The Relationship between Adult Delinquency, Childhood Victimization, Drug Abuse and PTSD in Prison Population

ABSTRACT

The present investigation directs attention to the role played by PTSD symptoms and drug abuse in the correlation between childhood victimization and adult criminal behavior. Using Amos (Analysis of Moment Structure) it was found that whereas drug abuse indicated non-specific connections between past (childhood/adolescent) types of victimization and types of adult criminal behavior, PTSD symptoms, such as intrusive thoughts and cognitive avoidance, led to specific types of criminal behavior (the same as that of the victimization type). Thus, sexual victims who develop cognitive avoidance tend to become sexual offenders as adults, while those who develop drug dependency tend to exhibit non-specific criminal behavior.

Introduction

The purpose of this paper is to introduce a model explaining the ‘cycle of violence’ that represents the relationship between adult criminal activity and childhood victimization. The model introduced in this paper suggests that past victimization, the developmental phase of PTSD and drug usage may serve as an explanatory factor for the various types of adult criminal activity.

The similarity between childhood/adolescent victimization and certain types of crime may be explained by PTSD; while PTSD followed by drug abuse may explain e adult criminal activities that are not related to childhood victimization.

Childhood sexual and physical abuse has been found to increase the probability of adult violent and criminal behavior. Curtis (1963) maintained that victimized children are “tomorrow’s murderers and perpetrators of other crimes of violence, if they survive” (p.386). More recent research results further support this notion (Spatz-Widom, 2000, White & Spatz-Widom, 2003).
Moreover, childhood or adolescent victimization was shown to have serious short and long term effects on its victims (Bergen, Martin, Richardson, Allison, Roeger, 2004; Ben-David, Alek & Silfen, 2002). Symptoms such as depression, anxiety, sleeplessness and intrusive thoughts were so common among abuse victims that, in 1980, Post-traumatic Stress Disorder (PTSD) was defined and introduced in the *Diagnostic and Statistical Manual of Mental Disorder* (3rd edition: DSM-III) (Rowan & Foy, 1993). The aim of this paper is to explore the correlations between childhood victimization, PTSD, drug abuse and adult criminal behavior.

Various studies have shown that children who were exposed to childhood victimization tend to be antisocial, aggressive and commit crimes as adults (Bergen et al, 2004; Saptz-Widom, 2000; Haapasalo & Pokela, 1999). Both the prospective (Maxfield & Widom, 1996) and retrospective approaches (Clarke, Stein, Sobota, Marisi, & Hanna, 1999) suggest a high prevalence of abused children in both the female and male adult criminal populations. This phenomenon is known as the ‘cycle of violence’ (Spatz-Widom, 1992; Maxfield & Widom 1996).

However, the research on the link between earlier victimization and adult delinquency has yielded, overall, contradictory results. These results may be divided into two broad categories (Cohen, 1995): A non-specific General Link (GL), which means that any form of abuse may lead to various forms of adult violence and/or criminal behavior (Barnard, Hankins, & Robbins, 1992; Graham, 1996); A Direct Link (DL), which maintains that the type of victimization predicts specific ensuing criminal activity, i.e.: sexually abused children will become sex offenders, battered children will become violent criminals etc. (Laws & Marshall, 1990; Marshall & Barbaree, 1990).

Several theoretical approaches may explain the connection between past victimization and adult criminal activity. A few of them include: the social learning (Bandura, 1973, 1977) and “Monkey see monkey do” hypothesis of Curtis (1963), the traumagenic hypothesis of Finkelhor (1988), and the attachment insecurity supposition (Smallbone & MacCabe, 2003). Haapasalo and Pokela (1999) attested that the trauma model is the most interesting theoretical approach to explain the relationship between past victimization and present criminal activity. While these theoretical explanations may account for the SL, none of these theories have tried to account for both types of links, the General and the Specific.
This paper suggests that PTSD and consequential drug abuse may explain these two links between past victimization and criminal activities.

The DSM-IV divides PTSD into three symptomatic groups: persistent psychological re-experiencing of the traumatic event, psychological numbing or avoidance, and hyper arousal (American Psychiatric Association, 1994). However some researchers have suggested a different classification of PTSD. Based both on statistical analysis, such as factor analysis, and theoretical considerations, they suggest that avoidance and numbing are distinct phenomena. Thus, they should be separated and renamed as cognitive avoidance and emotional avoidance. While cognitive avoidance is largely regulated by a cognitive psychological process, emotional avoidance is also mediated by biological-hormonal mechanisms (Foa, Riggs, & Gershuny, 1995; Myslobodsky, Glicksohn, Singer, Stern, Bar Ziv, Friedland, and Bleich, 1995).

Everly (1995) suggested a neuro-cognitive model for the developmental sequence of PTSD. In this model, post trauma, intrusive thoughts are developed first and are followed by cognitive avoidance. When cognitive avoidance proves ineffective in reducing intrusive thoughts, the occurrence of emotional avoidance can be expected (Everly, 1995).

Cognitive avoidance, or a release from intrusive thoughts, can be achieved through distraction from these painful thoughts. While Emotional avoidance, or the anesthesia of intrusive thoughts, may be attained by a numbing or blunting of the emotions (Lipton, 1988). Substance abuse (e.g. alcohol, drugs, food, etc.) may serve as ‘self-medication’ to help alleviate intrusive thoughts (Teusch, 2001; Saladin, Drobes, Coffey, Dansky, Brady, Kilpatrick, 2003). Distraction may be achieved through criminal activity, as suggested by Stott (1950) and Addad (1989).

Although the prevalence of PTSD among both male and female offenders is very high (Barnard et al, 1992, Yoshinaga, Kadomoto, Onati, Sasaki & Kato, 2004), limited research examining the correlation between PTSD, criminal activity and drug abuse exists (Zhang, Welte & Wieczorek, 2001).

Previous studies of Israeli female prisoners found that 71% suffered from past victimization. A high proportion of these prisoners were characterized by PTSD avoidance symptoms (Ben-David, 1994; Ben-David, Alek & Silfen 2002). Similarly, a high frequency of avoidance and hyper-arousal symptoms were found in sex offender population (Barnard et al, 1992). These findings show the distinction between
criminal populations and the intrusive thoughts predominately found in non-criminal populations (Horowitz, Weine, Jekel, 1995; Solomon, 1988). Thus, it seems plausible to assume that avoidance, whether cognitive or emotional, is one characteristic of adult offenders who were previously victimized. It may also be deduced that avoidance precedes, or is one of the enabling conditions for adults who were victimized in their youth, the execution of criminal activities.

Criminal activity, similar to any other behavior, is learned. It can also be seen as an almost natural development of learned behavior, or identification with the aggressor (Freud, 1966). Abused children learn this behavior in order to reduce stress or to express disappointment. In addition, children who experience physical violence or sexual abuse might believe that this is common or acceptable behavior (Finkelhor, 1988). For these children, the normal response to crisis situations in adulthood may be learned violent behavior similar to the violent or sexual abuse they suffered from in their youth. These activities are facilitated by emotional avoidance that enables pain to be inflicted on others. Thus, emotional avoidance and learning theories may explain the SL.

On the other hand, as aforementioned, drug abuse is one way of releasing emotional pain after trauma. However, drug abuse may also precede criminal activities. These activities could manifest as a way to finance the illicit drugs. It could also be considered indicative of a criminal lifestyle (Bennett & Holloway, 2005; Brochu, 2001). As a result, victims using drugs as a means to alleviate their former childhood victimizations are involved in general crimes necessary to finance their crude remedy. Thus, they are characterized as the GL.

We propose therefore that developmental phase of PTSD (Everly, 1995) may serve as an explanatory factor for the SL between childhood/adolescent victimization and the type of criminal behavior manifested in adulthood, while drug abuse following PTSD may explain the GL.

**Method**

**Participants**

The participants included 123 offenders incarcerated in Israeli prisons. The 47 sex offenders (SO) were randomly selected from a list provided by the Israeli Prison Service. The 76 randomly selected non sex offenders were divided into two groups: 29 violent offenders (VO) and 47 sentenced for miscellaneous offences (MO). The
prisoners were assigned to these groups based on their known criminal history, including the offense for which they had been incarcerated (Cohen, 1995; Nachshon, 1988). The purpose of the research was explained to the participants, and each one signed a consent form.

**Research tools**

The data were gathered through two questionnaires:

1. *Criminal activity, drug abuse and past victimization inventory.*

   A Self-disclosure inventory of past victimization, criminal activity and substance abuse was developed, validated and used in research with female (Ben-David, 1991), and male (Cohen, 1995) inmates. The inventory showed the high validity of self-reports for both sexual ($\alpha=.89$) and physical ($\alpha=.88$) abuse (Cohen, 1995).


   This questionnaire measures three types of PTSD: intrusion, avoidance and emotional avoidance (Joseph, Williams, Yule and Walker, 1992; Myslobodsky et al, 1995). The Hebrew version showed a reliability of $\alpha=.93$, and was found to fit various population groups (Solomon, 1988).

**Procedure**

After signing a written consent form, subjects were individually interviewed. This method was preferred because many of the prisoners have poor writing skills. The interviewer explained the purpose of the study, pointing out that participation had no legal implications, did not entitle the subject to any privileges, and did not constitute an admission of guilt for the alleged offense. Each prisoner signed an agreement to take part in the research.

**Results**

The findings indicated significant age differences between the three groups of offenders: (F(2,110)=3.20; p<.05) where SO (sex offenders) were older than the other two groups, with a mean age of 40, while the mean age of VO (violent offenders) was 38, and that of MO (miscellaneous offenders) was 33. No
differences were found between the research groups regarding marital status, education level and country of origin. However, a significant difference was found in the number of previous arrests ($\chi^2 = 47.5; p < .000$): only 25.6% of the SO had previous arrests compared to 58.6% of VO and 87.2% of MO. In addition, most of the SO served in the army. Only 21.3% SO did not serve compared to 27.6% of the VO and 61.7% of the MO ($\chi^2 = 7.1; p < .05$). This finding may suggest that SO do not, in essence, belong to the criminal sub-culture.

Of the 123 prisoners, 15.4% reported sexual abuse (SV), and 36.6% indicated physical abuse (PV). No direct correlation was found between victimization type and type of offence. Table 1 presents the distribution of these two variables.

A three-way MANOVA was used to calculate the relationship between type of offence, type of victimization and the severity of PTSD symptoms. The following effects were found to be significant: type of victimization ($F(2,105) = 5.15; p = .007$), where PTSD symptoms were more severe in SV and PV than in NV; the type of PTSD was significantly different between the three groups ($F(2,210) = 24.8; p = .000$). Among SV, SO suffer from the most severe cognitive avoidance and emotional avoidance, and they suffer less from intrusive thoughts compared to other groups of offenders.

Chi Square was used to test the relationship between drug usage and the type of offences, which was found to be significant ($\chi^2 = 22.820; p < .01$). More than half of the SO did not use drugs (57.4%), while most of the MO (88.9%) and VO (72.4%) did use drugs.

A three-way MANOVA was used to assert the relation between type of offence, type of victimization and drug use. The following main effect was found to be significant: drug usage ($F(1,131) = 15.131; p = .000$). Among SV, most (86.7%) SV who were SO did not use drugs, while most (66.7%) SV who were using drugs were not SO, ($\chi^2 = 21.16; p < .01$). Among PV, a similar trend was found. More than half (55.6%) of those who were not using drugs were VO, while most (80%) of FV who were using drugs were not VO, ($\chi^2 = 5.78; p = .056$).
We hypothesized that PTSD symptoms would facilitate the SL. In other words, past victimization would predict the type of criminal activity, while drug abuse would indicate the GL. Specifically, among drug abusers, no similarity between type of victimization and type of criminal activity would exist. In order to check our hypothesis, we used the Analysis of Moment Structure (AMOS) (Arbuckle, 1997). AMOS (Analysis of Moment Structure) uses structural equation modeling (SEM), a form of multivariate data analysis that can test for accuracy between the data obtained in the research and the researcher’s specified model. AMOS calculates maximum likelihood estimates from the covariance matrix and several fit indexes in order to evaluate the reliability of the connection between the data and the specified model.

Since AMOS calculates several fit measures, the choice of fit is arbitrary. However, Hu & Bentler (1999) recommended, for a sample size of 200 or less, that the following fit measures be used: $\chi^2 > 0.5$; CMIN/DF<3 (chi square divided by degrees of freedom); RMR (Root mean residuals) <0.6; TLI (Tucker-Lewis index)$\geq$0.95; CFI (Comparative fit index)$\geq$0.95; RMSEA (Root mean square error of approximation)$\leq$0.06.

**Specifying the Model**

The model we derived is presented in fig.1. Our indices, presented in table 2, indicate a good fit between the model and the data. In addition, according to our hypothesis, drug abuse had a negative effect on crime type. In other words, the higher the level of substance abuse, the less similarity existed between type of victimization and type of crime committed.

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Insert figure 1 about here
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The model indicates three or four main paths:

1. PTSD developmental path: Trauma (type of victimization) initiates the development of PTSD, starting with intrusive thoughts leading to cognitive avoidance, and then to
emotional avoidance

2. Two paths indicating GL:
   a. Trauma (type of victimization) initiates intrusive thoughts leading to drug abuse and to criminal activity
   b. Trauma (type of victimization) initiates intrusive thoughts leading to cognitive avoidance, drug abuse and to criminal activity

3. A SL path: Trauma (type of victimization) initiates intrusive thoughts leading to cognitive avoidance and to criminal activity, indicating that PTSD has a sequential development as described in the literature

Discussion

The literature is rich with phenomenological and statistical reports stating that interesting and intriguing phenomena exist, such as the transformation of victims into victimizers. However, only a few attempts have been made to explain these relationships. Moreover, contradictory findings in the literature regarding the nature of these connections appear (specific link, i.e. victimizations leading to same offence as victimization or general link, in which any type of victimization leads to any type of criminal activity). Explanations for this contradiction have focused largely on poor research techniques or on differences in data sources (Cohen, 1995). Attempts to account for these phenomena theoretically are rare, if they can indeed be found.

The present investigation directs attention to the role played by victimization early in life on subsequent PTSD symptoms leading either to drug abuse and atypical criminal behavior, or directly to criminal behavior similar to that of the victimization type.

In employing causal modeling, the objective is to hypothesize a model linking initial variables to indicator variables, where applicable, and a structural model displaying the functional relations between the variables. The viability of this model is then assessed by determining the degree to which the indicator variables can be accounted for in the predicted model. In order to test our model, a confirmatory factor analysis using AMOS software (Arbuckle, 1997) was conducted. As shown in illustration no. 1, the analysis introduced two variables as
major indicators, drug abuse and PTSD, or to be more exact, intrusive thoughts and cognitive avoidance.

Whereas drug abuse indicated non-specific connections between past (childhood/adolescent) types of victimization and types of adult criminal behavior, PTSD symptoms, such as intrusive thoughts and cognitive avoidance, led to specific types of criminal behavior (the same as that of the victimization type). Thus, sexual victims who develop cognitive avoidance tend to become sexual offenders as adults, while those who develop drug dependency tend to exhibit non-specific criminal behavior.

This supposition is supported by our finding that most of the sex offenders who were sexually victimized are not using drugs. In contrast, sexual victims who are not sex offenders usually use drugs. A similar trend was found among FV.

An abused child learns to be unaware of feelings or unable to express them because feelings of pain are so strong that they become intolerable. As adults, some of the victims are able to cope with past trauma, adjust and lead normative lives. Others learn to survive the abuse by negating their true feelings (Bat Or, 1992). Such negation can be achieved through addiction to a substance or substances, such as alcohol, drugs, or food (Teusch, 2001; Bat Or, 1992). However, there is a connection between drug use and crime. Drugs are very expensive. Moreover, heavy drug users are usually unable to maintain employment. As a result, many of them commit crimes in order to finance their drugs (Bennett & Holloway, 2005; Brochu, 2001). It is easy to deduce that these criminal acts are driven by the need to purchase drugs, or by the drug-usage lifestyle. Thus, such a pattern comprises the aforementioned General Link.

The Direct Link, as the finding suggests, has no connection to drug usage. There is a direct link through intrusive thoughts and cognitive avoidance from victimization type to type of criminal activity. Children who experience physical violence or sexual abuse might perceive it as common or acceptable behavior, as a way to relieve anxiety, or to express anger and/or rage (Barnard et al, 1992). For these children, the normal response to crisis situations in adulthood may be violent behavior. This pattern is facilitated by cognitive avoidance that negates the feelings of compassion to the sufferings caused by their actions.

In conclusion, while it seems strange that one who has suffered abuse will impose suffering upon others, our findings suggest that the path from victimization
to criminal behavior is facilitated by PTSD and drug usage. The findings also clarify the distinctions between GL and SL.

Acknowledgments
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References


Clarke, J., Stein, M.D., Sobota, M., Marisi, M., Hanna L. 1999. *Archives of International Medicine, 159*: 1920-1924


Table 1. Distribution of Type of Offence among Types of Past Victimization

<table>
<thead>
<tr>
<th>Types of offence</th>
<th>Sexual abuse (SV)</th>
<th>Physical abuse (PV)</th>
<th>No abuse (NV)</th>
<th>Total n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex offenders (SO)</td>
<td>42.1</td>
<td>35.6</td>
<td>39.0</td>
<td>47 (100)</td>
</tr>
<tr>
<td>Violent offenders (VO)</td>
<td>42.1</td>
<td>31.0</td>
<td>20.3</td>
<td>29 (100)</td>
</tr>
<tr>
<td>Miscellaneous offenders MO</td>
<td>15.8</td>
<td>44.4</td>
<td>40.7</td>
<td>47 (100)</td>
</tr>
<tr>
<td>Total N (%)</td>
<td>19 (15.4)</td>
<td>45 (36.6)</td>
<td>59 (48.0)</td>
<td>123 (100)</td>
</tr>
</tbody>
</table>
Table 2. Estimated fit Measures for the Model

<table>
<thead>
<tr>
<th>$\chi^2$</th>
<th>CMIN/DF</th>
<th>RMR</th>
<th>TLI</th>
<th>CFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.54</td>
<td>1.19</td>
<td>0.03</td>
<td>0.98</td>
<td>0.98</td>
<td>0.039</td>
</tr>
</tbody>
</table>

**note**: $\chi^2$ (chi-square); CMIN/DF (chi square divided by degrees of freedom); RMR (Root mean residuals); TLI (Tucker-Lewis index); CFI (Comparative fit index); RMSEA (Root mean square error of approximation)
Figure 1. Estimated Relationship between the Variables in the Model