Appetitive Aggression and Adaptation to a Violent Environment Among Youth Offenders

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Previous research has demonstrated that those who perpetrate violence and report aggression to be appetitive are less vulnerable to developing posttraumatic stress disorder (PTSD). The current study examined the hypothesis that, among youth offenders living in a high-violence community, an attraction to violence is associated with improved psychosocial functioning and less concern about future threats. A sample of 69 male youth offenders living in two high-violence communities in Cape Town, South Africa, completed measures of trauma exposure, PTSD symptoms, appetitive aggression, reactive aggression, psychosocial functioning, and concerns about future threats. Higher PTSD symptoms predicted lower psychosocial functioning as well as more concern about future threats. However, participants high in appetitive aggression showed better functioning and fewer concerns about future threat. By contrast, reactive aggression was a significant predictor of reduced functioning and increased concerns about threat. These findings suggest that, for youth offenders living in contexts of ongoing violence exposure, appetitive aggression may serve a psychologically self-protective function. Implications for interventions with youth offenders living in high-violence communities are considered.

Keywords: appetitive aggression, youth offenders, PTSD, South Africa

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Although South Africa has experienced a reduction in levels of politically motivated violence since the demise of the apartheid system in the 1990s, rates of homicide, gender-based violence, and gang-related violence are currently among the highest in the world (Altbekker, 2007; Seedat, Van Niekerk, Jewkes, Suffla, & Ratele, 2009). Almost a third of adult South Africans have been a victim of violence, and over half have experienced multiple exposures to potentially traumatic events (Kaminer, Grimsrud, Myer, Stein, & Williams, 2008). However, South African youth are at particularly high risk for exposure to violence. Youth between 12 and 22 years of age are twice as likely as adults to be victimized by crime and violence (Burton, 2006). Youth between the ages of 10 and 29 years account for 48% of all violent deaths in the country (Foster, 2012), with rates of youth homicide being especially high in Cape Town’s impoverished townships (Seedat et al., 2009). In addition to the developmental challenges posed by high levels of poverty and inequality, many South African youth also grow up amid high levels of threat and danger to which they must adapt. Although levels of violence exposure among South African youth may be particularly high, it is evident that youth living in other contexts also have to find ways to cope with daily exposure to violence (Hunt, Martens, & Belcher, 2011; Kennedy, 2008).

Although the majority of survivors of single traumas do not develop posttraumatic stress disorder (PTSD; Breslau, 1998), research has indicated a dose-response relationship between trauma exposure and PTSD: Increased exposure to traumatic stressors is associated with an increased risk of PTSD, and beyond a cumulative threshold of exposure almost all survivors will develop the disorder (Kolassa et al., 2010; Neuner et al., 2004; Schauer et al., 2003; Steel et al., 2009). The increasing likelihood of PTSD with higher exposure to traumatic stressors has been termed the building-block effect. The dose-response effect reported in adults has also been documented for children (Catani, Jacob, Schauer, Kohila, & Neuner, 2008; Catani et al., 2009). However, because not all youth living in conditions of violence develop trauma symptoms and reduced psychosocial functioning, there must also be factors that contribute to resilience against the negative effects of cumulative trauma exposure.

Recent studies have started to investigate the perception and processing of violence among perpetrators. It has been argued that cruel behavior offers an evolutionary advantage and an associated gratification in perpetrators (Jones, 2008; Nell, 2006). If cruel behavior evolved as a beneficial by-product of evolutionary adaptation, there must be a different perception of violence cues among those who perpetrate serious atrocities (Elbert, Weierstall, & Schauer, 2010). The infliction of harm on a victim for the purpose of experiencing violence-related enjoyment beyond secondary rewards like status or material benefits has been termed appetitive aggression (Elbert et al., 2010). It is motivated by approach behavior toward a positive emotional state aroused by violence cues.

By contrast, its counterpart, called reactive or facilitative aggression, occurs in response to a threat or aversive stimulus, and is motivated by an avoidance of a negative emotional state like fear or distress (Weierstall & Elbert, 2012). A number of studies have revealed that appetitive aggression is not only a common phenomenon among former combatants (Weierstall & Elbert, 2011), but is also associated with a reduced risk of trauma spectrum disorders. Across different samples it has been demonstrated that those who report higher appetitive aggression show fewer posttraumatic stress symptoms, accounting for up to 12% of the variance of PTSD symptoms (Weierstall, Schaal, Schalinski, Dusingizemungu, & Elbert, 2011; Weierstall, Schalinski, Crombach, Hecker, & Elbert, 2012). Hence, those who describe perpetrating violent offenses as appetitive or pleasurable demonstrate a better adaptation to environments characterized by high levels of violence.

It has been reported that reactive aggression can also be increased in those who perpetrate violence. Among war veterans who suffer from PTSD, reactive aggressive behavior and an increase in anger and hostility have been demonstrated, and are often associated with psychosocial problems (Byrne & Riggs, 1996; Jakupcak et al., 2007). However, we suggest that the underlying mechanisms between the two forms of aggression are opposed: Whereas appetitive aggression is related to a positive valence, the heightened aggressive behavior in those who suffer from PTSD is a consequence of a permanent hyperarousal and the increased perception of fear, which makes defense reactions out of
anger or fear more likely to occur—often in situations in which this type of responding is inappropriate. Consequently, reactive aggression should not improve adaptation to a violent environment, but rather cause further psychological problems.

The aim of the present study was to investigate whether appetitive aggression serves as a protective factor for the development of psychological dysfunction and the expectation of future danger among male youth offenders living in a high-violence context. It was hypothesized that those who are attracted to perpetrating violence are less likely to develop psychological dysfunction and will show a lower concern about experiencing future danger. To investigate differences in the impact of the two different forms of aggressive behavior, we also controlled our analyses for reactive aggressive behavior.

Method

Sample

A sample of 70 male participants, residing in two low-income communities in Cape Town, South Africa, participated in the study. They were between 13 and 27 years of age ($M = 20, SD = 3$). The first language of all participants was isiXhosa, an indigenous South African language, while levels of English fluency varied within the sample. The demographic data of the sample is presented in Table 1.

![Table 1](#)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>$M$ (SD), [range] or $n$ (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>20.3 (2.9) [13–27]</td>
</tr>
<tr>
<td>Marital status (%)</td>
<td>19 (27.1)idelity</td>
</tr>
<tr>
<td>Partner</td>
<td>51 (72.9)</td>
</tr>
<tr>
<td>Number of children</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>56 (80.0)</td>
</tr>
<tr>
<td>1</td>
<td>13 (18.6)</td>
</tr>
<tr>
<td>2</td>
<td>1 (1.4)</td>
</tr>
<tr>
<td>Years spend in school</td>
<td>9.8 (1.9) [5–14]</td>
</tr>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>No school</td>
<td>1 (1.4)</td>
</tr>
<tr>
<td>Primary school</td>
<td>65 (92.9)</td>
</tr>
<tr>
<td>Secondary school</td>
<td>4 (5.7)</td>
</tr>
<tr>
<td>Imprisonment (yes/no)</td>
<td>36 (51.4)/34 (48.6)</td>
</tr>
</tbody>
</table>

The study formed part of a pilot project to investigate mental health in former young offenders in two urban townships of Cape Town, South Africa. The South African townships emerged during apartheid, the system of institutionalized racial segregation that characterized South Africa during the rule of the National Party from 1948–1994. These townships are a legacy of apartheid’s geographic separation of South Africans along racial lines, and remain characterized by high unemployment, informal housing, and a lack of basic infrastructure (Christopher, 2005; Turok & Watson, 2001), as well as high rates of criminal violence (Demombynes & Özler, 2005) and domestic violence (Dinan, McCall, & Gibson, 2004).

Participants in this study were members of a community-based intervention program that aims to prevent reoffenses among ex-inmates as well as nonincarcerated former young offenders who have been diverted from the justice system by the state. Over a 6-month period, members of the organization take part in nine programs that offer social and psychological support as well as skills development. The program director, together with the researchers, explained the study aims to all youth attending the organization’s program in the last quarter of 2011 and the first quarter of 2012, and all were invited to participate. It was further explained that participation in the study was voluntary and that declining to participate would not impact on participation in the organization’s program, and that participants would receive no financial compensation. None of the potential participants declined to participate.

Measures

**Traumatic event load.** For the assessment of previous exposure to potentially traumatic or threatening events, a trauma checklist was administered. The 32-item checklist included all trauma exposure items from the UCLA Trauma Checklist (Rodriguez, Steinberg, & Pynoos, 1999) as well as items from the Children’s Exposure to Violence Checklist (CEVC; Amaya-Jackson, 1998), a self-report checklist that assesses children’s exposure to violence as witnesses or victims. The CEVC has demonstrated excellent internal reliability in both U.S. (Fehon, Grilo, & Lipschitz, 2001) and South African samples (Fincham et al., 2009). The
Almost every day

The UCLA PTSD Index can be administered either verbally or in paper-and-pen format. To improve external validity, a checklist was administered verbally in the form of a structured interview. Each item was scored dichotomously, that is, 0 if the participant was not previously exposed to the event and 1 if the participant had been exposed to the event. For the analysis, all events were summed. Participants reported that they had experienced a range of between 8 and 29 different events (M = 19.8, SD = 4.1), indicating that all participants were exposed to multiple potentially traumatic events. The reliability of the CEVC in our sample was sufficient (Kuder–Richardson alpha = .79).

PTSD symptom severity. For the assessment of PTSD symptom severity, the UCLA PTSD Index (Rodriguez et al., 1999) was administered. This 20-item measure assesses PTSD symptoms according to the diagnostic criteria of the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM–IV TR), and its validity for African samples has been established (e.g., Ellis, Lhewa, Charney, & Cabral, 2006; Hermenau et al., 2011). It has been specifically designed for the valid assessment of PTSD in children and adolescents, and it asks for PTSD symptoms during the past month. Participants were asked to select the worst event that they had experienced from those endorsed on the Traumatic Event Load scale, and to answer the symptom items with reference to that specific event. Items are rated on a 5-point Likert scale, ranging from 0 (none) to 4 (almost every day). This self-report scale can be administered either verbally or in paper-and-pen format. To improve external validity, a clinical psychologist administered the items in a structured interview. The items in the UCLA PTSD Index can be either summed up for a severity score or scored categorically, yielding a likely diagnostic grouping according to the DSM–IV. In this study, the item scores were summed for a PTSD symptom severity score. The UCLA PTSD Index has demonstrated strong convergent validity (Rodriguez, Steinberg, Saltzman, & Pynoos, 2001) as well as a high internal consistency, indicated by alpha coefficients (.90; Layne, Stuvland, Saltzman, Dijao, & Pynoos, 2001). For the present sample, Cronbach’s alpha was .88.

Psychosocial dysfunction. The Strengths and Difficulties Questionnaire (SDQ; Goodman & Scott, 1999) was used to assess psychosocial dysfunction. It is a brief 25-item behavioral screening instrument, designed for children aged 4—16 years, with demonstrated reliability (Goodman, 2001). Compared with other measures, it allows for the broad assessment of internalizing and externalizing symptoms. It consists of five scales that assess emotional, conduct, hyperactivity, peer relations, and social behavior problems. Originally, it was developed in the United Kingdom (Goodman, 2001), but has been adapted for different countries and languages and has demonstrated good cross-cultural validity (Mullick & Goodman, 2001). Symptoms can either be assessed as self-ratings or ratings by teachers and parents. In this study, the items were administered verbally to participants as part of a structured interview. The severity of each symptom can be scored with 0, 1, or 2 points. The symptoms can either be summed separately for each of the five scales or into a total sum score for the scale. In this study, we used the total SDQ sum score as an overall measure of psychosocial dysfunction.

Concerns about future threat. As a further measure of the enduring possible consequences of traumatic and threatening events, participants’ concerns about potential future threatening events were assessed using the Traumatic Event Load scale described above. For each item, in addition to stating whether they had previously experienced the event, participants were also asked if they were worried that this event would happen to them again in the future. As with the items about prior exposure to potentially traumatic events, these items were rated dichotomously and then summed. Participants reported between 2 and 24 different potentially traumatic events that they were concerned would happen to them in the future (M = 10.8, SD = 5.8).

Appetitive aggression. Attraction to violence was assessed with the Appetitive Aggres-
sion Scale (AAS; Weierstall & Elbert, 2011).
The AAS was designed to assess the concept of
appetitive aggression, and its sound psychomet-
ric properties have been established, indicated
by a Cronbach’s alpha of .85 and a single-factor
structure, accounting for 32% of the variance. It
has been administered to more than 2,000 par-
ticipants, mainly perpetrators of severe vio-
lence, in different conflict regions (e.g.,
Uganda, Rwanda, Colombia). It consists of 15
items (e.g., “Is it fun to prepare yourself for
fighting?”, “Does it fascinate you if someone is
hurt in a fight?”. Once you got used to fighting,
did you want to inflict more and more pain?”). For
every item, participants are asked to re-
spond to the statement dealing with their pro-
pensity toward violence using a 5-point Likert
scale, ranging from 0 (I totally disagree) to 4 (I
totally agree). Cronbach’s alpha in this sample
was .85.

Reactive aggression. For the assessment of
reactive aggression, the reactive subscale from
the Reactive—Proactive Aggression Question-
naire (Raine et al., 2006) was chosen. It has
been validated in different populations and
proven its factorial validity as well as its satis-
factory reliability. It is the only available ques-
tionnaire that specifically addresses reactive
aggression. From the 23-item questionnaire, we
selected the 11 reactive items. Participants were
asked how often they exhibited different types
of reactive aggression in the past month. For
each item, response options were never (0),
sometimes (1), or often (2). The score for reac-
tive aggression was calculated by the sum of all
items, which ranged in this sample from 4—21
points (M = 13.71, SD = 4.57). Cronbach’s
alpha in the sample was .78.

Experiences of violence perpetration.
Participants completed a list of 16 items related
to past violence perpetration, which forms the
first section of the AAS. The perpetration items
range from physical assault to murder to sexual
assault. An item was scored as 1 if the partici-
 pant committed the violent act and 0 if he did
not. The participant’s answers were summed. In
this sample, the summed score ranged from
1—16, with a mean score of 10.2 violent acts
committed (SD = 4.1). The reliability of this
scale was high (Kuder—Richardson alpha = .87).

Procedure

Prior to administration of the study, all par-
ticipants were given a written informed consent
letter, which was translated into isiXhosa with
the assistance of an interpreter. The interpreter
also read the consent letter aloud to participants,
due to varying levels of education and literacy
in the sample. For participants under the age of
18 years, parents or legal caretakers also gave
written informed consent prior to administra-
tion.

All questionnaires were translated from Eng-
lish into Xhosa by a bilingual speaker and back-
translated from Xhosa into English by a second
bilingual speaker. The back-translations were
compared with the original English versions by
a panel of bilingual translators to ensure equiv-
ality with the original standardized instru-
ments, and any discrepancies were resolved
through consensus. The questionnaires were ad-
ministered to participants by a clinical psychol-
ogist, together with a bilingual interpreter, who
was trained to translate the structured inter-
views. Six interpreters assisted with administra-
tion, and all received prior training in general
mental health issues as well as in the concepts
of trauma and aggression.

Participants were interviewed at the organi-
zation’s premises. Interviews took 90—120 min
to complete. In cases in which suicidality or
acute mental health problems were reported by
participants, they received further counseling or
referrals to the local psychiatric health service.

Data Analysis

Linear statistical modeling was used to test
our hypothesis and to explore the relation be-
tween aggressive tendencies, exposure to poten-
tially traumatic events, symptoms of traumatic
stress, and the two dependent variables of psy-
chosocial dysfunction and concerns about fu-
ture threat. Akaike information criterion (AIC;
Akaike, 1987) was used to select the best-fitting
models. For the full models, all possible two-
way interactions and squared terms were added
as predictors. To mitigate multicollinearity,
variables were mean-centered before interac-
tions were calculated. To detect significant \( R^2 \)
changes, analyses of variance were calculated.
Data analysis was conducted using SPSS for
Mac, Version 20.0.
Results

Table 2 shows the two-way correlations between all dependent variables that were assessed in the sample. Self-committed violence correlated with traumatic event load and showed the strongest correlations with the two measures of aggression, but had no significant correlation with the other two measures of current symptomatology. Except for the relation between appetitive aggression and concerns about future threat as well as PTSD symptom severity and reactive aggression, all the other variables were significantly and positively correlated. To test our research hypothesis and to discover the complex relations between these variables in the prediction of psychosocial dysfunction and concerns about future threat, two linear regression analyses were calculated.

Predicting Psychosocial Dysfunction From Aggressive Behavior, Trauma Exposure, and PTSD Symptoms

A multiple linear regression analysis was performed to test whether appetitive aggression could reduce the risk for psychosocial dysfunction as a consequence of potentially traumatic events. Psychosocial dysfunction, indicated by the SDQ sum score, was therefore reduced on the two trauma-associated variables—PTSD symptom severity and traumatic event load—as well as the three aggression-related variables—appetitive aggression, reactive aggression, and self-committed violence—and all possible two-way interactions. For the final model (see Figure 1), all simple effects as well as both two-way interactions between appetitive aggression with self-committed violence and reactive aggression with self-committed violence were kept in the model. The selected model explained 47% of the variance in psychosocial dysfunction, $R^2_{adj} = .47$, $F(7, 62) = 9.89$, $p < .001$, $f^2 = .89$, and, because of the large effect size, also had sufficiently high statistical power, even though the sample size was comparably small, $(1 − \beta) = .99$ (Faul, Erdfelder, Lang, & Buchner, 2007). The regression model revealed a main effect for PTSD symptom severity and traumatic event load. As expected, participants who reported more severe trauma symptoms also reported greater psychosocial dysfunction. The same was true for trauma exposure: Participants who had experienced more potentially traumatic events also reported greater psychosocial problems, independent of PTSD symptoms.

The relationship between the aggression variables and psychosocial functioning was more complex. On the one hand, there was a main effect for the factor reactive aggression, a significant positive interaction by trend between self-committed violence and reactive aggression, as well as a significant negative trend for self-committed violence. Thus, reactive aggression and self-committed violence appear to cancel each other out: Participants who committed more violent acts did not show better psychosocial functioning when they also showed more reactive aggression. Instead, with an increase in reactive aggression—as indicated by the main effect—psychosocial dysfunction also increases. On the other hand, there was no main effect for the factor appetitive aggression, a significant negative interaction between self-committed violence and appetitive aggression.

Table 2
Means, (Standard Deviations), and Correlations ($r_p$) for All Variables

<table>
<thead>
<tr>
<th>Measure</th>
<th>M (SD)</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Traumatic event load</td>
<td>19.7 (4.1)</td>
<td>.36**</td>
<td>.41**</td>
<td>.38**</td>
<td>.27*</td>
<td>.31*</td>
<td>.35*</td>
</tr>
<tr>
<td>2. PTSD symptom severity</td>
<td>22.0 (16.5)</td>
<td>.63**</td>
<td>.42**</td>
<td>.28*</td>
<td>.23</td>
<td>.21</td>
<td></td>
</tr>
<tr>
<td>3. Psychosocial dysfunction</td>
<td>16.3 (8.3)</td>
<td>.33*</td>
<td>.24*</td>
<td>.36*</td>
<td>.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Concerns about future threat</td>
<td>18.7 (9.2)</td>
<td>.07</td>
<td>.29*</td>
<td>.11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Appetitive aggression</td>
<td>30.7 (15.3)</td>
<td>.63**</td>
<td>.77**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Reactive aggression</td>
<td>13.7 (4.6)</td>
<td>.56**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Self-committed violence</td>
<td>10.2 (4.2)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. PTSD = posttraumatic stress disorder.
* Correlation significant at the .05 level (two-tailed). ** Correlation significant at the .001 level (two-tailed).
as well as the negative trend for self-committed violence already described.

Thus, the more violent acts a participant commits under an appetitive perception of violence, the better their psychosocial functioning. Moreover, an increase in the AAS score is not sufficient to reduce the SDQ symptom score. As indicated by the significant interaction between appetitive aggression and self-committed violence, only when the violence is acted out does the attraction to violence become noticeable and the participants experience less psychosocial problems. This effect accounts for at least 9% of the variance. A residual diagnostic performed to establish whether the proposed model fulfilled all formal criteria revealed that there were no statistical limitations (maximum variance inflation factor \( VIF = 3.13 \), maximum Cook’s \( d \) = .22, Kolmogorov–Smirnov test for residual differences from normal distribution \( Z = .56, p = .912 \)).

Relation Between Appetitive Aggression and Concerns About Future Threat

A further multiple linear regression investigated which variables contributed to the variance in the number of perceived future threats about which participants were concerned. As in the previous model, the score for concerns about future threat was regressed on the two trauma-associated variables—PTSD symptom severity and traumatic event load—as well as the three aggression-related variables—appetitive aggression, reactive aggression, and self-committed violence—and all possible two-way interactions. AIC was used for the selection of the best-fitting model. Figure 2 shows the selected model, accounting for 43% of the variance in participants’ concerns about future threats, \( R^2_{adj} = .43, F(4, 65) = 13.77, p < .001 \). On the one hand, PTSD symptom severity as well as trauma event load both increased concerns about potential future threats. On the other hand, appetitive aggression reduced concerns about future threats. By contrast, reactive aggression was a marker for increased concerns about future threats. Neither self-committed violence nor any of the two-way interactions improved model fit \((p > .05)\). The effect size as well as the statistical power were sufficient, \( f^2 = .75, 1 - \beta = .99 \) (Faul et al., 2007). Analyses of the residuals revealed that the re-
gression model fulfilled all necessary quality criteria (maximum VIF = 1.71, maximum Cook’s $d = .15$, Kolmogorov–Smirnov test for residual differences from normal distribution $Z = .41, p = .996$).

**Discussion**

The aim of the present study was to investigate whether appetitive aggression is associated with a reduced risk of psychosocial dysfunction and concerns about future threats when living under conditions of continuous exposure to violence. As one would expect, the number of experienced traumatic events and current PTSD symptomatology were significant predictors of both psychosocial dysfunction and concerns about future threat. However, the results further revealed that those who reported violence to be fascinating and rewarding and who also acted out violent behavior showed less psychosocial dysfunction and reported fewer concerns about future threats. For both outcomes, appetitive aggression accounts for a significant proportion of the variance. Interestingly, this inverse relation is limited to the interactions of appetitive aggression with trauma symptoms, but does not apply to other measures. In particular, the counterpart to appetitive aggression, reactive aggressive behavior, was associated with increased psychosocial dysfunction. Thus, it is not the perpetration of violence or aggressive behavior in general that contributes to a better adaptation to a threatening environment, but the rewarding perception of violence. How can these results be explained?

The more different traumatic event types a person experiences, the greater the probability that daily cues will trigger elements of the traumatic events and cause a fear response. During a traumatic event, the sensory, emotional, and physiological cues an individual experiences are burned into memory. However, because most traumatic events share elements—as, for example, heart racing, blood, or fear—traumatic events are not stored in the brain as separate entities, but rather every traumatic event also triggers former traumatic events. Following principles of Hebbian learning that neurons that fire together also wire together, experiences are stored in an interconnected neural network (Elbert, Rockstroh, Kolassa, Schauer, & Neuner, 2006), which may establish a “fear network” (Lang, 1979, 1984). This fear or trauma network encompasses sensory, cognitive, physiological, and emotional experiences and includes the action disposition related to the experience. It grows with every new stressful experience, thereby increasing the probability of developing PTSD (Schauer, Neuner, & Elbert, 2011). In PTSD, this sensory—perceptual representation has lost its usual association to the contextual system. The brain can no longer distinguish which representation belongs to which experi-
ence. Environmental stimuli (e.g., a smell or noise) and internal cues (e.g., a thought) can still activate the fear or trauma structure, but the trauma survivor has difficulties with autobiographical memory; that is, they are unable to orient the fear associated with the events appropriately in time and space or to clearly chronologize these traumatic events. The information regarding “where” and “when” gets lost. Sometimes even minor and implicit daily cues can thus arouse severe trauma symptoms. The permanent fear response arouses ongoing stress and impairs psychosocial adaptation, causing further behavioral problems.

This was also observed in the present study: PTSD symptom severity was related to both psychosocial dysfunctioning and concerns about future threat. However, we suggest that the avoidance producing (negative valent) “fear network” competes with a “hunting network” with positive valence, that is, approach rather than avoidance for the integration of violence cues (Elbert et al., 2010). According to the appetitive perception of violence, violence cues that are processed from a perpetrator’s perspective during the commission of atrocities are associated with an appetitive instead of an aversive arousal. Consequently, cues like blood or heart racing do not become associated with a fear response, but rather develop a desirable association. These cues no longer enlarge the fear network, but are integrated into an appetitive network. Moreover, cues that formerly belonged to the fear network now become appetitive. This leads to a reduction of the frequency of fear responses and thus may improve daily functioning.

Furthermore, we have found in other populations that appetitive aggression also increases status in the ingroup (Crombach, Weierstall, Hecker, Schalinski, & Elbert, in press). One might speculate that psychosocial adaptation depends on one’s social status in the ingroup: Those who behave more violently experience fewer threats within their own group and therefore display less psychosocial dysfunction. This element seems to be crucial in the South African context as well. Gang-related urban violence in Cape Town has a long history in South Africa and goes back to the early 20th century. It has been estimated that in this area, up to 100,000 inhabitants, most of them males living in townships, are organized in street gangs (Kimnes, 1995). Gang membership is often associated with a gain in security and a sense of community, which are often lacking in daily life, but is also associated with a rise in social status (Covey, 2003). Sathiparsad, Taylor, and Dlamini (2008) stated that dominance, assertiveness, and aggression are key features of masculinity in the highly patriarchal society of South Africa. However, societal changes in the past years in South Africa have challenged masculine identities, leading to “instability and uncertainty over social role and identity, sexuality, work and personal relationships”—a situation that has been called a crisis in masculinity (Frosh, Phoenix, & Pattman, 2002, p. 85; Walker, 2005).

In economically disadvantaged contexts such as South Africa’s townships, the favelas of Brazil, or the inner cities of the United States, where power and social status are difficult to achieve economically, engagement in street gangs and the related creation of a violent norm of masculinity may help to create new homes and families and to retain traditional masculine roles (Hagedorn, 2008; Kynoch, 1999). In line with these theoretical assumptions, our results support the view that, in an adverse environment, dominated by violence and threat, fearful processing of the enduring threats and of past exposure to violence compromises psychosocial functioning, while violent enactments and an appetitive perception of violence may be an effective coping strategy. We suggest that appetitive aggression not only alters the perception of violence but also might have an impact on status and acceptance in the social environment. The possible relation between appetitive aggression, norms of masculinity, and social status in those who perpetrate violence should be investigated in future studies.

Of course, in the long term, this coping strategy may result in further risk of harm to self and others, incarceration, and cycling of violence. This asks for the development of more appropriate coping strategies and resiliencies among young men who live in high-violence communities, while recognizing their need to maintain physical safety, psychological status, and meaningful masculine roles within their communities.

To address appetitive aggression in populations with histories of violence perpetration, we have recently developed FORNET (Narrative Exposure Therapy for Forensic Offender Rehabilitation; Elbert, Hermnau, Hecker, Weierstall, & Schauer, 2012), an adaptation of Narrative Exposure Therapy (Schauer et al., 2011), a
treatment that has proven its effectiveness for the treatment of trauma victims in randomized controlled trials (Robjan & Fazel, 2010). In FORNET, a chronological narrative of the participant’s life is constructed, focusing on the detailed exploration of the traumatic experiences and the committed offenses. A significant reduction in the perpetration of violence after participation in FORNET has been demonstrated (Hermenau, Hecker, Schaal, Maedl, & Elbert, in press). However, even though aggressive behavior can effectively be reduced on an individual level, it remains highly functional in socioeconomically marginalized communities as a means to gain resources, status, and safety. Effective programs of socioeconomic empowerment are needed at a community level as well. As long as the organization in street gangs offers more powerful incentives than abstinence from violent behavior, the long-lasting transfer of therapeutic gains from institutional settings into the real world of the community remains a challenge for those youth offenders who try to refrain from violence.

Study Limitations

This study focused on a group of former young offenders in a South African context, and external validity is therefore limited to this subgroup. Another limitation is that the age range of participants was heterogeneous. However, there was no influence of participants’ age in any of the analyses. A future research focus on different age groups, following their development over a longer time course, would provide fruitful insights into the underlying mechanisms of aggression and traumatization in youth and help to identify sensitive periods. It is further possible that participants in this study may have attempted to present themselves to the researchers in a way that reflected masculine gender norms that value aggression and denigrate fear or anxiety responses. Moreover, motivation to successfully complete the program in which they were enrolled may have limited the truthfulness with which participants answered the questions. However, even these limitations do not fully account for the rather complex relations between the assessed constructs that are in line with results from other studies. In particular, the differential effects of reactive and appetitive aggression on our main outcome variables appear to lend support to the validity of our findings.

References


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