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#### **Research Article**

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# Relationship between psychiatric symptoms, childhood traumas, and types of crime of convicts in Elazig closed prisons

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#### Abstract

Our study aimed to examine the childhood traumas and psychiatric symptoms of prisoners and their relationship with crime types. Persons convicted in Elazig Penitentiary Institutions were included in the study. The Demographic and Clinical Evaluation Form, Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), Childhood Trauma Questionnaire (CTQ) and Symptom Checklist (SCL-90) were administered to all participants. A total of 370 people were included in the study. For prisoners who have been imprisoned before, CTQ-physical abuse, BAI, SCL-90-somatization, anxiety, and hostility subscale scores were higher than those who entered the prison for the first time (p values: 0.020, 0.003, 0.016, 0.017, 0.047, respectively). Prisoners with a family history of prison entry had higher SCL-90 test all subscale scores, total scores and CTQ physical abuse subscale scores than the group without a family history of prison entry. Those exposed to violence in childhood and those who had attempted suicide before had higher scores on all scales. Those with a history of alcohol and substance use had higher total scores on the CTQ-emotional abuse and sexual abuse scale. According to the type of crime committed, only the CTQ-sexual abuse subscale scores differed. These subscale scores of the prisoners involved in more than one crime were higher than those involved in a single crime (p=0.030). The CTQ-sexual abuse subscale scores of those who were involved in the crime of willful homicide were calculated to be high (p=0.030). It was thought that preventing abuse, violence, and traumas in childhood may be necessary in reducing the tendency to crimes.

Keywords: prison, prisoner, depression, anxiety, psychiatric symptoms

# 1. Introduction

Crime defines all of the actions for which criminal law sanctions are envisaged. The Criminal behavior concept is as old as human history, affects all societies, and is widespread (1). Individuals obliged to stay in prison after any crime and legally deprived of their freedom are defined as "detainees". A "convict" is a person whose conviction has been decided by judicial organs (2). According to the Ministry of Justice's data in Turkey for 2022, there were 314.502 detainees and 275.965 convicts (3). According to the 2018 data from the Turkish Statistical Institute (TSI), the number of people in prisons increased by 10.1% in 2019 (4).

The individual imprisoned for the crime committed is alienated from society. For the detainees and convicts, the crime committed, the punishment received, and being in a closed environment are stress factors. When all these come together, it is reported that the incidence of mental problems in detainees and convicts increases (5). Depressive disorder, schizophrenia, other psychotic disorders and anxiety disorders were found to be high in detainees and convicts in studies in the literature (5, 6, 7). It was also reported that the frequency

of traumas and traumatic experiences was high in studies conducted with detainees and convicts (1). Also, detainees and convicts who have inadequate coping attitudes have difficulty overcoming their problems and have a risk of suicide (5, 8). Studies were conducted on coping attitudes, the effects of regular exercise programs on violent behavior, and the severity of depressive and anxiety symptoms in prisoners and convicts in prisons in our country (4, 9, 10, 11). However, to the best of our knowledge, a study in which general psychiatric symptoms and childhood traumas were evaluated together and their relationship with crime types was not detected in the literature. In light of this information, the present paper examined the childhood traumas and psychiatric symptoms of convicts in prisons and their relationship with crime types.

# 2. Patients and Method

# 2.1. Sampling and the intervention

The study was conducted in Elazig E Type, T Type, No 1 High-Security, and No 2 High-Security Penal Institutions. People convicted in Elazig E Type, T Type, No 1 High-Security, and No 2 High-Security Prisons were informed about the study.

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The study included people who agreed to participate, were literate and could fill in the forms. People who did not agree to participate in the study, those who had mental retardation or neurodegenerative diseases, and those who were illiterate were excluded.

The approval of the Firat University Non-Interventional Local Ethics Committee was received for the study on 23.05.2019 with the number 09/02 and from the Republic of Tükiye Ministry of Justice with the date 12.08.2022 and the number 112444. The study was conducted in accordance with the Declaration of Helsinki principles. Each participant signed a written informed consent form. Then, the demographic and clinical evaluation form, Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), Childhood Trauma Questionnaire (CTQ), and Symptom Checklist (SCL-90) were applied.

#### 2.2. Data collection tools

The Demographic and Clinical Evaluation Form: This form was prepared by the researchers and includes demographic data on age, gender, marital status, and education levels. It also includes clinical evaluation questions such as how many years the participants had been in prison, whether they had received psychiatric treatment, whether they had taken substances before, and if so, what they used.

Beck Depression Inventory (BDI): Developed by Beck to measure the presence and severity of depressive symptoms as a self-report scale with twenty-one questions. As the calculated total score increases, the severity of depression increases. The Turkish validity and reliability study was conducted by Hisli et al. (12, 13).

Beck Anxiety Inventory (BAI): It was developed by Beck et al. to determine the frequency and severity of anxiety symptoms experienced by an individual on a self-report scale with 21 questions, scored between 0-3. Ulusoy et al. adapted the inventory into Turkish (14, 15).

Childhood Trauma Questionnaire (CTQ): The scale evaluates the experiences of abuse and neglect during childhood and adolescence. Developed by Bernstein et al., it is a self-report scale with twenty-eight questions. Turkish validity and reliability study was performed by Şar et al. It has five sub-dimensions; emotional neglect, emotional abuse, physical neglect, physical abuse, and sexual abuse. A total scale score is calculated based on the sub-dimension scores (16, 17).

Symptom Checklist (SCL-90): It is a ninety-question, 11-subscale, self-report scale. Symptom distribution is evaluated with subscale scores with nine sub-dimensions consisting of somatization, obsessive-compulsive symptoms, interpersonal sensitivity, depression, anxiety, anger/hostility, phobic anxiety, paranoid thoughts, and psychotic symptoms. In addition to these subscales, there is an additional scale that evaluates sleep and eating problems and a general subscale that

makes a general assessment. The net score is obtained by dividing the calculated score of each subscale by the number of questions. The scores of one or more indicate psychopathological conditions. The scale was developed by Derogatis et al. and translated into Turkish by Dağ (18, 19).

#### 2.3. Statistical analysis

All the analyzes were evaluated with the Statistical Package for Social Sciences version 22 program. The descriptive analyzes of the demographic data and applied scales were performed. Numerical data were presented as mean and standard deviation, and categorical data were presented as numbers and percentages. The Kolmogorov-Smirnov Test was used to analyze whether the data were suitable for normal distribution, and it was found that the data did not fit the given normal distribution. The Mann-Whitney U Test was used to compare the scales between two independent groups, and the Kruskal-Wallis Test was used to compare the scales between three or more independent groups. The linear relationship between the variables was analyzed using the Spearman Correlation Analysis. When a *p*-value calculated for our study was less than 0.05, it was considered statistically significant.

#### 3. Results

## 3.1. Demographic characteristics of the participants

The forms were given to 500 prisoners for the study, and 370 individuals who met the inclusion criteria were recruited. All participants were male, and their mean age was calculated as  $34.51\pm10.26$ . The occupations before entering prison were as follows. The majority of the participants were self-employed (craftsmen) (151 people), and their economic situations were bad (225 people) with less than one thousand TL. The crimes due to which the prisoners were imprisoned were as follows: 131 people (35.40%) were selling drugs, 81 (21.89%) were injured, 57 (15.40%) were deliberately murdered, and 53 (14.32%) were extortion. One hundred people (27.02%) were involved in multiple types of crime.

Receiving psychiatric treatment status before entering prison was as follows: A total of 66 (17.83%) participants received psychiatric treatment, 304 (82.16%) did not have psychiatric treatment, and 47 (12.70%) of those who received psychiatric treatment received inpatient treatment. Although 60 (16.21%) had people who received psychiatric treatment in their family, 310 (83.78%) did not. While 272 (73.5%) never experienced self-harm/suicide attempt in any period of their life, 98 (26.5%) experienced self-harm/suicide attempt. The ways the participants tried suicide were as follows: 33 (8.9%) tried to commit suicide with drugs, 26 (7%) with sharp objects, 12 (3.2%) with firearms, 11 (3.0%) jumped off a height, and the remaining 16 participants tried multiple methods. The demographic characteristics of the participants are given in Table 1.

# 3.2. The scale scores of the participants

The Beck Depression Inventory scores were calculated as 19.21±13.19. The number of participants who scored 30 points

or more was 95 (25.67%). For BAI, the calculated value was 16.99±13.87. Two hundred twenty-seven participants (61.35%) received a score of 1 or higher in the SCL-90 supplementary items in which physiological symptoms such as appetite and sleep were questioned. SCL-90 general psychopathology level was calculated as one or more in 194 (52.43%) participants. The mean, standard deviation, and minimum-maximum values of the participants' scale scores are given in Table 2.

**Table 1.** The demographic characteristics of the participants

Marital status
Divorced   Spoused dead   Spoused   Spoused dead   Spoused
Spoused dead
Spoused dead
Literate
Primary school graduate   Secondary school graduate   High school graduate   19   5.1
Graduate   Secondary   School   Graduate   High school graduate   High school graduate   Point   Poi
Secondary school graduate   High school graduate   High school graduate   High school graduate   19   5.1
Graduate   High school graduate   19   24.6
High school graduate   91   24.6
University graduate   19   5.1   Still in education   25   6.8
Still in education   25   6.8
Occupation going to prison         Employee Craftsman         91         24.6           going to prison         Craftsman         151         40.8           Civil servant Unemployed Retired         94         25.4         Retired         5         1.4           Farmer         9         2.4         Student         5         1.4           Income status (TL)         < 1000
Craftsman
Civil servant Unemployed Question Retired Farmer Question Student Income status (TL)
Unemployed   94   25.4   Retired   5   1.4   Farmer   9   2.4   Student   5   1.4   Income status (TL)   < 1000   225   60.8   1000-2000   79   21.4   2000-3000   41   11.1   3000-4000   8   2.2   > 4000   17   4.6   4.6   Type of prison   Open prison   144   38.9   E type   114   30.3   T type   112   30.8   E type   112   30.8   T type   112   30.8   E type   114   30.3   35.9   A person who went to prison in the family   No   221   59.7   Was s/he exposed to violence as a child?   No   210   59.7   Type of violence to which they were exposed   Other   27   7.3   Alcohol intake before entering prison   Yes/No/Quit   151/   40.8   40.4   71.8   40.4   71.8   5   Drug intake before   Yes/No/Quit   170/   45.9   45.9
Retired   5   1.4   Farmer   9   2.4   Student   5   1.4
Retired   Farmer   9   2.4
Farmer   9   2.4     Student   5   1.4     Income status (TL)   < 1000   225   60.8     1000-2000   79   21.4     2000-3000   41   11.1     3000-4000   8   2.2     > 4000   17   4.6     Type of prison   Open prison   144   38.9     E type   114   30.3     T type   112   30.8     Entering   prison   Yes   237   64.1     before   No   133   35.9     A person who went to   Yes   149   40.3     prison in the family   No   221   59.7     Was s/he exposed to   Yes   160   43.2     violence as a child?   No   210   59.7    Type of violence to   Physical violence   3   0.8     other   27   7.3     Alcohol intake before entering prison   59/1   /15     foo   9/4   3.2     Smoking status   Yes/No/Quit   288/   77.8     40/4   /10   2   81/     11.3   5     Drug intake before   Yes/No/Quit   170/   45.9
Student
Income status (TL)
1000-2000   79   21.4   2000-3000   41   11.1   3000-4000   8   2.2   > 4000   17   4.6
2000-3000
3000-4000   8   2.2     > 4000   17   4.6           4.6
No   17   4.6
Type of prison         Open prison         144         38.9           E type         114         30.3           T type         112         30.8           Entering prison before         Yes         237         64.1           before         No         133         35.9           A person who went to prison in the family         Yes         149         40.3           No         221         59.7           Was s/he exposed to violence as a child?         Yes         160         43.2           Type of violence to which they were exposed         Physical violence         3         0.8           Other         27         7.3           Alcohol intake before entering prison         Yes/No/Quit         151/2         40.8           Smoking status         Yes/No/Quit         288/2         77.8           40/4         /10.         2         81/2           11.3         5         5           Drug intake before         Yes/No/Quit         170/2         45.9
E type
Entering prison Yes 237 64.1 before No 133 35.9 A person who went to prison in the family No 221 59.7 Was s/he exposed to violence as a child? No 210 59.7 Type of violence to which they were exposed Other 27 7.3 Alcohol intake before entering prison Physical violence 3 0.8 entering prison Sexual violence 3 0.8 Sexual violence 4
Entering before         prison before         Yes         237         64.1           A person who went to prison in the family         Yes         149         40.3           A person who went to prison in the family         No         221         59.7           Was s/he exposed to violence as a child?         Yes         160         43.2           Type of violence to which they were exposed         Physical violence         130         35.1           Sexual violence         3         0.8           Other         27         7.3           Alcohol intake before entering prison         Yes/No/Quit         151/2         40.8           Smoking status         Yes/No/Quit         288/2         77.8           40/4         /10.         2         81/2           11.3         5         5           Drug intake before         Yes/No/Quit         170/2         45.9
before
A person who went to prison in the family  No  221  Sp.7  Was s/he exposed to violence as a child?  Type of violence to which they were exposed  Alcohol intake before entering prison  Alcohol intake before entering prison  Other  Yes/No/Quit  Yes/No/Quit  Yes/No/Quit  Yes/No/Quit  Yes/No/Quit  Yes/No/Quit  288/ 40/4  11.3  5  Drug intake before Yes/No/Quit  170/  Yes/No/Quit  170/  45.9
A person who went to prison in the family No 221 59.7  Was s/he exposed to violence as a child? No 210 59.7  Type of violence to which they were exposed Other 27 7.3  Alcohol intake before entering prison Yes/No/Quit 151/60 9/4 3.2  Smoking status Yes/No/Quit 288/77.8  Alcohol intake before entering prison Yes/No/Quit 288/77.8  Yes/No/Quit 288/77.8  40/4 /10. 2 81/11.3 5  Drug intake before Yes/No/Quit 170/ 45.9
prison in the family         No         221         59.7           Was s/he exposed to violence as a child?         Yes         160         43.2           Type of violence to which they were exposed         Physical violence         130         35.1           Alcohol intake before entering prison         Yes/No/Quit         27         7.3           Alcohol status         Yes/No/Quit         151/2         40.8           Smoking status         Yes/No/Quit         288/2         77.8           40/4         /10.         2         81/2           11.3         5         5           Drug intake before         Yes/No/Quit         170/2         45.9
Was s/he exposed to violence as a child?         Yes         160         43.2           Type of violence to which they were exposed         Physical violence         130         35.1           Alcohol intake before entering prison         Yes/No/Quit         151/2         40.8           Smoking status         Yes/No/Quit         288/2         77.8           Mo/Quit         288/2         77.8         40/4         /10.           2         81/2         11.3         5           Drug intake before         Yes/No/Quit         170/2         45.9
violence as a child?         No         210         59.7           Type of violence to which they were exposed         Physical violence         130         35.1           Alcohol intake before entering prison         Other         27         7.3           Alcohol intake before entering prison         Yes/No/Quit         151/2         40.8           Smoking status         Yes/No/Quit         288/2         77.8           40/4         /10.         2         81/2           11.3         5         5           Drug intake before         Yes/No/Quit         170/2         45.9
Type of violence to which they were exposed Other 27 7.3  Alcohol intake before entering prison Yes/No/Quit 151/ 40.8  Smoking status Yes/No/Quit 288/ 77.8  Wes/No/Quit 288/ 77.8  40/4 /10.  2 81/  11.3  5  Drug intake before Yes/No/Quit 170/ 45.9
which they were exposed         Sexual violence         3         0.8           Alcohol intake before entering prison         Other         27         7.3           Alcohol intake before entering prison         Yes/No/Quit         151/2         40.8           Smoking status         Yes/No/Quit         288/2         77.8           40/4         /10.         2         81/2           11.3         5         5           Drug intake before         Yes/No/Quit         170/2         45.9
which they were exposed         Sexual violence         3         0.8           Alcohol intake before entering prison         Other         27         7.3           Alcohol intake before entering prison         Yes/No/Quit         151/2         40.8           Smoking status         Yes/No/Quit         288/2         77.8           40/4         /10.         2         81/2           11.3         5         5           Drug intake before         Yes/No/Quit         170/2         45.9
exposed Other 27 7.3  Alcohol intake before entering prison Yes/No/Quit 151/ 40.8  Smoking status Yes/No/Quit 288/ 77.8  40/4 /10. 2 81/ 11.3 5  Drug intake before Yes/No/Quit 170/ 45.9
Alcohol intake before entering prison  Yes/No/Quit  151/ 59/1 /15. 60 9/4 3.2  Smoking status  Yes/No/Quit  288/ 77.8 40/4 /10. 2 81/ 11.3 5  Drug intake before Yes/No/Quit 170/ 45.9
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entering prison
Smoking status  Yes/No/Quit  288/ 40/4 77.8 40/4 /10. 2 81/ 11.3 5  Drug intake before Yes/No/Quit 170/ 45.9
Smoking status       Yes/No/Quit       288/ 40/4 /10.       77.8 40/4 /10.         2       81/ 11.3 5         Drug intake before       Yes/No/Quit       170/ 45.9
Smoking status       Yes/No/Quit       288/ 40/4 /10.       77.8 40/4 /10.         2       81/ 11.3 5         Drug intake before       Yes/No/Quit       170/ 45.9
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11.3 5 Drug intake before Yes/No/Quit 170/ 45.9
Drug intake before Yes/No/Quit 5  45.9
Drug intake before Yes/No/Quit 170/ 45.9
7//1 /12.
53 7/4
1.4
used Heroin 7 1.9 Cocaine 4 1.1

Methamphe amine	6	1.6
Green prescription drug	5	1.4
Multiple substances/drugs	69	18.6

Table 2. The scores received in the scales applied to the participants

	Mean	SD	Min-Max
BDI	19.21	13.19	0-60
BAI	16.99	13.87	0-57
SCL-90 Somatization	1.29	0.96	0-4
SCL-90-Anxiety	1.10	0.93	0-3.9
SCL-90-Obsession	1.34	0.90	0-4
SCL-90-Depression	1.26	0.94	0-4
SCL-90-Interpersonal	1.21	0.94	0-3.69
sensitivity			
SCL-90-Psychoticism	0.96	0.84	0-4
SCL-90-Paranoid thought	1.30	1.01	0-3.6
SCL-90-Hostility	1.11	1.04	0-3.63
SCL-90 Phobic anxiety	0.73	0.79	0-4
SCL-90-Addition	1.43	0.95	0-4
SCL-90-General	1.19	0.82	0-4
psychopathology			
CTQ-Emotional abuse	8.27	4.02	5-24
CTQ Physical abuse	8.21	4.49	5-25
CTQ Physical neglect	9.06	3.42	5-21
CTQ Emotional neglect	12.80	5.22	5-27
CTQ Sexual abuse	6.68	3.68	5.23
CTQ- Total	45.03	15.33	25-109
CTQ-Denial	0.79	0.83	0-3

# 3.3. The relationship between clinical variables and scale scores

The relationship between the participants' demographic data and clinical variables and the scale scores was examined. In the results, CTQ physical abuse score was higher in singles than in married people (p=0.046). Prisoners imprisoned before had CTQ-physical abuse, BAI, SCL-90-somatization, anxiety, and hostility subscale scores were higher than the inmates who entered prison for the first time (p values: 0.020, 0.003, 0.016, 0.017, 0.047, respectively). Prisoners whose families had a prison entrance had higher CTQ physical abuse scores than those with no family history of prison entry (p=0.009). They also had higher SCL-90 somatization, anxiety, obsession, depression, interpersonal sensitivity, psychoticism, paranoid thought, hostility, phobic anxiety, additional symptoms, and general symptom screening subscale scores than the group without prison entry in their families (p values=0.015; 0.045; 0.003; 0.010; 0.046; 0.001; 0.004; 0.013; 0.047; 0.000; 0.003, respectively). All scale and subscale scores of prisoners exposed to violence in childhood were high. Prisoners who had alcohol intake before entering prison also had higher CTQ physical abuse, emotional abuse, sexual abuse, total trauma scores, and SCL-90 hostility subscale scores than those without alcohol intake (p values = 0.000; 0.005; 0.001; 0.004; 0.005, respectively). Prisoners who used substances before entering the prison had higher CTQ-emotional abuse, physical abuse, sexual abuse, total scores of the scale and SCL-90 somatization, anxiety, psychoticism, hostility, and general subscale scores than the group without substance use (p values = 0.005; 0.000; 0.013; 0.012; 0.034; 0.047; 0.021; 0.005; 0.042, respectively). All scale and subscale scores of the prisoners who had attempted suicide before were higher. According to the type of crime committed by the prisoners, only the CTQ-sexual abuse subscale scores differed. The subscale scores of prisoners involved in many different crimes were higher than those involved in one type of crime (Mean Rank=176.74; p=0.030). Those who were involved in the crime of willful homicide had high CTQ-sexual abuse subscale

scores (Mean rank=163.26; p=0.030).

# 3.4. Spearman correlation analysis results

The depression and anxiety scale scores of the participants were positively and moderately correlated (r=.582; p=0.000). All sub-dimensions of the CTQ were positively correlated with BDI and BAI. BDI and BAI were moderately positively correlated with all subscales of the symptom screening list (SCL-90). The Spearman Correlation Analysis results of the participants are given in Table 3.

Table 3. Spearman correlation analysis results

Tuble of spear	man correlation								
	Prison	BDI	BAI	CTQ-P	CTQ-E	CTQ-P	CTQ-S	CTQ-E	CTQ-
	duration			Neglect	Neglect	Abuse	Abuse	Abuse	Total
Prison	1	.097	.221*	.136*	012	.083	.043	.031	.078
duration									
BDI	.097	1	.582*	. 364*	.228*	.351*	.188*	.374**	.409*
BAI	.220*	.582*	1	.393*	.183*	.417*	.201*	.451*	.428*
SCL-90-1	.195*	.502*	.746*	.312*	.116*	.363*	.189*	.367*	.347*
SCL-90-2	.161*	.529*	.746*	.389*	.185*	.419*	.266*	.455*	.441*
SCL-90-3	.157*	.491*	.635*	.338*	.084	.376*	.215*	.404*	.359*
SCL-90-4	.127*	.576*	.642*	.362*	.188*	.363*	.231 *	.423*	.399*
SCL-90-5	.164	.620*	.699*	.379*	.159*	.243*	.406*	.460*	.477*
SCL-90-6	.157*	.486*	.626*	.362*	.191*	.387*	.292*	.446*	.424*
SCL-90-7	.131*	.440*	.579*	.352*	.134*	.371*	.197*	.431*	.381*
SCL-90-8	.178*	.453*	.583*	.394*	.150*	.450*	.267*	.465*	.455*
SCL-90-9	.155*	.438*	.596*	.334*	.207*	.326*	.262*	.392	.399*
SCL-90- 10	.147*	.524*	.596*	.290*	.085	.339*	.182*	.379*	.328*
SCL-90- 11	.176*	.559*	.726*	.390*	.160*	.421*	.257*	.469*	.435*

Abbreviations in the table: BDI: Beck Depression Inventory, BAI: Beck Anxiety Inventory, SCL-90-1: Symptom Checklist-Somatization; SCL-90-2: Symptom Checklist-Anxiety; SCL-90-3: Symptom Checklist-Obsession; SCL-90-4: Symptom Checklist-Depression; SCL-90-5: Symptom Checklist-Interpersonal sensitivity; SCL-90-6: Symptom Checklist-Psychoticism; SCL-90-7: Symptom Checklist-Paranoid thought; SCL-90-8: Symptom Checklist-Hostility; SCL-90-9: Symptom Checklist-Phobic anxiety; SCL-90-10: Symptom Checklist-Appendix; SCL-90-11: Symptom Checklist-general symptomatology; CTQ-P. Neglect: Childhood trauma questionnaire-Physical abuse; CTQ-E. Neglect: Childhood Trauma questionnaire-Emotional neglect; CTQ-P. Abuse: Childhood trauma questionnaire-Physical abuse; CTQ-E. Abuse: Childhood trauma questionnaire-emotional abuse; CTQ-S. Abuse: Childhood trauma questionnaire-sexual abuse; CTQ-Total: Childhood trauma questionnaire-total score. Spearman Correlation Analysis Test was used in the calculations. The *r* values are given in the table. \*p<0.05

# 4. Discussion

The present study examined the psychiatric symptoms of the prisoners, the traumas they experienced during their childhood, and their relationship with the types of crimes. The majority of our participants were single and low-income people. The number of people who received outpatient and inpatient psychiatric treatment before entering prison was relatively low. Suicide attempt was experienced at a rate of 26.5% in the past. In the evaluations made with their current state, the depression scores of the participants were calculated as 25.67%, at a level that can be called severe depression. The psychiatric symptom scores of those who had been in prison before were higher. The SCL-90 somatization, anxiety, hostility scores, BAI scores, and CTQ-physical abuse scores were higher in those with prison admission before. Similarly, some subscale scores of those with a family history of prison entrance were high. Also, prisoners exposed to violence during childhood and those who had attempted suicide before had higher scores on all scales. When the results were examined according to the types of crimes committed by the prisoners, only the CTQ-sexual abuse subscale scores differed. These subscale scores of the prisoners involved in multiple crimes were higher than those involved in one. Finally, those who were involved in the crime of willful homicide had higher CTQ-sexual abuse subscale scores when compared to the prisoners who were involved in other crimes.

Both the crime and closed environment are a source of stress for the individual in prison because of a crime committed and whose freedom is restricted, making the prisoners mentally risky groups (5). The results obtained here confirm this data. The present study calculated the SCL-90 general psychopathology level as one or higher in 194 (52.43%) prisoners. An SCL-90 general symptom level score of 1.00 and above indicates that the symptoms are at a psychopathological level (18, 19). It was found that 227 prisoners (61.35%) received a score of 1 or higher from the SCL-90 supplementary sub-scale, in which physiological symptoms such as sleep quality and appetite were questioned. In a study very similar to the present study, SCL-90 additional symptoms, somatization,

and depression scores of a group of convicts were found to be in the first three ranks (5). Additional symptoms, obsession, and paranoid thought made up the first three lines in our results and were followed by somatization and depression. It was considered that psychiatric symptoms might increase with stress factors such as being in a closed environment and punishment.

It was shown that people become lonely and depressed after a while in prisons where freedoms are restricted, and inmates live within the framework of specific rules (5, 20). It was also determined that suicidal thoughts are high (5, 21). In a study conducted abroad with 236 newly imprisoned people, anxiety scores were high, with a rate of 66.5%, and depression scores with a rate of 85.2% (22). Similarly, it was shown in another study that prisoners have a risk of suicide rate of 13.2%. The same study also listed depressive disorder, dysthymic disorder, panic disorder, generalized anxiety disorder diagnoses, and childhood traumas as predictors for the probability of suicide (23). Another study conducted abroad reported the rates of depression in prisoners in developing and developed countries as 39.2% and 33.1%, respectively. Moreover, studies that used severity-determining scales for depressive disorder have shown a significant rate of 19.1% to 54% (24). In our results, the depression scores were high in the third rank for SCL-90. Also, the BDI scores of the prisoners participating in the study were calculated at a rate of 25.67%, at a level that can be called severe depression, and the participants tried suicide attempts with a rate of 26.5%. Although the scale scores for both depressive symptoms and suicide were high, people were less likely to seek treatment. In addition to all these, all scale scores of prisoners exposed to childhood violence were higher than those who did not experience violence. In other words, the depression scores of prisoners exposed to violence as children were much higher. These rates obtained here were generally compatible with the literature, and this was interpreted as an increased susceptibility to depression in deprived prisoners.

When the literature was reviewed, the number of prison entrances was examined in a limited number of studies, and the psychiatric symptoms of prisoners were questioned (22, 25). In a previous study, it was reported that the depression scores of those who had a prison entrance before were higher than those who did not have a prison entrance (22). Another study showed that the idea of suicide was less among prisoners entering prison for the first time (251). In our results, psychiatric symptom scores of prisoners admitted to prison before were higher than those who entered prison for the first time. SCL-90 somatization, anxiety, hostility scores and BAI scores, and CTQ-physical abuse scores were higher in those admitted to prison. This was interpreted as exposure to prison stressors more than once with different crimes increases mental symptoms.

Finally, when the prisoners were grouped according to the types of crimes they committed, it was found that there was

only a difference in the CTQ-sexual abuse subscale scores. The subscale scores of prisoners involved in multiple crimes were higher than those involved in one. Those who were involved in the crime of willful homicide had higher CTQ-sexual abuse subscale scores than the prisoners who were involved in other crimes. In previous studies conducted in the literature on this subject, it was determined that the rates of childhood traumas were high in prisoners (26, 27, 28). Many studies show that traumas can increase the risk of mental illness. It was demonstrated that traumas might pose a risk of suicide (28). A previous study reported that all childhood traumas and abuse rates were high in both male and female prisoners. Again, a study conducted abroad reported that the rate of post-traumatic stress disorder was high in prison inmates and that people had anger control problems with the effect of traumas, and the risk of suicide increased (29). The present study found that those who were in prison more than once were exposed to more traumas, which supports these studies.

The most important limitation of the present study was the unequal distribution between the genders. Other limitations were the relatively insufficient number of participants, the self-report scale of the scales, and the inability to apply structured clinical interviews with the participants. These limited the interpretation and generalization of the results. It is necessary to conduct more extensive studies with larger sample groups for findings obtained to gain importance.

As a result, it was concluded that prison inmates might have mental symptoms and that their anxiety and depressive complaints might increase. It was also found that going to prison more than once causes more mental symptoms. Also, prisoners who were exposed to violence in childhood and had a previous suicide attempt had more psychiatric symptoms, and prisoners involved in more than a thousand different crimes and willful homicides were exposed to more childhood sexual abuse. In light of all these findings, it was considered that people who had a healthy childhood and were not exposed to abuse, violence, or trauma during childhood could be mentally healthier. It was thought that exposure to trauma in childhood might lead a person to commit a crime, which may affect both the person's life and society. For this reason, it was considered that the psychiatric follow-up of children exposed to childhood trauma and providing the necessary psychosocial support could reduce the delinquency rate. It was also considered very important to follow up on the prisoners' psychiatric symptoms, reveal the traumas they experienced, and intervene correctly and promptly. To generalize and interpret the findings obtained in the study, there is a need for studies in larger sample groups that also examine different psychiatric symptoms.

# **Ethical statement**

The study was approved by the First University Non-Interventional Local Ethics Committee on 23.05.2019 with the number 09/02 and by the R.T. Ministry of Justice with the date 12.08.2022 and the number 112444.

#### Conflict of interest

The authors declared no conflict of interest.

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#### Authors' contributions

Concept: Ş.K., Design: G.T., Data Collection or Processing: N.K., Analysis or Interpretation: B.D., Literature Search: F.Ö., Writing: Ş.K.

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