she is not sure if the item applies, or (e) the item does not apply to him/her. Items for which the participant confirmed that the event happened to him/her personally received a score of one; all other responses were given a score of zero. Scores were summed up to get a composite score of trauma for each respondent. Deliberately inflicted (qs. 6, 7, 8, 9, 10, 12, 13, 15), and non-deliberate trauma (qs. 1, 2, 3, 4, 5, 11, 14, 16) composite scores were also calculated for each respondent, summing up their responses to relevant questions. To test the first hypothesis, which required comparing traumatic experience means of 12 crime groups, One-Way ANOVA was used. Additionally, using chi-square analysis, percentages of the sample falling into high, moderate and low trauma categories within crimes against life versus crimes against property subsamples were compared (Table 3). To do this, two cut-off scores were determined by clicking Analyze→Descriptive Statistics→Frequencies→Statistics→Percentile Values→Cut Points for Equal Groups. The cut-off scores obtained

by this procedure, 2 and 5, were used in transforming the data into low trauma (trauma score <2), moderate trauma (trauma score $>2<5$) and high trauma (trauma score >5) groups. SPSS→Transform→Recode into Different Variable function was employed to transform the interval data into categorical data suitable for chi-square analysis.

In order to compare the means for deliberately inflicted and non-deliberate trauma (i.e. to test the second hypothesis) t-test was used. To test the moderating effect of sociodemographics (i.e. the third hypothesis), Univariate ANOVA was conducted. The graph (Figure 1) was made by the SPSS Chart Builder. The significance level was set at $p<0.05$.

Results

The largest group of participants was within their 17 year of age (60%). The majority (85%) was cohabiting with their families at the time of crime, the rest were living alone or with peers. Almost 66% of the juveniles had three or more siblings in the family, and about 35% had six or more siblings. Narcotics crimes (selling or possession of drugs) were the most frequent crimes with 22%, followed by usurpation (17%), homicide (16%) and plundering (14%). Overall, crimes against life and health (narcotics, homicide, injury, terror, murder, deprivation of liberty, and abuse) constituted 55% of all the crimes; while the rest were crimes against property. Eighteen percent of the juveniles who participated in this study had previously been charged for other crimes. Fifty-four percent of juvenile participants reported a personal experience of physical attack. Table 1 and 2 present the sample.

The first null hypothesis was: Level of traumatic experiences cannot differentiate between different crime types (i.e. crime dichotomy, and twelve crimes, such as usurpation, homicide etc.). This hypothesis was rejected.

Table 1. Sociodemographics and Trauma Descriptives Related to Different Crime Types

Crime Type	N %	Age	Num. of Siblings	Income	Educa-tion Level	Trauma Scores
Usurpation	25 17.2%	M: 16.48 SE: 0.17	M: 5.3 (SE: 0.60) Range: 2-11	M: 3.80 SE: 0.25	M: 4.68 SE: 0.36	M: 3.04 SE: 0.38
Theft	19 13.1%	M: 16.68 SE: 0.19	M: 6.4 (SE: 0.72) Range: 3-12	M: 3.37 SE: 0.29	M: 5.00 SE: 0.40	M: 3.74 SE: 0.54
Injury	12 8.3%	M: 16.25 SE: 0.33	M: 4.5 (SE: 0.57) Range: 2-9	M: 3.83 SE: 0.30	M: 5.42 SE: 0.72	M: 4.25 SE: 0.78
Narcotics	32 22.1%	M: 16.31 SE: 0.17	M: 5.0 (SE:0.63) Range: 1-15	M: 2.94 SE: 0.24	M: 5.19 SE: 0.37	M: 4.56 SE: 0.63
Homicide	23 15.9%	M: 16.48 SE: 0.21	M: 6.1 (SE: 0.93) Range: 1-19	M: 3.57. SE:0.33	M: 5.65 SE: 0.44	M: 5.17 SE: 0.80
Terror	5 3.4%	M: 16.20 SE: 0.49	M: 7.2 (SE: 1.72) Range: 2-12	M: 3.40 SE: 0.40	M: 4.80 SE: 0.92	M: 6.60 SE: 1.47
Plundering	20 13.8%	M: 16.40 SE: 0.20	M: 6.2 (SE: 1.02) Range: 2-17	M: 3.65 SE: 0.31	M: 4.75 SE: 0.44	M: 2.35 SE: 0.51
Forced entry	1 0.65%	M: 16.00	M: 5.00	M: 4.00	M: 7.00	M: 2.00
Attempted murder	5 3.4%	M: 17.00 SE: 0.0	M: 5.2 (SE: 1.56) Range: 2-9	M: 3.20 SE: 0.20	M: 6.80 SE: 0.74	M: 2.40 SE: 0.40
Deprivation of liberty	1 0.65%	M: 17.00	M: 3.00	M: 4.00	M: 8.00	M: 2.00
Abuse/Harassment	1 0.65%	M: 17.00	M: 6.00	M: 3.00	M: 8.00	M: 8.00
Vandalism	1 0.65%	M: 17.00	M: 5.00	M: 4.00	M: 2.00	M: 2.00
Total	145	M: 16.46 SE: 0.08	M: 5.6 (SE: 0.29) Range: 1-19	M: 3.46 SE: 0.11	M: 5.18 SE: 0.17	M: 3.87 SE: 0.25

There was a statistically significant difference between the group, which committed crimes against life and health versus the group, which committed crimes against property, $F(1, 143)=9.926, p=0.002<0.05$.

ANOVA analysis also yielded a statistically significant difference in traumatic experiences scores among groups of juveniles representing 12 different crimes, $F(11, 133)=2.072$, $p=0.027<0.05$. Since four groups were composed of less than two participants, Scheffe and Tukey Post Hoc tests could not be performed.

Table 2. Age at the time of crime

Age at the Time of Crime	Frequency	Percentage (%)
<13	1	0.7%
13<15	49	34%
15< 18	95	65%

Composite traumatic experience scores could range between 0-16. The raw composite scores were recoded into a group variable according to two cut-off points (2 and 5) which yielded three similar-sized groups. A chi-square analysis showed that the proportion of involvement in more serious crimes (i.e. against life and health) increased as trauma level climbed from low to moderate and high, Chi-Square = (2, N =145)=7.288, $p=0.026<0.05$. Seventy-three percent of juveniles in the high trauma group committed crimes against life and health, compared to 53.8% in the moderate trauma group and 44.6% in the low trauma group.

Table 3. Crosstabulation of Trauma Level and Crime Type

			Crime Type		Total
			Property	Life/Health	
composite traumatic experience scores grouped using 2 cutoffs: 2 and 5	Low Trauma	Count	31	25	56
		%	55.4%	44.6%	100.0%
	Moderate Trauma	Count	24	28	52
		%	46.2%	53.8%	100.0%
	High Trauma	Count	10	27	37
		%	27.0%	73.0%	100.0%
	Total	Count	65	80	145
		%	44.8%	55.2%	100.0%

The second null hypothesis was: *There is no difference between the effects of deliberately inflicted and non-deliberate trauma on juvenile involvement in different types of crimes.* This hypothesis was rejected. The independent samples t-test results showed that both deliberate and non-deliberate traumatic experience means were higher in juveniles who committed crimes

against life than the ones who committed crimes against property (Table 4). However, in both crime types, deliberate trauma means were moderately higher; that is, for crimes against life and health *Cohen's d* was 0.74 and *Effect Size* was 0,35, while for crimes against property *Cohen's d* was 0.57 and *effect size* was 0,27.

Table 4. Comparisons of deliberate and non-deliberate trauma levels in life and property crimes

	Crime Type	N	Mean	SD	t-test	P
Nondeliberate Trauma	Life	80	3,23	0,78	2,495	,017
	property	65	2,84	1,02		
Deliberate Trauma	Life	80	3,80	0,76	2,629	,020
	property	65	3,41	0,98		
Total Trauma	Life	80	3,51	0,67	2,826	,017
	property	65	3.13	0.92		

The third null hypothesis was: Demographic factors do not moderate the relationship between traumatic experiences and crime type. This hypothesis was accepted. Univariate ANOVA was conducted to test whether the relationship between the traumatic experiences and crime types was moderated by sociodemographic variables (e.g. income, education level, number of siblings, parental status). The values of moderation effects were as follows: For number of siblings $F(9, 119)=1.639$, $p=0.112>.05$; for parental status $F(3, 137)=0.740$, $p=0.530>0.05$; for education level $F(6, 130)=0.703$, $p=0.648>0.05$; for income level $F(2, 139)=1.233$, $p=0.295>0.05$; for cohabiting with family $F(1, 141)=0.003$, $p=0.956>0.05$.

Apart from testing the hypotheses, further data mining was conducted to find out salient relationships, which should not be ignored. Firstly, the participants were classified into two groups according to their education level. Graduating from primary school was taken as the cut-off level. The juveniles who completed primary school ($N=71$) as a minimum, and those who could not complete it ($N=74$) were compared in terms of the traumatic life events they had experienced (the composite scores according to the LEC). No statistically significant difference could be discerned, $t(143)=0.756$, $p>0.05$. However, when the participants were divided into eight groups according to completed education years (Range: 0-12 years), we could see a significant difference in terms of crime dichotomy. Crimes

against life were committed more frequently by the more educated group (i.e. primary school graduates, secondary school graduates, and college students) while the less educated group (i.e. illiterate, non-schooled but literate, and non-graduated participants) got involved in more crimes against property. Since education level was categorical and highly varied, mode was used, as it was a more suitable measure of central tendency for such cases (Figure 1).

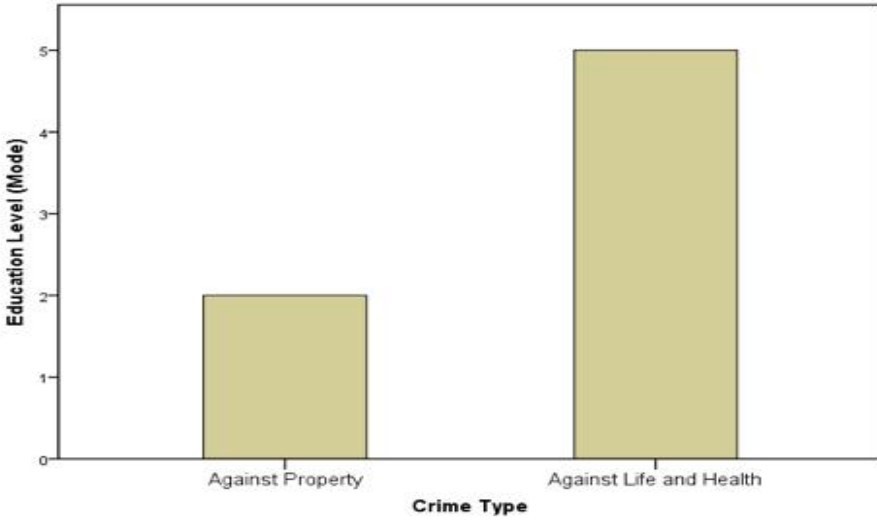


Figure 1. Education level and crime-type relationship

Further inquiries about monthly income showed that at least 53% of the children's families lived below the starvation line (below the national minimum income for survival of a 4-person family, i.e. < 700 TL). Only 0.5% (N=7) of the sample came from a family with an income of >1500, which is also a low income in Turkey. The crosstabulation of crime types (Range: 1-12) and number of siblings (Range: 1-19) with chi-square analysis did not indicate a significant relationship; $Chi-Square = (165, N = 145) = 1.004, p = 0.852 > 0.05$. There was no significant difference regarding trauma scores when cohabitation with family was used as a grouping factor $t(143) = 0.12, p > 0.05$. Children coming from intact (N=104) and broken (N=41) families were compared in terms of the scores they received on LEC, but no significant difference was found, $t(143) = -0.067, p > 0.05$. Table

5 presents the crosstabulation of parental status and traumatic experience level.

Table 5. Crosstabulation of trauma-level and parental-status

		Parental Status				Total	
		Mom-dead	Dad-dead	Separated	To-gether		
<i>Composite traumatic experience scores</i>	Low	Count	5	9	6	36	56
	Trauma	%	8,9	16,1	10,7	64,3	100,0
<i>grouped using two cut-offs:2 and 5</i>	Moderate	Count	2	5	7	38	52
	Trauma	%	3,8	9,6	13,5	73,1	100,0
	High	Count	0	4	3	30	37
	Trauma	%	0	10,8	8,1	81,1	100,0
Total		Count	7	18	16	104	145
		%	4,8	12,4	11,0	71,7	100,0

Discussion

The present study revealed results of 145 juveniles ranging in age between 13 and 18 years with an average of 16.5 years. Approximately 71% of the detained juveniles had intact families, where both biological parents lived together in the same home, while the rest had either lost one parent or had separated parents. Most of the participants were from large families; more than 66% had four or more siblings. Fifty-three percent of detained juveniles' families had an income of 700 TL (approximately 300 Euros) or less. This figure was much less than Turk-iş April 2011 statement of poverty and hunger limit (i.e. 870 TL, for a family of four), however, in studies which investigated the factors behind juvenile delinquency in Turkey, particularly low SES is frequently encountered (e.g. Çırak, 1996; Karakoç, 2009). Almost 85% of imprisoned juveniles in the present study were living with their families before incarceration. The mean schooling was 5.14 years.

In the present research, narcotics crimes stand out with 22% as the most frequent crime type juveniles were charged with. Usurpation and homicide followed with 17% and 16% respectively. According to 2009 Forensic Statistics published by the Turkish Republic Ministry of Justice, the proportion of juveniles charged with crimes against property was almost

49%. In this study, the proportion was found to be almost 45%, which was quite close to the official statistics.

There were three hypotheses in the present study. The first hypothesis was about discriminability of crime type based on traumatic experience scores. It was found that higher traumatic experience scores reliably predicted the more serious crimes, which were *crimes against life and health*. Since the instrument used in this research (i.e., LEC) assesses polytraumatization, the results also indicated that exposure to multiple traumatizers during childhood led to more serious crimes (i.e. against life and health), demonstrating the cumulative effect of trauma. When the juveniles were questioned about their traumatic life experiences, 91% of them reported having been exposed to traumatic events at least once before their criminal act, and 18% of them had already been charged with other crimes previously. This finding was similar to the study by Abram et al. (2004) on detained children, which revealed that 92.5% of them were exposed to at least one traumatic event in their life.

Experiencing multiple traumas (i.e. polytraumatization) is a factor, which increases posttraumatic stress; hence, the frequency and intensity of posttraumatic problems are also multiplied by the number of previous traumatic events. Traumatized juveniles are usually exposed to a chain of distressing, hurtful events that include abuse and violence, often committed by their parents or caretakers who are naturally supposed to protect them. According to the *social control theory*, this has tremendous potential to disrupt the bonds between children and parents, and stunt a child's development by instilling a profound distrust of and disrespect for adults and adult norms. This may place juveniles at much greater risk of delinquency and other deviant behaviors, putting them in a circle of violence. Therefore, the outcome of trauma is cumulative: the greater the number and complexity of traumatic events that a child experiences, the greater the risks to a child's development and his/her emotional and physical health (Buffington, Dierkhising, & Marsh, 2010).

Classified top-down, the trauma scores in this study were associated with terror, murder, narcotics, infliction of injury and theft in successive order. Posttraumatic anger may become a channel of violence, which may end up in a petty quarrel among friends or a legally binding act requiring

a heavy sentence. APA (2011) states that drug abuse may be a direct correlate triggered by childhood trauma. This helps us explain the juveniles' link with drugs (i.e. narcotics crimes led with 22%) in this study.

The second hypothesis was about the discriminative effects of deliberately inflicted and non-deliberate trauma on juvenile involvement in different types of crimes. In this study, *physical attack* was found to be the predominant traumatizer event, with almost 54% of the juvenile participants reporting that they had personally experienced it. Traffic accidents succeeded physical attacks with 41%, and armed attack with 39%. When all these three events were analyzed, it was apparent that humans realized them all; and two of them, physical attack and armed attack, were classified as deliberate human caused traumatizers. Experience of deliberate human caused trauma was moderately higher in offences against life and health compared with offences against property.

Traumatic events are detrimental to one's belief system, perception of fairness and goodness, trust in oneself and others. The study by Wang et al. (2007) demonstrated that preschool children in Israel learn to be aggressive and deviant by being directly and indirectly exposed to terrorism. When trauma is imposed purposefully and voluntarily by other people, trust in others dissolves largely, especially when the imposer is a loved one (e.g., a family member). This leads to the dissipation of social control and ends in aberrant behavior. Thus, deliberately caused trauma can undermine not only cognitive but also the moral system of an individual. This finding can also be interpreted as the direct transfer of experienced violence to others, in other words as the cycle of violence. This explanation is within the frame of *social learning theory*, which claims that experiencing violence teaches you how to apply violence; i.e. if a child is battered, his/her probability to batter others increases.

Further inquiries into the data yielded some interesting findings, out of confines of the main hypotheses in this study. Although education level was not a factor moderating the relationship between trauma and crime type, it emerged as a factor that could predict the type of crime (i.e. *crimes against property* versus *crimes against life*). Lower education level was linked to crimes against property, and higher education level was linked to crimes against life. The following quotation is meant to enlighten this finding:

Those with a lower level of schooling and training, i.e., those with potential legal income well below the average, would have a relatively large wage differential in crimes against property and a relatively low opportunity cost of imprisonment and thus a relatively strong incentive to enter crimes against property. Moreover, according to this theory, they would also tend to spend more time at, or to "specialize" in, illegitimate activities relative to other offenders. In contrast, those with higher education—in particular, those with specific legitimate training—would have less incentive to participate in such crimes (Ehrlich, 1975; p. 321).

Results denoted no significant difference, when frequencies of traumatic events experienced by the participants were compared based on their *status of living with or without family* before entering the penitentiary. The results also showed that the proportion of juveniles living with their families before detainment was much higher than the ones living apart from their family. These findings may be a sign that the children learn criminal behavior from their families, and that their families neglect them seriously. Explained based on *social learning* and *social control* theories, this means, living with family may lead to even more negative consequences, if the family lacks healthy bonds with the juvenile, and is deficient in the infrastructure to care for and educate a young human being properly.

The third hypothesis was about the moderating role of sociodemographic factors on the trauma and crime type relationship in juvenile delinquency. The alternative hypothesis was not accepted, since statistics indicated no significant moderating effects of parental status, cohabiting with family, number of siblings, education and family income on trauma and crime type relationship. Therefore, focus shifted to the simple (unmoderated) relationship between trauma and crime types, which were probed by the first and second hypotheses.

Taken together, the results of this study suggested that to safeguard children from involvement in delinquency, they should be protected particularly from exposure to damage caused by other people (e.g. physical attacks, armed attacks, terror). This will save them from trauma due to losing trust in people, and will thereby shelter their values and belief systems from complete dissolution, which leads to posttraumatic distress and associated involvement in crimes. Intra-family communication and soft skills training related with problem solving and stress management,

alongside knowledge of child care, negligence and abuse should be provided chiefly to the families from low socioeconomic background. Preventive strategies concerning juvenile delinquency will be more successful if handled with collaboration of multiple agents in society.

By systematically and comprehensively examining the moderating effects of sociodemographic factors, the present study made an important contribution to the literature, which explores the relationship between trauma and delinquency. Nevertheless, it had a number of limitations that need to be addressed.

Firstly, the sample would be better if it was larger. However, the specific characteristics (Turkish + male + <18 years old + delinquent + incarcerated), and very limited size of the target population (1649 members at the time of the study, i.e. 2010), besides problems with getting the legal access to incarcerated juveniles, made it very difficult to enlarge the sample. Even after access to them was made possible, getting this special group with substantial externalization behaviors to fill in questionnaires correctly (e.g. choosing only one option) was quite problematic, which led to considerable (32%) missing data. Secondly, the data was cross-sectional. Therefore, readers should be cautious in attributing causality to any of the relationships that were revealed. For instance, although the analysis generally showed that older youth who have many siblings cohabiting with their intact families had higher rates of delinquency against life and health, one cannot assert with certainty that the combination of age, number of siblings, cohabitation with parents and living in an intact home cause more serious delinquency. To make such a statement, the present findings should be replicated with a multi-faceted qualitative research design, in which the exact reason of any delinquent behavior can be assessed by in-depth interviews with not only the juvenile himself/herself, but also the informants in his/her close social circle.

Although this study controlled for a number of possible sociodemographic correlates of delinquency, it did not control for personal variables (e.g. temperament, personality, intelligence, negative affectivity, resilience, interpersonal skills, self-efficacy) and a number of other traditional predictors of misbehavior (e.g. social control factors, the presence of conventional social support, and the absence of association with antisocial age and status peers, delinquent learning from family and close circle, etc.),

because they were out of the confines of this study. In order to develop thorough understanding of how the effects of trauma vary according to sociodemographic and personal context, these issues should also be explored in future research.

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