



Community Violence among Young People

A review of the literature

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Executive Summary

Introduction

Community violence is violence between individuals who are unrelated, and who may or may not know each other, generally taking place outside the home (Krug et al, 2002). Exposure to community violence may be via victimisation, witnessing, vicarious exposure, or perpetration. Violent crime is often predictable and preventable, yet it remains a big issue in our communities (Krug et al. 2002; Indermaur 1996).

Aims

The purpose of the Community Violence among Young People Research Project is to seek out opportunities for effective prevention and early intervention programs to reduce community violence among young people in WA. The first phase of research is a literature review, which aims to gather and interpret information on a state, national and international level regarding community violence and young people. This review of the literature identifies the areas in which research into the issue is lacking, and the areas that are key for further research.

Method

Searches were conducted in the Medline, Sciencedirect and Proquest databases for papers containing information on at least one of the topics 'risk factors for community violence exposure', 'effects of exposure to community violence' and 'prevalence of exposure to community violence. The search yielded 32 articles that were suitable for this review, two of which were previous review articles. A manual search for articles referenced by these review papers and by other articles identified further studies not found in the database searches.

Results

Five contextual domains of risk factors for community violence exposure were identified as community and neighbourhood; family and household; relationships with parents and caregivers; relationships with peers; and personal characteristics. The risk factors that are incorporated under these contextual domains are incorporated in tables one to five. Where at least one of the articles reviewed found a significant association between the risk factor and a form of exposure, this is represented in the tables as a tick in the 'yes' column. Where at least one of the articles did not find a significant association, this is represented as a tick in the 'no' column.

Table 1: Significant and nonsignificant associations found between community and neighbourhood risk factors and community violence exposure in the literature.

Community and neighbourhood risk factor	Type of exposure							
	Victimisation		Witnessing		Vicarious exposure		Perpetration	
	Yes	No	Yes	No	Yes	No	Yes	No
Economic disadvantage	✓	✓	✓	✓	✓	✓	✓	✓
Social disorder & lack of control	✓		✓				✓	
Community efficacy	✓	✓		✓				
Situational factors	✓						✓	✓

Table 2: Significant and nonsignificant associations found between family and household risk factors and community violence exposure in the literature.

Family and household risk factor	Type of exposure							
	Victimisation		Witnessing		Vicarious exposure		Perpetration	
	Yes	No	Yes	No	Yes	No	Yes	No
Structure	✓	✓					✓	✓
Family conflict	✓		✓				✓	
High-risk behaviour of family members	✓						✓	
SES	✓	✓	✓				✓	✓

Table 3: Significant and nonsignificant associations found between relationships with parents and caregivers risk factors and community violence exposure in the literature.

Relationships with parents and caregivers risk factor	Type of exposure							
	Victimisation		Witnessing		Vicarious exposure		Perpetration	
	Yes	No	Yes	No	Yes	No	Yes	No
Child maltreatment and physical punishment	✓	✓		✓			✓	
Attachment to parents		✓					✓	
Parent monitoring and involvement	✓	✓	✓	✓			✓	

Table 4: Significant and nonsignificant associations found between relationships with peers risk factors and community violence exposure in the literature.

Relationships with peers risk factor	Type of exposure							
	Victimisation		Witnessing		Vicarious exposure		Perpetration	
	Yes	No	Yes	No	Yes	No	Yes	No
Friendships							✓	✓
Associations with deviant peers	✓				✓		✓	

Table 5: Significant and nonsignificant associations found between personal characteristics risk factors and community violence exposure in the literature.

Personal characteristics risk factor	Type of exposure							
	Victimisation		Witnessing		Vicarious exposure		Perpetration	
	Yes	No	Yes	No	Yes	No	Yes	No
Gender	✓	✓	✓	✓	✓	✓	✓	✓
Age	✓	✓	✓	✓	✓	✓	✓	✓
Ethnicity	✓	✓	✓	✓	✓	✓	✓	
Religion								✓
Alcohol use	✓	✓	✓	✓			✓	
Smoking	✓	✓	✓	✓			✓	
Marijuana use	✓	✓	✓	✓			✓	✓
Hard drug use	✓	✓	✓	✓			✓	
Problem drug use							✓	
Polydrug use							✓	
Drug selling	✓						✓	
Behaviour							✓	✓
Weapon carrying	✓						✓	
Negative life events							✓	
Social cognition	✓						✓	
Academic functioning							✓	
Mental health							✓	
Involvement in school activities							✓	
Dropping out of school							✓	
Early pregnancy							✓	

In addition to the risk factors associated with community violence exposure, this literature review examines the negative effects of community violence exposure on health and general functioning. The research reported that adolescents who were exposed to community violence were more likely than their non-exposed peers to develop post-traumatic stress disorder symptomatology, anxiety, somatisation, intrusive thinking, sadness, avoidance and abnormal physiological functioning. This review reports inconsistent findings for the relationship between community violence exposure and depression and suicidal ideation.

Another outcome of community violence exposure is externalising behaviour problems and aggressive behaviour. Young people who were exposed to community violence were found to be more likely to behave aggressively or violently than their non-exposed counterparts, and they were more likely to have trouble with teachers and alcohol use. Finally, community violence exposure was negatively correlated with academic functioning and achievement.

Discussion

This literature review makes two findings with implications for research into community violence among young people in Western Australia. First, most of the studies reviewed had a cross-sectional study design, and thus were unable to make assumptions about causality. For example, alcohol use has been identified as a risk factor for community violence exposure, however it has also been

identified as an outcome of community violence exposure. Future research needs to be longitudinal in design so that directionality may be ascertained.

Finally, the literature reviewed presents issues of generalisability. Most of the studies were conducted on inner-city, predominantly African-America communities in the United States. This convenience sample is not at all representative of the communities within Western Australia, and it may be that the risk factors and health outcomes for community violence exposure are different between the communities. Therefore, any research into this issue needs to be specific to the communities for which intervention and prevention initiatives will be developed and implemented.

Table of Contents

1.	INTRODUCTION	1
2.	METHODS.....	2
3.	RESULTS.....	3
3.1.	DEFINITIONS	3
3.2.	RISK FACTORS FOR EXPOSURE TO COMMUNITY VIOLENCE	4
3.2.1.	<i>Victim</i>	4
3.2.1.1.	Community and neighbourhood contextual factors.....	4
3.2.1.1.1.	Economic disadvantage	4
3.2.1.1.2.	Social disorder and lack of control.....	4
3.2.1.1.3.	Community efficacy.....	5
3.2.1.1.4.	Situational factors.....	5
3.2.1.2.	Family and household contextual factors.....	5
3.2.1.2.1.	Structure of family or household.....	5
3.2.1.2.2.	Family conflict.....	6
3.2.1.2.3.	High-risk behaviour of family members.....	6
3.2.1.2.4.	Socioeconomic status.....	6
3.2.1.3.	Relationships with parents and caregivers	6
3.2.1.3.1.	Child maltreatment and physical punishment.....	6
3.2.1.3.2.	Attachment to parents.....	7
3.2.1.3.3.	Parent monitoring and involvement	7
3.2.1.4.	Relationships with peers	7
3.2.1.4.1.	Association with deviant peers.....	7
3.2.1.5.	Personal characteristics	7
3.2.1.5.1.	Gender.....	7
3.2.1.5.2.	Age.....	9
3.2.1.5.3.	Ethnicity.....	9
3.2.1.5.4.	Alcohol use.....	10
3.2.1.5.5.	Smoking.....	10
3.2.1.5.6.	Marijuana use.....	11
3.2.1.5.7.	Hard drug use.....	11
3.2.1.5.8.	Drug selling.....	11
3.2.1.5.9.	Social cognition.....	12
3.2.1.5.10.	Weapon carrying.....	12
3.2.2.	<i>Witness</i>	13
3.2.2.1.	Community and neighbourhood contextual factors.....	13
3.2.2.1.1.	Economic disadvantage.....	13
3.2.2.1.2.	Social disorder and lack of control.....	13
3.2.2.1.3.	Community efficacy.....	13
3.2.2.2.	Family and household contextual factors.....	14
3.2.2.2.1.	Family conflict.....	14
3.2.2.2.2.	Socioeconomic status.....	14
3.2.2.3.	Relationships with parents and caregivers	14
3.2.2.3.1.	Child maltreatment and physical punishment.....	14
3.2.2.3.2.	Parent monitoring and involvement	14
3.2.2.4.	Personal characteristics	15
3.2.2.4.1.	Gender.....	15
3.2.2.4.2.	Age.....	16
3.2.2.4.3.	Ethnicity.....	17
3.2.2.4.4.	Alcohol use.....	17
3.2.2.4.5.	Smoking.....	18
3.2.2.4.6.	Marijuana use.....	18
3.2.2.4.7.	Hard drug use.....	19
3.2.3.	<i>Vicarious exposure</i>	19
3.2.3.1.	Community and neighbourhood contextual factors.....	19
3.2.3.1.1.	Economic disadvantage.....	19
3.2.3.2.	Relationships with peers	19
3.2.3.2.1.	Association with deviant peers.....	19

3.2.3.3.	Personal characteristics	20
3.2.3.3.1.	Gender	20
3.2.3.3.2.	Age	20
3.2.3.3.3.	Ethnicity	20
3.2.4.	<i>Perpetrator</i>	22
3.2.4.1.	Community and neighbourhood contextual factors	22
3.2.4.1.1.	Economic disadvantage	22
3.2.4.1.2.	Social disorder and lack of control	22
3.2.4.1.3.	Situational factors	23
3.2.4.2.	Family and household contextual factors	23
3.2.4.2.1.	Structure of family or household	23
3.2.4.2.2.	Family conflict	23
3.2.4.2.3.	High-risk behaviour of family members	24
3.2.4.2.4.	Socioeconomic status	24
3.2.4.3.	Relationships with parents and caregivers	24
3.2.4.3.1.	Child maltreatment and physical punishment	24
3.2.4.3.2.	Attachment to parents	24
3.2.4.3.3.	Parent monitoring and involvement	24
3.2.4.4.	Relationships with peers	25
3.2.4.4.1.	Friendships	25
3.2.4.4.2.	Association with deviant peers	25
3.2.4.5.	Personal characteristics	25
3.2.4.5.1.	Gender	25
3.2.4.5.2.	Age	26
3.2.4.5.3.	Ethnicity	26
3.2.4.5.4.	Religion	26
3.2.4.5.5.	Alcohol use	26
3.2.4.5.6.	Smoking	27
3.2.4.5.7.	Marijuana use	27
3.2.4.5.8.	Hard drug use	28
3.2.4.5.9.	Problem drug use	28
3.2.4.5.10.	Polydrug use	28
3.2.4.5.11.	Drug selling	28
3.2.4.5.12.	Behaviour	29
3.2.4.5.13.	Weapon carrying	29
3.2.4.5.14.	Negative life events	29
3.2.4.5.15.	Social cognition	29
3.2.4.5.16.	Academic functioning	30
3.2.4.5.17.	Mental health	30
3.2.4.5.18.	Involvement in school activities	30
3.2.4.5.19.	Dropping out of school	30
3.2.4.5.20.	Early pregnancy	30
3.3.	EFFECTS OF EXPOSURE TO COMMUNITY VIOLENCE	31
3.3.1.	<i>Direct effects on internalising behaviour problems and symptoms</i>	31
3.3.1.1.	Post-Traumatic Stress Disorder (PTSD)	31
3.3.1.2.	Internalising symptoms	32
3.3.1.2.1.	Depression	32
3.3.1.2.2.	Anxiety	33
3.3.1.2.3.	Somatisation	33
3.3.1.2.4.	Intrusive thinking	33
3.3.1.2.5.	Sadness	33
3.3.1.2.6.	Suicidal ideation	34
3.3.1.2.7.	Avoidance	34
3.3.1.2.8.	Psychological distress	34
3.3.1.3.	Physiological functioning	35
3.3.2.	<i>Direct effects of exposure on externalising problems and behaviour</i>	36
3.3.2.1.	Externalising behaviour problems and violent and aggressive behaviour	36
3.3.3.	<i>Direct effects of exposure on academic functioning</i>	36
4.	DISCUSSION	37
5.	REFERENCES	41

1. Introduction

Community violence among young people is an issue that is increasingly recognised as an important public health problem, as evidenced by the quantity of research that has been published on the topic over the past 15 years. A range of studies have investigated the risk factors associated with community violence exposure, as well as the negative sequelae of such exposure for young people.

Previous work has identified five contextual domains that incorporate the risk factors for community violence exposure. These are the community and neighbourhood, including economic disadvantage, social disorder and lack of control, community efficacy and situational factors; family and household, comprising issues such as family stress, the structure of the family or household, family conflict, high risk behaviour of family members, and socioeconomic status; relationships with parents and caregivers, incorporating child maltreatment and physical punishment, attachment to parents, and parent monitoring and involvement; relationships with peers, including friendships and association with deviant peers; and finally personal characteristics, which comprises behaviour, social cognition, academic functioning, weapon carrying, mental health, student status, early pregnancy, and demographic characteristics such as gender, ethnicity, age, religion, and substance use.

Several studies document the numerous health effects to young people who have reported exposure to community violence. The direct effects of community violence exposure on internalising behaviour and symptoms include post-traumatic stress disorder, physiological functioning and internalising symptoms such as depression, anxiety, somatisation, intrusive thinking, sadness, suicidal ideation, avoidance, and psychological distress. The direct effects on externalising behaviour problems and violent and aggressive behaviour have been reported by a number of researchers, and some studies have found that the academic functioning of young people is negatively affected by exposure to community violence.

This literature review first examines the risk factors for community violence exposure among young people that have been assessed by studies predominantly from the United States. Following this is an analysis of the effects of community violence exposure on young people. This review concludes with a summary of the recommendations made by reviewed studies, and the implications for research on community violence and young people in Australia.

2. Methods

Literature searches for this review were conducted between August and October of 2005 in the Medline, Sciencedirect, and Proquest databases. All searches were limited to English language literature, and were relating to the topic 'community violence among young people'. Selected articles contained information on at least one of the following subtopics: risk factors for community violence exposure; effects of community violence exposure; and prevalence of exposure to community violence.

The keyword terms searched were community violence and youth, community violence and adolescent, community violence and young people, physical aggression, community violence victimisation, community violence victimisation, violent crime, antisocial behaviour, antisocial behavior, interpersonal violence, stranger violence, social disorganisation, and social disorganisation. All articles utilised for this review referred to community violence either directly or indirectly, and articles that discussed the effects of exposure to violence in general were also included.

The search yielded 32 articles that were suitable for this review, two of which were previous review articles. A manual search for articles referenced by these review papers and by other articles identified studies not found in database searches.

This review seeks to identify the areas in which research into community violence and young people is lacking, and which of these areas are key for further research.

3. Results

3.1. Definitions

This review defines community violence as acts of interpersonal violence between acquaintances or strangers. The nature of this violence may be physical, sexual, psychological, or involve deprivation or neglect. Exposure includes victimisation, witnessing, vicarious exposure, and perpetration. Victimisation describes a direct form of exposure in which a young person is targeted by aggravated assault (physical assault involving either the use of a weapon or injury of the victim), simple assault (physical assault without a weapon and without injury), shootings, stabbings, violent threats, sexual assault, rapes, life-threatening events, robbery by force, and gang fights.

Witnessing community violence is indirect exposure, and involves witnessing another person being victimised by all the types of violence listed for victimisation, and includes homicide. Vicarious exposure involves an individual hearing about another who has been victimised by community violence, or hearing community violence transpire, and perpetration of community violence entails that an individual is involved in victimising an acquaintance or stranger with the above forms of violence.

3.2. Risk factors for exposure to community violence

3.2.1. Victim

3.2.1.1. Community and neighbourhood contextual factors

3.2.1.1.1. Economic disadvantage

Some studies confirm the popular assumption that community violence and hence community violence victimisation is more common in impoverished neighbourhoods. Henrich et al. (2004) found a significant positive, although very weak, correlation between community violence victimisation and poverty-risk status. These findings are consistent with the findings of Gladstein, Rusonis and Heald (1992), who studied 339 inner-city adolescents and 435 middle-upper class adolescents residing in a resort community. This study revealed that inner-city adolescents, who live in a more economically disadvantaged community, were more likely than their middle-upper class counterparts to have been victims of physical assault, rapes, knifings, life-threatening events, gunshots, and robbery (Gladstein, Rusonis & Heald 1992). On the other hand, Grant et al. (2005) did not find significant associations between poverty or economic stressors and community violence victimisation. However, this may be reflective of the reduced power of their small sample size. Likewise, Halliday-Boykins and Graham (2001) found that neighbourhood socioeconomic status did not show statistically significant correlation with violence victimisation in their sample of 277 adolescent offenders surveyed prior to release from a detention camp.

3.2.1.1.2. Social disorder and lack of control

Social disorder within communities is characterised by high rates of crime and violence (Salzinger et al. 2002). Young people who reside in socially disordered environments are more likely to be exposed to acts of serious violence. In their study of 80 young people aged nine to 24, Selner-O'Hagan et al. (1998) found that respondents living in areas with a high crime rate reported significantly more community violence victimisation than did those subjects living in low crime areas. Rountree, Land and Miethe (1994) found that the risk of violent victimisation was increased by a high level of exposure to violence in the community or neighbourhood for 5090 Seattle residents. Likewise, Muller et al. (2000) found that community violence victimisation and being a witness to community violence were moderately but significantly correlated, and Halliday-Boykins and Graham (2001) found a significant weak relationship between victimisation and neighbourhood deviance. DuRant et al. (1994) also reported a positive moderate correlation between previous violence exposure and community violence victimisation. Similarly, in their study of 249 inner-city African

American and Latino boys aged 13-17, Sheidow et al. (2001) also found that previous exposure to community violence was a predictor of future community violence victimisation.

3.2.1.1.3. Community efficacy

Community efficacy incorporates extensive social networks, as well as congruent purposes and values between community members. Studies on the effect of community efficacy on community violence victimisation have had mixed results. Muller et al. (2000) found that in a sample of 65 high-risk adolescents aged 13-17 years who were admitted consecutively to psychiatric inpatient units, subjects from communities with low social support networks were not significantly more likely than subjects from communities with high social support networks to be victims of community violence. In accordance with this, Sheidow et al.'s (2001) study on different community clusters found that the overall rates of violence exposure were not significantly different between inner-city neighbourhoods and other urban communities. However, findings from other studies on community efficacy and exposure to community violence show a significant relationship. In a study of 8782 residents from 343 neighbourhoods in Chicago, Sampson, Raudenbush and Earls (1997) found that collective efficacy is strongly negatively related to violence.

3.2.1.1.4. Situational factors

The situational parameter location has been found to affect the level of exposure that young people have to community violence. Rountree, Land and Miethe (1994) revealed in their study that the number of busy places in a neighbourhood has a strong, positive effect on the risk of violent victimisation. Hence high density neighbourhoods are associated with increased community violence exposure.

3.2.1.2. Family and household contextual factors

3.2.1.2.1. Structure of family or household

The structure of an individual's family or household has shown to impact on their risk of violent victimisation. Sheley, McGee and Wright (1992) did not find that gun-related victimisation, and its predicted increased exposure to violence in the community, was associated with living situation. However, in a study of 707 high school students aged 14-17 in the US, Malik, Sorenson and Aneshensel (1997) found that children living with both biological parents reported the least community violence victimisation.

3.2.1.2.2. Family conflict

Family conflict is another family and household contextual factor that has shown association with community violence victimisation. Community violence victimisation was found by DuRant et al. (1994) to show a positive moderate correlation with family conflict. Family conflict was also identified by Halliday-Boykins and Graham (2001) as being a risk factor that is significantly, albeit weakly, related to violence victimisation.

3.2.1.2.3. High-risk behaviour of family members

An increased risk for community violence victimisation has been found by some studies to be a result of the high-risk behaviour of family members. Sheley, McGee and Wright (1992) found in their study of gun-related victimisation that adolescents from families in which males carried guns routinely were at greater risk of gun-related victimisation at school, and on the way to and from school. Gun-related victimisation in this study was found to predict increased exposure to violence elsewhere than in school (Sheley, McGee & Wright 1992). Family risk factors, such as parent or sibling criminality, were also found by Halliday-Boykins and Graham (2001) to have a significant weak relationship with community violence victimisation.

3.2.1.2.4. Socioeconomic status

The socioeconomic status of the family may also impact on an individual's level of victimisation by community violence. Samms-Vaughan and Jackson (2005) found that socioeconomic status did not discriminate exposure to physical violence as a victim. On the contrary, Schubiner, Scott and Tzelepis (1993) found that subjects at high risk of victimisation by community violence were significantly more likely to be of lower socioeconomic status than subjects at low risk. In their study of 12-17 year olds, Crouch et al. (2000) found that while household income was significantly negatively related to violence victimisation in Caucasians, this relationship was nonsignificant for African American and Hispanic youth.

3.2.1.3. Relationships with parents and caregivers

3.2.1.3.1. Child maltreatment and physical punishment

Victimisation by family members may be associated with victimisation in the community. DuRant et al. (1994) found no correlation between community violence victimisation and previous corporal punishment. However, Schubiner, Scott and Tzelepis (1993) found that subjects at high risk of victimisation by violent acts were more likely to have been physically abused than those at low risk of victimisation.

3.2.1.3.2. *Attachment to parents*

Attachment to parents and a strong, positive parent-child relationship were shown to have nonsignificant associations with community violence victimisation. Boney-McCoy and Finkelhor (1996) reported that their longitudinal prospective survey of 10-16 year old adolescents yielded no association between the parent-child relationship and community violence victimisation.

3.2.1.3.3. *Parent monitoring and involvement*

Grant et al. (2005) were unable to detect a significant association between neglectful or distant parenting and inconsistent discipline, and community violence victimisation, however this nonsignificance may be a result of the small sample that was surveyed. Parent support of adolescents was found to be another risk factor for community violence victimisation by other studies. Henrich et al. (2004) found that in their study of 759 urban middle-school students in the US, violence victimisation was weakly although significantly negatively associated with parent support. Adolescents lacking parental support were more likely to be victimised by community violence than adolescents with positive parental support.

3.2.1.4. *Relationships with peers*

3.2.1.4.1. *Association with deviant peers*

Association with deviant peers is a hypothesised risk factor for community violence exposure, as deviant peer affiliation may lead to inevitable involvement in violent situations. In their study of adolescent offenders, Halliday-Boykins and Graham (2001) found a significant weak relationship between deviant peer affiliation and community violence victimisation.

3.2.1.5. *Personal characteristics*

3.2.1.5.1. *Gender*

A plethora of research has examined the association between gender and community violence victimisation. A study done on 3735 14-19 year old students in the US found that female adolescents reported lower community violence victimisation rates compared with male adolescents (Singer et al. 1995). Twenty-three percent of females compared to 37% of males were threatened with violence in their neighbourhood, and only nine percent of females as opposed to 24% of males were physically assaulted in their neighbourhood (Singer et al. 1995). Twelve percent of females compared with 28% of males were shot at or shot (Singer et al. 1995). Gender differences in community violence victimisation

were also found by Henrich et al. (2004). Boys were found to be victimised to a greater degree than girls, where 44% of boys compared to 23% of girls reported being victimised at least once (Henrich et al. 2004). Samms-Vaughan and Jackson (2005) made similar findings, noting that in their sample of 1674 urban children, boys had greater exposure to community violence as victims than did girls.

In their study of inner-city and middle-upper class adolescents aged 11-24, Gladstein, Rusonis and Heald (1992) found that males were more likely to have been victims of robbery, physical assault, shootings, knifings, and life-threatening events than females. Freudenberg et al. (1999) found that males were more likely than females to report victimisation by certain categories of violence. Females tend to report more victimisation by sexual assault and rape than do males. Twenty-eight percent of males reported having ever been beaten up, whereas only 14% of females reported being beaten up in their lifetime (Freudenberg et al. 1999). Males were more likely to have been stabbed, where 14% of male respondents compared with only three percent of female respondents reported ever having been stabbed (Freudenberg et al. 1999). Males were also significantly more likely to be victimised by gun violence in the community, with 12% of boys and only 1% of girls aged 12-21 reporting that they had been shot (Freudenberg et al. 1999). In addition, Sheley, McGee and Wright (1992) found that in their study of gun-related victimisation in 1653 inner-city high school students across the US that males were more likely than females to experience gun-related victimisation.

In their study of 471 inner-city grade six students and their parents, Ng-Mak et al. (2004) found that boys were victimised by community violence more often than girls. Boney-McCoy and Finkelhor (1995) found that males were three times as likely as females to be victims of aggravated assault by a nonfamily member, and 16.3% of males compared with only 6.6% of females reported victimisation by a nonfamily member by simple assault. Of all reported aggravated assaults, 16% were perpetrated by a stranger, and of the simple assaults, 13% were perpetrated by a stranger (Boney-McCoy & Finkelhor 1995). Gender differences in victimisation by community violence were also found by Singer et al. (1995). Of the 3735 14-19 year old students studied in the US, 37% of males compared with 23% of females had been threatened in their own neighbourhood, and more than twice as many males as females were physically assaulted and shot or shot at in their neighbourhood (Singer et al. 1995). Selner-O'Hagan et al. (1998) also found that of their 80 respondents aged nine to 24, males reported more victimisation by community violence over their lifetime and the year preceding the study than did females. Boys also reported more community violence victimisation than girls in Malik, Sorenson and Aneshensel's (1997) study of 707 high school students aged 14-17 years.

A study that did not find a significant association between demographic characteristics and community violence exposure surveyed a group of 228

school children aged nine to 15 who attended school in urban and rural communities in South Carolina (Cooley, Turner & Beidel 1995). This study found that there were no significant differences in the frequency of victimisation by community violence between the sampled boys and girls, however the researchers do note that the reason for the nonsignificance may be that the sample was too young or the study lacked construct validity (Cooley, Turner & Beidel 1995). Other studies that reported nonsignificance between genders in community violence victimisation were done by Cooley-Quille and Lorion (1999), and Berton and Stabb (1996), however they too utilised a small sample of only 64 and 97 subjects respectively.

3.2.1.5.2. *Age*

Age has yielded some significant findings of association with community violence victimisation. DuRant et al. (1994) reported a weak-moderate association between age and community violence victimisation. Consistent with this finding, Grant et al. (2005) found that exposure to violence was associated with age in their study of 105 African American adolescents. Selner-O'Hagan et al. (1998) also found that older subjects reported more exposure to community violence than younger subjects. Samms-Vaughan and Jackson (2005) reported that age was related to community violence victimisation, however their finding was that children attending primary school had greater exposure to violence as victims. Conversely, Cooley, Turner and Beidel (1995) did not find any significant differences in frequency of victimisation between age or school grade groups, and neither did Cooley-Quille and Lorion (1999), Berton and Stabb (1996), nor Sheley, McGee and Wright (1992). In the latter two studies, the small sample sizes may have resulted in the findings of nonsignificance. Malik, Sorenson and Aneshensel (1997) found that although age differences were apparent for community violence perpetration in their sample of 707 students, these differences were not apparent for victimisation.

3.2.1.5.3. *Ethnicity*

A large number of studies have examined the effect of ethnicity, defined as non-Caucasian, on exposure to community violence. Rountree, Land and Miethe (1994) found a positive association between ethnicity and the probability of experiencing violent crime in the vicinity of survey respondents' residences. Selner-O'Hagan et al. (1998) also found that African American subjects had significantly higher rates of victimisation in the year preceding the study than did Caucasian subjects. Malik, Sorenson and Aneshensel (1997) found that among African American, Asian American and Caucasian respondents, African Americans scored highest on measures of community violence victimisation and Asian Americans scored the lowest. Consistent with their findings of nonsignificance for the relationship between other demographic variables and community violence exposure, Cooley, Turner and Beidel (1995) found that there were no significant differences in frequency of community violence victimisation

between ethnic groups. Berton and Stabb (1996) and Sheley, McGee and Wright (1992) had similar nonsignificant findings.

3.2.1.5.4. *Alcohol use*

The assumption that alcohol use is a significant risk factor for violence between strangers or acquaintances is a common one, given that it lowers individuals' inhibitions. A literature review on substance abuse and violence found that researchers have consistently noted that alcohol use by the perpetrator or victim immediately preceded many violent events (Boles & Miotto 2003). In a study done on 3380 14-17 year old adolescents residing in urban communities in Belgium, Russia, and the US, Vermeiren et al. (2003) found that in Russia and the US, moderate victimisation was significantly related to reported alcohol use. In Russia, adolescents who reported consuming alcohol were 1.79 times as likely to be victims of moderate community violence compared to Russian adolescents who did not report alcohol use, and in the US, adolescents who reported alcohol use were 1.68 times as likely to be moderately victimised by community violence (Vermeiren et al. 2003).

Alcohol rendered a heightened, but statistically nonsignificant, risk increase for moderate community violence victimisation in Belgium (OR: 1.32, 95% CI: 0.93-1.87) (Vermeiren et al. 2003). When severe victimisation was examined, only the US yielded a significant relationship between alcohol use and severe victimisation (Vermeiren et al. 2003). Users of alcohol in the US were nearly twice as likely as respondents who did not report alcohol use to be severely victimised by community violence (Vermeiren et al. 2003). There was no statistically significant relationship between alcohol use and severe victimisation in Belgium (OR: 1.8, 95% CI: 1.00-3.24) or Russia (OR: 2.04, 95% CI: .92-4.54); however a heightened risk increase was suggested in both countries (Vermeiren et al. 2003).

3.2.1.5.5. *Smoking*

Smoking, like alcohol use, is another risk factor for community violence victimisation. In Vermeiren et al.'s (2003) study of adolescents in Belgium, Russia, and the US, the researchers found that moderate community violence victimisation was significantly related to reported smoking in Belgium and Russia; however smoking rendered a heightened, but statistically nonsignificant increase in risk for community violence victimisation in the US. In Belgium, smokers were 1.5 times as likely to be victims of community violence and in Russia, smokers were 1.8 times as likely to be victims of moderate community violence (Vermeiren et al. 2003). Severe community violence victimisation was found to be significantly related to reported smoking in all three countries (Vermeiren et al. 2003). In the US, smokers were 1.5 times more likely than nonsmokers to be victims of severe community violence; in Belgium, smokers were 1.9 times as likely to be victims of severe community violence; and in Russia, smokers were

more than three times as likely as nonsmokers to be victims of severe community violence (Vermeiren et al. 2003).

3.2.1.5.6. Marijuana use

Marijuana use is another variable that lowers inhibitions, and is associated with exposure to community violence. Vermeiren et al. (2003) reported a significant correlation between marijuana use and moderate community violence victimisation in Belgium, where users of marijuana were 1.8 times as likely to be victims of moderate community violence compared to non-users. Although a relationship was reported between marijuana use and moderate victimisation in Russia and the US, this association was not statistically significant (Vermeiren et al. 2003). When severe victimisation was considered, Belgium and Russia reported a significant relationship between marijuana use and severe community violence victimisation (Vermeiren et al. 2003). In Belgium, marijuana users were nearly three times as likely to be victimised by severe community violence, and in Russia they were nearly four times as likely as non-users to be severely victimised by community violence (Vermeiren et al. 2003). There was no significant relationship between marijuana use and severe victimisation in the US, despite a reported odds ratio of 1.29 (95% CI: .089-1.85) (Vermeiren et al. 2003).

3.2.1.5.7. Hard drug use

Hard drug use has been associated with violent crime, and studies have shown that it is also associated with community violence victimisation. Vermeiren et al. (2003) found that in all countries studied, moderate community violence victimisation was significantly related to reported hard drug use. In the US, Belgium and Russia, adolescents who reported hard drug use were around twice as likely as adolescents who did not report hard drug use to experience moderate community violence victimisation (Vermeiren et al. 2003). Severe victimisation was also shown to be related to hard drug use in all three countries (Vermeiren et al. 2003). In the US, adolescents who used hard drugs were nearly twice as likely to report moderate community violence victimisation, and in Russia and Belgium, adolescents who reported use of hard drugs were around three times as likely as nonusers to report moderate violence victimisation (Vermeiren et al. 2003). Drug use was also found to be associated with gun-related victimisation by Sheley, McGee and Wright (1992).

3.2.1.5.8. Drug selling

Delinquent behaviour such as selling drugs is likely to predict involvement in community violence, and hence victimisation. Youths who sold drugs in Sheley, McGee and Wright's (1992) study of 1653 inner-city high school students were more likely to be victimised by gun-related violence than youths who did not sell drugs.

3.2.1.5.9. Social cognition

Social cognitive research has shown that social cognition is significantly related to risk of community violence victimisation. Halliday-Boykins and Graham (2001) found that an individual's aggressive beliefs and hostile bias were both significantly albeit weakly related to community violence victimisation.

3.2.1.5.10. Weapon carrying

Weapon carrying, another delinquent behaviour, has also been identified as a risk factor for community violence victimisation. Sheley, McGee and Wright (1992) found that gun-related victimisation at school and in transit to or from school, as well as exposure to violence elsewhere, are all associated with carrying a gun.

3.2.2. Witness

3.2.2.1. Community and neighbourhood contextual factors

3.2.2.1.1 Economic disadvantage

Grant et al. (2005) did not find significant associations between poverty or economic stressors and witnessing community violence, however their nonsignificant findings may be due to the reduced power of the small sample that was used. Alternatively, Henrich et al. (2004) reported finding a positive, weak-moderate correlation between poverty-risk status and witnessing community violence. Congruent with these findings, Gladstein, Rusonis and Heald (1992) found that economically disadvantaged inner-city adolescents were more likely than middle-upper class adolescents to have witnessed all types of community violence. However, Halliday-Boykins and Graham (2001) did not find that the relationship between neighbourhood socioeconomic status and witnessing community violence was significant.

3.2.2.1.2. Social disorder and lack of control

Selner-O'Hagan et al. (1998) reported that respondents who lived in high crime neighbourhoods witnessed significantly more community violence events than respondents in low crime areas. In addition, Sheidow et al. (2001) found that previous exposure to community violence was predictive of later witnessing of community violence, and neighbourhood deviance was found by Halliday-Boykins and Graham (2001) to have a significantly weak relationship with witnessing community violence.

3.2.2.1.3. Community efficacy

The effect of community efficacy on witnessing community violence has yielded nonsignificant results in the literature reviewed. Muller et al. (2000) found that respondents from communities with low social support networks were not significantly more likely than subjects from communities with high social support networks to be witnesses of community violence.

3.2.2.2. *Family and household contextual factors*

3.2.2.2.1. *Family conflict*

Witnessing community violence has been shown to be positively moderately correlated with family conflict (DuRant et al. 1994). Halliday-Boykins and Graham (2001) made similar findings, although the correlation was weaker.

3.2.2.2.2. *Socioeconomic status*

Samms-Vaughan and Jackson (2005) found that socioeconomic status significantly discriminated exposure to physical violence as a witness. Similarly, Schwab-Stone et al. (1995) found that in their sample of 2248 grade six, eight and 10 students, the students from the most economically disadvantaged families, defined as those enrolled in the free lunch program, were more often witnesses of severe community violence. Results were variable between different ethnicities, where Crouch et al. (2000) reported that household income was negatively related to the prevalence of witnessing violence in Caucasian, but not in African-American or Hispanic youth.

3.2.2.3. *Relationships with parents and caregivers*

3.2.2.3.1. *Child maltreatment and physical punishment*

While an association was found to exist between child maltreatment and physical punishment and community violence victimisation, the studies examined in this literature review did not report similar findings for witnessing community violence. Unlike both community violence victimisation and perpetration, DuRant et al. (1994) found no significant association between previous corporal punishment and witnessing community violence.

3.2.2.3.2. *Parent monitoring and involvement*

No significant association between witnessing community violence and neglectful or distant parenting and inconsistent discipline was found by Grant et al. (2005), however significance may have been found with an increased sample size. Parent support is another risk factor that has been found to impact on the likelihood of witnessing community violence. Henrich et al. (2004) found that witnessing violence was weakly, but significantly negatively correlated with parent support.

3.2.2.4. *Personal characteristics*

3.2.2.4.1. *Gender*

Consistent with findings of association between gender and community violence victimisation, Singer et al. (1995) found a relationship between gender and witnessing community violence. Males consistently reported witnessing more community violence in their neighbourhoods. Fifty-three percent of females compared with 61% of males reported witnessing violent threats, one half of females as opposed to 63% of males reported witnessing physical assault in their neighbourhood, and 37% of female respondents compared to 49% of male respondents claimed to have witnessed someone else being shot at or shot (Singer et al. 1995). Similarly, Mazza and Reynolds (1999) found that in their study of 94 young adolescents from an inner-city school, boys reported witnessing an average of 5.5 violent events in the previous year, while girls reported a lesser exposure of 4.9 violent events.

Gender differences in witnessing community violence were also noted by Henrich et al. (2004), who found that 82% of boys compared with 74% of girls reported witnessing at least one act of violence. Consistent with other findings, Samms-Vaughan and Jackson (2005) found that boys in their study sample had greater exposure to violence as witnesses. Gladstein, Rusonis and Heald (1992) found in their study of adolescents from communities of differing economic advantage that males were consistently more likely than females to witness someone being robbed, assaulted, or knifed. Ng-Mak et al. (2004) also reported that boys witnessed community violence more frequently than girls. In addition, Singer et al. (1995) reported that 61% of males witnessed someone else being threatened compared with 53% of females; 63% of males and half of females reported witnessing physical assault; and half of the male respondents compared with just over a third of female respondents witnessed another being shot at or shot. Significant differences in witnessing community violence between males and females was noted by Selner-O'Hagan et al. (1998) as well as Schwab-Stone et al. (1995) and Malik, Sorenson and Aneshensel (1997), who found that males reported witnessing more community violence.

A breakdown of the different rates of witnessing community violence by gender was reported by Pastore, Fisher and Friedman (1996) in their study of 630 students in grades nine to 12. In this sample, 43% of males had witnessed a stabbing, yet only half of this proportion of the female respondents reported having witnessed a stabbing (Pastore, Fisher & Friedman 1996). Half of males and a third of females reported witnessing a shooting, and 69% of male respondents but only half of female respondents witnessed a beating. Seventy percent of males and 54% of females witnessed a robbery (Pastore, Fisher & Friedman 1996).

On the other hand, Freudenberg et al. (1999) found that gender differences were not significant for witnessing community violence, despite findings of significance for gender differences for victimisation. Cooley, Turner & Beidel (1995) also found that there were no significant differences in the frequency of witnessing community violence between the sampled boys and girls, however this may be due to the young age of the sample or the study design (Cooley, Turner & Beidel 1995). Likewise, Sheehan et al. (1997) did not find significant differences in witnessing community violence between males and females in their study of 146 African American youths aged seven to 13 years, and neither did Cooley-Quille and Lorion (1999) in their study of 64 16-18 year old youths. Berton and Stabb (1996) also failed to find significant differences between demographic variables and violent crime exposure. Nonsignificance in these cases may be explained by the small power of the study.

3.2.2.4.2. Age

Exposure to violence via victimisation has been shown to be positively weak-moderately correlated with age (DuRant et al. 1994). Supporting these findings, Grant et al. (2005) found that community violence victimisation was associated with age. Samms-Vaughan and Jackson (2005) found an association between age and witnessing community violence, reporting that subjects attending primary school had greater exposure to violence as witnesses. Similarly, Schwab-Stone et al. (1995) found that grade eight students' level of exposure to community violence was significantly greater than the levels of either the grade six or grade 10 students surveyed. Similar nonlinear findings of an association between age and witnessing community violence were presented by Malik, Sorenson and Aneshensel (1997) in their study of 14-17 year olds. Reports of witnessing threats and physical assault were highest among 17 year olds and lowest among 14 year olds, yet witnessing injury or attacks with weapons was highest among 16 year olds and lowest among 15 year olds (Malik, Sorenson & Aneshensel 1997). Despite the small samples utilised by Selner-O'Hagan et al. (1998) and Sheehan et al. (1997) in their studies, the researchers found that significantly more older children witness community violence than younger children. Of the subjects aged seven to nine years, 28% and 26% had witnessed a shooting and a stabbing respectively. The proportion of older survey participants who had witnessed community violence almost doubled, with half of the children aged 10-13 reporting having witnessed a shooting, and 43% reporting having witnessed a stabbing (Sheehan et al. 1997).

On the other hand, Cooley, Turner and Beidel (1995) did not find any significant differences in the frequency of exposure as a witness to community violence between age or school grade groups. Neither did Cooley-Quille and Lorion (1999) nor Berton and Stabb (1996), however these findings may be due to a small sample size.

3.2.2.4.3. *Ethnicity*

Crouch et al. (2000) studied the effects of income and ethnicity on the risk of witnessing community violence for 4023 youths aged 12-17. African American and Hispanic youth reported significantly higher rates of witnessing violence than Caucasian youth, regardless of income level (Crouch et al. 2000). Fifty-seven percent of African American respondents reported witnessing violence, as did half of the Hispanic sample and only about a third of the Caucasian respondents (Crouch et al. 2000). Selner-O'Hagan et al. (1998) also reported that African American youth were more at risk of witnessing community violence than Caucasian youth. Schwab-Stone et al. (1995) support this, finding that witnessing community violence was more frequent for the African American and Hispanic students than for Caucasian students.

Ethnic differences between African American and Hispanic subjects in witnessing acts of community violence found to be significant by Pastore, Fisher and Friedman (1996) were for stabbings and shootings. Thirty-five percent of African Americans compared with only 21% of Hispanic youth in grades nine to 12 witnessed a stabbing, and 40% of African Americans and 30% of Hispanics witnessed a shooting (Pastore, Fisher & Friedman 1996). Similarly, Malik, Sorenson and Aneshensel (1997) found that rates of witnessing threats, physical assault, and fights involving weapons or injury were highest among African Americans, but Asian Americans scored the lowest on the threats and physical assault scale, and Caucasians scored the lowest on the weapons and injury scale.

Conversely, Mazza and Reynolds (1999) found that the differences in the number of violent events witnessed by African American and Hispanic subjects were nonsignificant. Similarly, Cooley, Turner and Beidel (1995) reported that there were no significant differences in the frequency of witnessing community violence between ethnic groups. Berton and Stabb (1996) found too that Chi-square analyses of their sample of 97 high school students aged 15-19 revealed no significant differences between ethnic groups in terms of witnessing community violence, however the authors also note that inferential significance was limited due to the small sample size.

3.2.2.4.4. *Alcohol use*

In a comparison of the US, Belgium and Russia, it was found that witnessing more than two community violence events was significantly related to reported alcohol use in all three countries (Vermeiren et al. 2003). In the US, alcohol users were 2.2 times as likely to witness more than two violent events; in Belgium, they were 2.3 times as likely to witness more than two violent events; and in Russia, alcohol users were 3.3 times as likely to witness more than two acts of community violence than respondents who did not report using alcohol (Vermeiren et al. 2003). In Belgium and Russia, witnessing 1-2 violent events was significantly related to reported alcohol use (Vermeiren et al. 2003). In

Belgium, self-reported alcohol users were 1.6 times as likely to witness 1-2 community violence events, and in Russia, alcohol users were twice as likely as respondents who did not report alcohol use to be witnesses to 1-2 acts of community violence (Vermeiren et al. 2003). There was no statistically significant correlation between alcohol use and witnessing 1-2 community violence events in the US, despite the study reporting an odds ratio of 1.55 (95% CI: 0.97-2.47) (Vermeiren et al. 2003).

3.2.2.4.5. *Smoking*

In Vermeiren et al.'s (2003) study of community violence in three countries, it was found that in Belgium and Russia, witnessing more than two violent events was significantly related to reported smoking. In Belgium, respondents who smoked were 2.7 times as likely as nonsmokers to be witnesses to more than two events of community violence, and in Russia, smokers were 2.84 times as likely to be witnesses to more than two community violence events (Vermeiren et al. 2003). Likewise, Belgium and Russia exhibited significant correlation between reported smoking and witnessing 1-2 events of community violence (Vermeiren et al. 2003). In Belgium, respondents who witnessed 1-2 violent events were almost twice as likely to be smokers, and in Russia, respondents who smoked were 1.5 times as likely as nonsmokers to witness 1-2 acts of community violence (Vermeiren et al. 2003). However, there was no statistically significant correlation between smoking and witnessing any community violence events in the US, despite the large sample drawn from here (Vermeiren et al. 2003).

3.2.2.4.6. *Marijuana use*

A study done by Vermeiren et al. (2003) revealed that in all three countries examined, witnessing more than two community violence events was significantly and strongly related to reported marijuana use. In the US, adolescents who reported marijuana use were twice as likely to report witnessing more than two events of community violence; in Belgium, marijuana users were three times as likely to report witnessing more than two violent events; and in Russia, they were 4.5 times as likely as adolescents who did not report marijuana use to witness more than two acts of community violence (Vermeiren et al. 2003). In Belgium and Russia, witnessing 1-2 violent events was significantly related to reported marijuana use (Vermeiren et al. 2003). Marijuana users in Belgium were 1.8 times as likely and in Russia were 2.5 times as likely as non-users of marijuana to report witnessing 1-2 community violence events (Vermeiren et al. 2003). However, there was no statistically significant correlation between marijuana use and witnessing only 1-2 events in the US, even though an odds ratio of 1.44 was reported (95% CI: 0.88-2.36) (Vermeiren et al. 2003).

3.2.2.4.7. *Hard drug use*

In Belgium and Russia, witnessing more than two violent events was found to be significantly associated with reported hard drug use (Vermeiren et al. 2003). Hard drug users in Belgium were 4.5 times as likely and in Russia were 5.2 times as likely as respondents who did not report hard drug use to witness more than two events of community violence (Vermeiren et al. 2003). However, no statistically significant correlation was found between hard drug use and witnessing more than two events in the US (Vermeiren et al. 2003). When witnesses of only 1-2 violent events were studied, only Belgium reported a significant association between witnessing 1-2 community violence events and hard drug use. Belgian adolescents who were users of hard drugs were more than twice as likely as those who did not report hard drug use to witness 1-2 community violence events (Vermeiren et al. 2003). However, there was no statistically significant correlation between hard drug use and witnessing 1-2 community violence events found in Russia or the US (Vermeiren et al. 2003).

3.2.3. Vicarious exposure

3.2.3.1. *Community and neighbourhood contextual factors*

3.2.3.1.1. *Economic disadvantage*

In their study of varying economically disadvantaged communities, Gladstein, Rusonis and Heald (1992) noted that the poorer inner-city participants more often knew of victims of community violence than the more affluent middle-upper class participants. On the other hand, Halliday-Boykins and Graham (2001) found that vicarious exposure to violence in their 277 adolescent offenders was not significantly related to the socioeconomic status of the neighbourhoods in which they reside.

3.2.3.2. *Relationships with peers*

3.2.3.2.1. *Association with deviant peers*

Deviant peer affiliation as a risk factor for vicarious exposure to community violence was assessed by Halliday-Boykins and Graham (2001), who found a significant weak relationship between the two variables.

3.2.3.3. *Personal characteristics*

3.2.3.3.1. *Gender*

Gladstein, Rusonis and Heald (1992) and Malik, Sorenson and Aneshensel (1997) reported that males were more likely than females to have known victims of community violence personally. Similarly, Pastore, Fisher and Friedman (1996) found that 56% of males compared with 39% of females in their study knew someone who had been murdered. A study that did not find a significant association between gender and vicarious exposure to community violence was that of Cooley, Turner and Beidel (1995). However this finding of nonsignificance was consistent for all other exposures, whereas other studies did find significance between gender and other forms of exposure. Cooley-Quille and Lorion (1999) and Berton and Stabb (1996) found that there were no significant gender differences in vicarious exposure to community violence, however significance may have been found had they used a larger sample.

3.2.3.3.2. *Age*

Malik, Sorenson and Aneshensel (1997) reported that vicarious exposure to community violence was significantly associated with age, however there is no linearity to this relationship. Vicarious community violence exposure to threats and physical assaults was most reported by 17 year olds and least reported by 14 year olds, and vicarious exposure to fights involving weapons and injury were most reported by 16 year olds and least reported by 15 year olds (Malik, Sorenson & Aneshensel 1997). Cooley, Turner and Beidel (1995), in their study of 228 school children, did not find significant differences in frequency of vicarious exposure to community violence between age or school grade groups. Likewise, Cooley-Quille and Lorion (1999) and Berton and Stabb (1996) were unable to detect significant age differences in vicarious exposure to community violence, however this nonsignificance may be a result of the small sample sizes of only 64 and 97 subjects respectively.

3.2.3.3.3. *Ethnicity*

Pastore, Fisher and Friedman (1996) found that African American youth were significantly more likely to know someone who had been murdered. Fifty-six percent of African American respondents compared with only 39% of Hispanic respondents knew someone who was murdered (Pastore, Fisher & Friedman 1996). Ethnic differences in levels of vicarious exposure to community violence were also presented by Malik, Sorenson and Aneshensel (1997). African American respondents scored the highest on both scales of vicarious community violence exposure, whereas Asian Americans scored the lowest for knowing someone else who had experienced threats and physical assault, and Caucasians scored the lowest for knowing someone who was injured or injured

by a weapon (Malik, Sorenson & Aneshensel 1997). As was the case between other demographic variables and vicarious exposure to community violence, Cooley, Turner and Beidel (1995) found that there were no significant differences in frequency of community violence victimisation between ethnic groups. Berton and Stabb (1996) also failed to find significant differences among the demographic variables in vicarious crime exposure, however this may be a result of their small sample size.

3.2.4. Perpetrator

3.2.4.1. Community and neighbourhood contextual factors

3.2.4.1.1. Economic disadvantage

Economic disadvantage has implications for community violence perpetration as well. Henrich et al. (2004) found that violence perpetration was positively weakly correlated with poverty-risk status. Hoffmann (2003) found in his study of 10,860 grade 10 students in 1612 communities that there is slightly more delinquent behaviour in communities with a high proportion of unemployed males or residents living below the poverty threshold. One study that did not find statistical significance for the relationship between violent behaviour and neighbourhood socioeconomic status was done on adolescent offenders (Halliday-Boykins & Graham 2001).

3.2.4.1.2. Social disorder and lack of control

In socially disordered neighbourhoods where exposure to community violence is relatively high, previous exposure to violence has been found to be positively correlated with community violence perpetration. Freudenberg et al. (1999) found that young people who had been shot were significantly more likely than young people who did not report ever having been shot to have hit or punched someone, hurt someone badly enough that they required medical attention, or threatened someone with a weapon in the last six months. They also reported that respondents who used a weapon to threaten someone else in the six months preceding the study were more likely to have been stabbed themselves (Freudenberg et al. 1999). Selner-O'Hagan et al. (1998) had similar findings.

Subjects who reported that they had perpetrated at least one violent event were found to have significantly higher exposure levels to community violence than did those respondents who were not perpetrators (Selner-O'Hagan et al. 1998). Likewise, Schwab-Stone et al. (1995) found that students who reported committing violent acts also reported significantly greater violence exposure, and Malik, Sorenson and Aneshensel (1997) noted that exposure to community violence was consistently strongly associated with perpetrating community violence. Halliday-Boykins and Graham (2001) also found that neighbourhood deviance exhibited a weak-moderate relationship with violent behaviour, and that neighbourhood family disorganisation was found to have a significant weak relationship with violent behaviour.

3.2.4.1.3. *Situational factors*

Gudlaugsdottir et al. (2004) found no association between location of residence and the use of violence. However in their study of 288 African American and Latino boys in Chicago, Gorman-Smith, Tolan and Henry (2000) found that youth living in inner-city neighbourhoods without functioning social processes were more likely to show antisocial and delinquent offending than those living in other poor urban neighbourhoods. Thus living in neighbourhoods characterised by a lack of social processes may be a risk factor for behaviours that will very likely lead to community violence perpetration in adolescence.

3.2.4.2. *Family and household contextual factors*

3.2.4.2.1. *Structure of family or household*

DuRant et al. (1994) found no significant correlation between family structure and community violence perpetration. On the other hand, Hoffmann (2003) found that adolescents who do not live with both biological parents are more likely to exhibit delinquent behaviour, including community violence. Malik, Sorenson and Aneshensel (1997) similarly found that surveyed children living with both biological parents reported the least perpetration of community violence. In this study, community violence perpetration was highest for those respondents who were living with a biological parent and a step-parent (Malik, Sorenson & Aneshensel (1997). In addition, adolescents living in communities with a higher proportion of households headed by females are more likely to be involved in delinquency (Hoffmann 2003). Youth from struggling families, those classified as low in discipline, monitoring, structure, cohesion and beliefs about the family over time, have demonstrated to be at increased risk of delinquent offending (Gorman-Smith, Tolan & Henry 2000). Gorman-Smith, Tolan and Henry (2000) found that these youth were 20 times more likely to commit chronic minor offences, and nearly 70 times more likely to commit escalating delinquent offences than youth from exceptionally functioning families. Adolescents from families with high levels of parenting practices and structure, but limited emotional warmth and lacking beliefs about the family are nearly five times more likely to commit serious chronic and violent offences than those with emotional warmth and beliefs about the family (Gorman-Smith, Tolan & Henry 2000).

3.2.4.2.2. *Family conflict*

Family conflict is another variable which has been shown to be a risk factor for community violence perpetration. DuRant et al. (1994) found that self-reported violence perpetration exhibited a positive weak-moderate correlation with family conflict, and Halliday-Boykins and Graham (2001) reported a significant weak relationship between family conflict and violent behaviour.

3.2.4.2.3. High-risk behaviour of family members

Family risk factors include the high-risk behaviour of family members in terms of their criminality. In their study of 277 adolescent offenders prior to release from a detention camp, Halliday-Boykins and Graham (2001) reportedly found a significant weak relationship between family risk factors and violent behaviour.

3.2.4.2.4. Socioeconomic status

Schubiner, Scott and Tzelepis (1993) found that subjects at high risk for perpetrating and being involved in community violence were significantly more likely to be of lower socioeconomic status. DuRant et al. (1994), on the other hand, found no significant correlation between socioeconomic status of the respondents and violence perpetration. In a separate study, Gudlaugsdottir et al. (2004) found that parental education was unrelated to the use of violence, and Hoffmann (2003) did not find that monetary strain affected delinquent behaviours that can lead to community violence perpetration.

3.2.4.3. Relationships with parents and caregivers

3.2.4.3.1. Child maltreatment and physical punishment

A study of self-reported use of violence by African American adolescents revealed a weak-moderate positive correlation between violence perpetration and previous corporal punishment (DuRant et al. 1994). Likewise Schubiner, Scott and Tzelepis (1993) found that subjects who were at high risk of involvement in community violence were more likely to have been physically abused.

3.2.4.3.2. Attachment to parents

Parental attachment has been shown to affect behaviour, and a lack of parental attachment may lead to a high risk for community violence perpetration. Hoffmann (2003) found that adolescents who report poor parental attachment are more likely than other adolescents to be involved in delinquent behaviour, and hence more likely to be at risk for community violence perpetration.

3.2.4.3.3. Parent monitoring and involvement

In their study of 3872 Icelandic students aged 15-16 years, Gudlaugsdottir et al. (2004) found that social support from parents was significantly related to community violence perpetration. Adolescents who reported difficulty in obtaining support from their parents were 68% more likely to use violence than adolescents who reported that obtaining parental support was easy (Gudlaugsdottir et al. 2004). As was found in Iceland, parent support was

negatively weakly correlated with violence perpetration in the US (Henrich et al. 2004).

3.2.4.4. *Relationships with peers*

3.2.4.4.1. *Friendships*

Gudlaugsdottir et al. (2004) found no association between social support from friends and the use of violence. When examining peer expectations, Hoffmann (2004) found that adolescents who reported lower peer expectations were more likely to be involved in delinquent activities than other adolescents.

3.2.4.4.2. *Association with deviant peers*

An association with deviant peers has been hypothesised to be an important risk factor for community violence perpetration. Deviant peer affiliation showed a significantly stronger correlation with community violence perpetration than it did with victimisation, witnessing and vicarious exposure (Halliday-Boykins & Graham 2001).

3.2.4.5. *Personal characteristics*

3.2.4.5.1. *Gender*

In their study of 225 African American adolescents, DuRant et al. (1994) found that male subjects reported engaging in significantly more violent behaviours than female subjects. Gudlaugsdottir et al. (2004) found that boys were 5.5 times more likely than girls to engage in violent behaviour. Henrich et al. (2004) also found that boys in their study of urban middle-school students had committed more violent acts than girls. Fifty-four percent of boys and only 34% of girls reported committing at least one act of violence (Henrich et al. 2004). Pastore, Fisher and Friedman (1996) also found a significant difference in the proportion of male and female subjects who were involved in fights. While 36% of male respondents reported involvement in fights, only half of this proportion of females reported involvement in fights (Pastore, Fisher & Friedman 1996).

In Ellickson, Saner and McGuigan's (1997) study of more than 4500 high school seniors and dropouts aged 17-18 years, the findings suggest that males were significantly more likely than females to be involved in all types of violence. This association was particularly strong for more predatory forms of violence such as carrying a hidden weapon or gang fights. Twenty-one percent of males compared with only four percent of females reported carrying a hidden weapon, and 13% of males compared to three percent of females reported involvement in gang fights (Ellickson, Saner & McGuigan 1997). Ng-Mak et al. (2004) reported that boys

had significantly higher levels of aggressive behaviour than girls, and Hoffmann (2003) also found that males are more likely than females to be involved in delinquent behaviour. Malik, Sorenson and Aneshensel (1997) found too that boys reported more community violence perpetration than their female peers. Similarly, DuRant et al. (1995) found in their study of 225 African American adolescents that the correlation between carrying weapons and fighting was stronger for males than it was for females.

Freudenberg et al. (1999) did not find significant differences in the rates of violent behaviour in the preceding six months between males and females, however this is likely to be a result of including all forms of violence, not just community violence, in the analysis.

3.2.4.5.2. Age

DuRant et al. (1994) found that respondents' self-reported use of violence exhibited a positive weak but significant association with age. Malik, Sorenson and Aneshensel (1997) found that age differences were apparent for community violence perpetration in their sample of 14-17 year olds, but there was no linear association with age. Sixteen year olds reported the highest level of community violence perpetration, and 14 year olds the lowest (Malik, Sorenson & Aneshensel 1997). However, Gudlaugsdottir et al. (2004) found no association between age in terms of school grade and the use of violence.

3.2.4.5.3. Ethnicity

In his study of over 10,000 adolescents, Hoffmann (2003) found that African American, Asian and Pacific Islander respondents were less likely than Caucasian subjects to be involved in delinquent behaviour, which has implications for community violence perpetration. Malik, Sorenson and Aneshensel (1997) also looked at ethnicity as a risk factor for community violence perpetration, however they found that African Americans were most likely to perpetrate community violence, followed by Caucasians, then Asian Americans.

3.2.4.5.4. Religion

DuRant et al. (1994) did not detect a significant relationship between subjects' religious behaviour and their self-reported use of community violence. Similarly, Gudlaugsdottir et al. (2004) found that after adjusting for confounding there was no net relationship between religion and the perpetration of violence.

3.2.4.5.5. Alcohol use

Alcohol has been identified in many studies as a proximal risk factor of violence perpetration. Haggård-Grann et al. (2006) found a substantially increased risk of

perpetrating violence within 24 hours of consuming alcohol. According to Gudlaugsdottir et al. (2004), adolescents in their study who had consumed alcohol more than 20 times in their life were 2.5 times more likely to commit violence than those who had never used alcohol. However, no association was found between the number of times respondents got drunk and the use of violence (Gudlaugsdottir et al. 2004). Ellickson, Saner and McGuigan (1997) had similar findings in their sample of 17-18 year olds, reporting that compared with nonviolent youth, sometimes violent teenagers are 1.4 times as likely to be weekly users of alcohol, and persistently violent teenagers are 2.9 times as likely to be weekly users of alcohol. In one study sample of incarcerated males aged 12-21, Freudenberg et al. (1999) reported that 41% of those surveyed reported binge drinking in the month prior to their arrest. However it should be noted that not all incarcerated subjects were arrested for perpetrating community violence.

The hypothesis that alcohol use is a risk factor for community violence perpetration was supported in a study by Steadman et al. (1998), which surveyed 1136 patients with mental disorders between the ages of 18 and 40, although the sample tended to be younger. Steadman et al. (1998) found that patients with symptoms of alcohol abuse were significantly more violent than patients without those symptoms, and Malik, Sorenson and Aneshensel (1997) found that the use of alcohol is positively associated with community violence perpetration. Consistent with these findings, Cogan, Porcerelli and Dromgoole (2001) found that Caucasian male students aged 18-22 who were violent toward strangers tended to have problems with alcohol abuse, as well as impulsivity and risk taking. These findings support the assumption that people who are violent towards strangers and acquaintances are more likely to drink alcohol and get into fights.

3.2.4.5.6. *Smoking*

Gudlaugsdottir et al. (2004) found that adolescents who had reported smoking cigarettes repeatedly during their lifetime were more likely to perpetrate violence than adolescents who did not. In addition, Ellickson, Saner and McGuigan (1997) found that persistently violent teenagers are 2.5 times as likely to be weekly users of cigarettes compared with youth who are not violent.

3.2.4.5.7. *Marijuana use*

Gudlaugsdottir et al. (2004) found no association between the use of hashish and violence perpetration. However, in a study by Ellickson, Saner and McGuigan (1997), persistently violent adolescents were shown to be 2.5 times as likely to be weekly users of marijuana compared with nonviolent adolescents. Malik, Sorenson and Aneshensel (1997) found that in their sample of 707 14-17 year old students, marijuana use was positively associated with community violence perpetration among the male respondents. Likewise in Freudenberg et al.'s (1999) study of incarcerated adolescent males, the researchers reported that

84% of respondents had used marijuana in the half a year preceding their arrest. However not all incarcerated subjects were arrested for community violence perpetration.

3.2.4.5.8. Hard drug use

Ellickson, Saner and McGuigan (1997) found that adolescents who were sometimes violent were 1.6 times as likely to have tried cocaine, and persistently violent teenagers were 2.5 times as likely to have tried cocaine. While marijuana was implicated in community violence perpetration by males, Malik, Sorenson and Aneshensel (1997) found that the use of other drugs was associated with community violence among girls. In a study of incarcerated young males, nine percent had used crack or cocaine and two percent had used heroin in the six months prior to arrest (Freudenberg et al. 1999). However, again, not all incarcerated adolescent males in the sample were arrested for perpetrating community violence.

3.2.4.5.9. Problem drug use

Ellickson, Saner and McGuigan (1997) reported that sometimes violent teenagers are 1.4 times as likely to be problem users of drugs and alcohol compared with nonviolent youth. They also found that compared with nonviolent youth, persistently violent teenagers are 1.7 times as likely to be problem users of drugs and alcohol (Ellickson, Saner & McGuigan 1997). Likewise, Steadman et al. (1998) found that patients with mental disorders and MAST/DAST symptoms were more likely to perpetrate violent acts than patients with mental disorders but without symptoms of drug and alcohol abuse.

3.2.4.5.10. Polydrug use

The use of more than one drug has been found to impact on an individual's risk for community violence perpetration. A study done by Ellickson, Saner and McGuigan (1997) on 17-18 year olds found that compared with nonviolent adolescents, sometimes violent teenagers are 1.6 times as likely to be polydrug users and persistently violent teenagers are 2.6 times as likely to be polydrug users.

3.2.4.5.11. Drug selling

Young people who sell drugs are more likely to be sometimes or persistently violent. Ellickson, Saner and McGuigan (1997) found that compared with nonviolent youth, sometimes violent adolescents are 3.1 times as likely and persistently violent teenagers are 10 times more likely to sell drugs.

3.2.4.5.12. Behaviour

Adolescents categorised by Gudlaugsdottir et al. (2004) as highly angry or aggressive were more likely to perpetrate violence. Similarly, Ellickson, Saner and McGuigan (1997) reported that when compared with nonviolent adolescents, teenagers who are sometimes violent are 1.2 times as likely to exhibit minor, or nonviolent, delinquency and 3.2 times as likely to show serious delinquency, or nonviolent felonies. Persistently violent adolescents are 1.3 times as likely to show minor delinquency and 7.5 times as likely to exhibit serious delinquency when compared to their nonviolent counterparts (Ellickson, Saner & McGuigan 1997). In terms of partner violence, Cogan, Porcerelli and Dromgoole (2001) did not find that partner violent behaviours were associated with tendencies to perpetrate violence towards strangers.

3.2.4.5.13. Weapon carrying

An adolescent who carries a weapon is more likely to perpetrate community violence than one who does not carry a weapon. DuRant et al. (1995) found that carrying weapons was strongly associated with the frequency of attacking someone with that weapon or with the intention of causing serious injury.

3.2.4.5.14. Negative life events

Gudlaugsdottir et al. (2004) found that adolescents who had experienced four or more negative life events in the preceding year were three times more likely to use violence than adolescents who had not experienced any negative life events. Similarly, Hoffmann (2003) found that adolescents who reported experiencing more stressful life events than others were more likely to be involved in delinquent activities. Thus experiencing negative or stressful life events places a young person at higher risk for community violence perpetration than a peer who has not experienced such events.

3.2.4.5.15. Social cognition

Pathologic adaptation can occur where high levels of community violence exposure result in psychological desensitisation to violence and a corresponding increase in aggressive behaviour (Ng-Mak et al. 2004). Ng-Mak et al. (2004) found that inner-city youth in their study underwent pathologic adaptation, suggesting a mechanism by which community violence exposure is a risk factor for community violence perpetration. In addition, Hoffmann (2003) found that adolescents who reported fewer conventional definitions were more likely to be involved in delinquent activities than other adolescents, and to be at higher risk for community violence perpetration. An adolescent's aggressive beliefs and hostile bias have also been noted as risk factors for violent behaviour (Halliday-Boykins & Graham 2001).

3.2.4.5.16. Academic functioning

It has been assumed that not surprisingly, adolescents with a low academic orientation are at higher risk of perpetrating community violence. Ellickson, Saner and McGuigan (1997) found that sometimes violent youth are 1.3 times as likely and persistently violent youth 2.3 times as likely to have low academic orientation when compared with youth who are not violent.

3.2.4.5.17. Mental health

Adolescents who are more likely to perpetrate community violence are also more likely to have poorer mental health than non-offending adolescents. In their study of 17-18 year olds, Ellickson, Saner and McGuigan (1997) discovered that youth who are sometimes violent are 1.3 times as likely as nonviolent youths to have poor mental health, and persistently violent adolescents were 1.5 times as likely to have poor mental health compared with nonviolent youth.

3.2.4.5.18. Involvement in school activities

Adolescents in a large study conducted by Hoffmann (2003) were more likely to be involved in delinquent activities if they were involved in fewer school activities than adolescents who reported greater involvement in school activities.

3.2.4.5.19. Dropping out of school

Students who drop out of school before completion are also at higher risk of perpetrating community violence. When Ellickson, Saner and McGuigan (1997) surveyed more than 4500 high school seniors and dropouts, they found that sometimes violent teenagers were 1.4 times as likely to be high school dropouts, and persistently violent adolescents were 2.2 times as likely to be high school dropouts when compared with their nonviolent peers.

3.2.4.5.20. Early pregnancy

Adolescent girls who have experienced early pregnancies have been shown to be more likely to perpetrate community violence. Ellickson, Saner and McGuigan (1997) found that sometimes and persistently violent females in their sample were 1.5 and 2.2 times more likely to have been pregnant at least once, respectively, when compared with nonviolent adolescent females.

3.3. Effects of exposure to community violence

3.3.1. Direct effects on internalising behaviour problems and symptoms

3.3.1.1. Post-Traumatic Stress Disorder (PTSD)

In addition to studying the risk factors associated with community violence exposure and involvement, a number of studies have also examined the effects of exposure to community violence on young people. Post-traumatic stress disorder symptomatology examined include intrusive imagery and thoughts, bad dreams, disturbed sleep, upset, jumpiness, and feelings of aloneness. In their study of 94 young adolescent inner-city students, Mazza and Reynolds (1999) found that witnessing community violence was significantly implicated in the development of PTSD symptomatology. Berton and Stabb (1996) also found that self-reported exposure to violence was significant for its ability to predict clinical scores on both the Keane PTSD Scale and the Civilian Mississippi Scale for PTSD. In the study of 97 high school juniors aged 15-19, 63% of those who reported regular exposure to violence indicated clinical symptomatology of PTSD (Berton & Stabb 1996).

Lipschitz et al. (2000) found similar results in their study of 90 female adolescents aged 12 to 21 who presented for routine medical care. The subjects were surveyed for trauma exposure, and the most common types of trauma were witnessing community violence and hearing about the homicide of a family member or friend, with 85.5% and 67.7% of respondents reporting such exposure respectively (Lipschitz et al. 2000). Fifteen percent of the girls who experienced a trauma met symptom criteria for a diagnosis of current PTSD, and 12% met symptom criteria for partial PTSD (Lipschitz et al. 2000). Lipschitz et al. (2000) also reported a dose-response relationship between exposure to trauma and PTSD, where girls with symptomatology reported significantly more types of trauma (an average of 4.7 traumas) than girls with partial PTSD (3.2 traumas) or without PTSD (2.4 traumas).

Post-traumatic stress disorder was able to be assessed by Nader et al. (1990) in 100 elementary school students who were exposed to a sniper attack in their playground 14 months earlier. They found that children who witnessed the shooting and hence had greater exposure to the event were more severely affected by PTSD. At 14 months after the event, 74% of the witnesses continued to report symptoms of PTSD, whereas only 19% of children vicariously exposed to the event reported these symptoms (Nader et al. 1990).

Boney-McCoy and Finkelhor (1995) found that in their sample of 2000 youths, both aggravated and simple assault victimisation were positively moderately correlated with PTSD symptomatology. The association was stronger in both cases for girls (Boney-McCoy & Finkelhor 1995). A relationship between witnessing and victimisation by community violence and PTSD was found in a study of 74 adolescent inpatients (Lipschitz et al. 1999). Just over half of the adolescents reported witnessing community violence. Of these, one eighth rated it as the most stressful event, and 40% of those who identified it as the most stressful event had a PTSD diagnosis (Lipschitz et al. 1999). Of the quarter of the sample who reported being victims of community violence, 15.8% rated it as the most stressful event they had experienced. One third of those who identified it as the most stressful event had a PTSD diagnosis (Lipschitz et al. 1999). A positive association between exposure to community violence as a victim as well as a witness and self-reported PTSD symptoms was also reported by Singer et al. (1995) and Ozer and Weinstein (2004).

Although Boney-McCoy and Finkelhor (1996) noted that both aggravated and simple assault by a nonfamily member were associated with PTSD symptomatology at the bivariate level of analysis, the relationships became nonsignificant when analysis included covariates.

Researchers have noted that PTSD is often a mediator between exposure to community violence and other detrimental outcomes such as depression, suicidal ideation and poor academic and general functioning. Mazza and Reynolds (1999) found that PTSD symptomatology mediated the relationship between exposure to violence and depression and suicidal ideation. Lipschitz et al. (2000) found that the girls in their study with PTSD were significantly more likely than others to fail a class or grade at school, and to have been arrested.

3.3.1.2. *Internalising symptoms*

3.3.1.2.1. *Depression*

Depression is an internalising problem that is frequently assessed in studies that examine the effects of exposure to community violence. In their study of 245 African American and Latino boys from economically disadvantaged inner-city neighbourhoods, Gorman-Smith and Tolan (1998) found that exposure to community violence was related to increases in depression. Henrich et al. (2004) reported that witnessing violence and violence victimisation were positively weak-moderately associated with depressive symptoms, as was violence perpetration, although this association was found to be very weak. Kliewer et al. (1998), Singer et al. (1995), Schwab-Stone et al. (1995), Ozer and Weinstein (2004) and Grant et al. (2005) also found that exposure to violence was positively related to depression.

In contrast, Pastore, Fisher and Friedman (1996) reported that involvement in school fights was not associated with depression. Furthermore, Mazza and Reynolds (1999) reported that exposure to violence did not add significantly to depression severity when suicidal ideations, PTSD symptomatology, and demographic variables were controlled. Boney-McCoy and Finkelhor (1996) also found that although significant at the bivariate level, the association between aggravated assault by a nonfamily member and depression dropped below significance on the inclusion of covariates. However, they also found that while exposure to simple assault was not significant in predicting depression at the bivariate level, it was associated with twice the likelihood of depression when considered in subsequent analyses of covariance (Boney-McCoy & Finkelhor 1996).

3.3.1.2.2. Anxiety

Similar to depression, anxiety is another frequently reported outcome of exposure to community violence. Klierer et al. (1998) found that exposure to violence was related to anxiety in their sample of 99 children. Positive associations between community violence exposure and anxiety were also found by Singer et al. (1995), Schwab-Stone et al. (1995), Ozer and Weinstein (2004) and Grant et al. (2005).

3.3.1.2.3. Somatisation

As well as PTSD, Nader et al. (1990) found an increase in somatisation for adolescents exposed to community violence. Significantly more somatic complaints were reported by respondents who either witnessed or were vicariously exposed to the playground shooting incident at both six and 14 months after the event when compared with nonexposed children.

3.3.1.2.4. Intrusive thinking

Intrusive thinking has been shown to be an outcome of community violence exposure. One study to report this was done by Klierer et al. (1998) on 99 children, finding that exposure to violence was positively related to intrusive thinking. Likewise, Lipschitz et al. (2000) found that 61.4% of their sample of female adolescents who had reported experiencing a trauma met current reexperiencing symptom criteria, which includes intrusive thoughts as well as nightmares and reliving.

3.3.1.2.5. Sadness

Boney-McCoy and Finkelhor (1995) found also that sadness was an effect of exposure to community violence. In their sample of 2000 youths, victims of simple assault were significantly twice as likely to experience sadness compared with their peers who had not been victimised (Boney-McCoy & Finkelhor 1995).

3.3.1.2.6. *Suicidal ideation*

Suicidal ideation and attempted suicide is another possible negative consequence of exposure to community violence. In a sample of 630 students in grades nine to 12, Pastore, Fisher and Friedman (1996) found that students who knew someone who was murdered were almost twice as likely to report suicidal ideation and four times as likely to report a suicide attempt. In addition, witnesses of a stabbing were twice as likely to report suicidal ideation and three times as likely to report having attempted suicide when compared with peers who had not witnessed a stabbing (Pastore, Fisher & Friedman 1996). No significant relationships were reported between witnessing a beating or a robbery and suicidal ideation or suicide attempt (Pastore, Fisher & Friedman 1996). Mazza and Reynolds (1999) also found that although exposure to violence showed a significant positive zero-order correlation with suicidal ideation, it did not add significantly to the regression model after controlling for the covariates depression, PTSD symptomatology, and demographic variables.

3.3.1.2.7. *Avoidance*

Avoidance can be another of the negative sequelae of community violence exposure, and an individual with avoidance symptom criteria may avoid thoughts, avoid people or places, become amnesic, have diminished interests, and become detached or numb, among other symptoms (Lipschitz et al. 2000). In their study of 90 females aged 12-21, Lipschitz et al. (2000) found that 30% of the respondents who reported experiencing a trauma, most frequently witnessing community violence, met avoidance symptom criteria.

3.3.1.2.8. *Psychological distress*

Other studies have found a positive association between exposure to community violence and psychological distress. In their study of 769 relatively poor college students, Cody Wilson, Rosenthal and Austin (2005) found that community violence exposure was weak-moderately correlated with psychological distress. Wilson and Rosenthal (2003) also found that exposure to community violence was positively correlated with psychological distress in their study of 17,322 adolescents from 37 independent samples. The effect size of this relationship was low-medium (Wilson & Rosenthal 2003). Psychological distress was also found in 61.4% of female adolescents who reported experiencing a qualifying trauma such as witnessing community violence or hearing about the homicide of a family member or friend (Lipschitz et al. 2000). An interesting finding was made by Ng-Mak et al. (2004) in their study of 471 inner-city youth, whereby exposure to community violence over time leads to 'pathologic adaptation', in which the exposed escape psychological distress but engage in high-risk and aggressive behaviour. Muller et al. (2000) did not find correlation between victimisation or witnessing community violence and psychopathology, and did not find that social support protected against psychopathology in those exposed to community violence. However, Ozer and Weinstein (2004) did find that support from certain

individuals, perceived safety at school, and lower constraints for discussing violence showed protective effects for psychological functioning in those exposed to community violence.

3.3.1.3. *Physiological functioning*

A few studies have even looked at the effects of community violence exposure on physiological functioning. In Cody Wilson, Rosenthal and Austin's (2005) study of college students, they found that exposure to community violence was significantly positively correlated with developing upper respiratory illness such as a cold or flu. Lipschitz et al. (2000) found that 29% of their sample who experienced a trauma such as witnessing or vicarious exposure to community violence met hyperarousal symptom criteria, including sleep difficulties, irritability, concentration problems, hypervigilance, and exaggerated startle. They also found that 61.4% of the traumatised sample exhibited physiological reactivity (Lipschitz et al. 2000).

Wilson et al. (2002) also found that exposure to community violence had implications for physiological functioning. Fifty-six African American adolescents were assessed for catecholamine excretion and nondipping status, defined as a less than 10% decrease in blood pressure from awake to asleep (Wilson et al. 2002). Both witnessing and vicarious exposure to community violence were positively weak-moderately associated with higher levels of daytime epinephrine excretion, and vicarious exposure was also positively associated with daytime norepinephrine excretion (Wilson et al. 2002). Nondippers were found to be nine times more likely than dippers to have experienced community violence victimisation in the year preceding the study, and were nearly 3.5 times more likely to have witnessed community violence (Wilson et al. 2002). Nondipping status among adults has been associated with a greater prevalence of stroke and left ventricular hypertrophy (Wilson et al. 2002). Significance was not found for the association between vicarious violence exposure and nondipping status (Wilson et al. 2002).

Cooley-Quille and Lorion (1999) studied sleeping difficulties, resting heart rate and pulse rate in 64 youths aged 16-18, and found that youth with the highest level of exposure to community violence reported the most difficulty sleeping. They also found that adolescents who reported the highest level of exposure to community violence had the lowest resting heart rate and pulse rate compared with their peers who reported lesser community violence exposure (Cooley-Quille & Lorion 1999).

3.3.2. Direct effects of exposure on externalising problems and behaviour

3.3.2.1. *Externalising behaviour problems and violent and aggressive behaviour*

A common finding for researchers to report is that exposure to community violence can result in aggressive behaviour. Gorman-Smith and Tolan (1998) found that exposure to community violence was related to increases in aggressive behaviour in their sample of African American and Latino boys. Likewise, Ng-Mak et al. (2004) found that exposure to community violence positively predicted aggressive behaviour in their sample of 471 inner-city adolescents. Henrich et al. (2004) found that urban middle school students from grade six to grade eight were more likely to behave aggressively if they had been exposed to or involved in violence. Interestingly, this correlation was much stronger in the younger students (Henrich et al. 2004). In their study of 2248 grade six, eight and 10 students, Schwab-Stone et al. (1995) found that students who were exposed to violence had greater involvement in aggressive and antisocial activities than students who did not report exposure to violence.

Behaviour of adolescents who have been victimised by community violence has been shown to impact on their interaction with others in the community. Boney-McCoy and Finkelhor (1995) found that male victims of simple assault were significantly 1.5 times more likely to experience trouble with a teacher than their peers who did not report victimisation by simple assault. Alcohol use appeared to be another outcome of community violence exposure that was examined in studies. Schwab-Stone et al. (1995) reported that violence exposure significantly predicted alcohol use, and Pastore, Fisher and Friedman (1996) found that witnessing a shooting was associated with twice the likelihood of alcohol use.

One study that did not find significant associations between exposure to violence and externalising symptoms was done by Grant et al. (2005), however this may reflect the reduced power of the small sample.

3.3.3. Direct effects of exposure on academic functioning

Exposure to community violence has also been implicated in poor academic achievement. In their study of 759 urban middle-school students, Henrich et al. (2004) found that witnessing violence was negatively correlated with academic achievement, and violence perpetration and victimisation were both negatively correlated with academic functioning. In another study, Schwab-Stone et al. (1995) found that students who were exposed to violence had lower levels of school achievement than their peers who were not exposed.

4. Discussion

This literature review supports the findings of earlier reviews on community violence among young people. Studies predominantly from the US have shown that young people are at risk for community violence exposure as victims, witnesses, perpetrators, or through vicarious exposure. A range of risk factors for exposure that stem from the community and neighbourhood, family and household, relationships with parents, caregivers and peers, and personal characteristics mean that few youth escape community violence exposure. Studies have also shown that community violence can have negative health implications for those exposed to it. Community violence among young people has been identified as an important issue, and this literature review has implications for research on this issue and prevention in Australia.

One limitation of most community violence exposure study designs is that they are cross-sectional studies, and causal pathways are unable to be determined. For example, causation between weapon-carrying and community violence perpetration cannot be implied from cross-sectional surveys, as weapon-carrying may be an outcome of community violence exposure or a risk factor for involvement in community violence. Similarly, while substance use has been found to be positively associated with community violence exposure, it is plausible that substance use is either a risk factor for community violence exposure, or an effect of community violence exposure.

Furthermore, Boles and Miotto (2003) note in their review of substance abuse and violence that causal linkages have rarely been documented in research between the two variables due to the multiple factors that are involved in determining etiology. A longitudinal study design should be utilised for further studies on the risk factors for and effects of community violence exposure, and studies need to be designed so that they achieve statistically significant findings. This is necessary in order to ascertain causality, directionality and the long-term effects of exposure, and to target the most pertinent factors for prevention and treatment.

Another limitation of studies done on community violence and youth is that the samples utilised are often not generalisable. A number of studies used convenience samples, which means that the findings cannot be generalised beyond that sample. DuRant et al. (1994) and DuRant et al. (1995) used a convenience sample of African American adolescents from a lower socioeconomic status background residing in or around Housing and Urban Development housing projects, and Sheehan et al. (1997) used a similar sample. Wilson et al. (2002) also used a small sample consisting only of African American respondents. Similarly Gorman-Smith and Tolan (1998), Gorman-Smith, Tolan and Henry (2000), and Sheidow et al. (2001) used a sample of African American and Latino boys from economically disadvantaged inner-city neighbourhoods.

Other studies looked only at students (Cogan, Porcerelli & Dromgoole 2001; Hoffmann 2003; Ng-Mak et al. 2004; Cooley, Turner & Beidel 1995; Singer et al. 1995; Malik, Sorenson & Aneshensel 1997; Schwab-Stone et al. 1995; Sheley, McGee & Wright 1992; Gudlaugsdottir et al. 2004; Mazza & Reynolds 1999; Grant et al. 2005; Pastore, Fisher & Friedman 1996; Henrich et al. 2004; Cody Wilson, Rosenthal & Austin 2005; Berton & Stabb 1996; Ozer & Weinstein 2004), offenders in detention (Halliday-Boykins & Graham 2001) or inpatients (Lipschitz et al. 1999; Muller et al. 2000). Although US studies cite generalisability issues, they all made similar findings. However, it may still be unsuitable to generalise these findings to an Australian sample. As Halliday-Boykins (2004) notes, a variety of factors differ across national and cultural groups and it should not be assumed that the findings in one country or one cultural group are applicable to another. For example, while minority cultural groups in the United States have tended to be at higher risk of community violence exposure than Caucasian Americans, local Australian data actually supports a slightly lower risk for non-English speaking people. This is also supported by Vermeiren et al. (2003) in their study comparing the US, Belgium and Russia. Findings were not consistent between countries (Vermeiren et al. 2003). Inaccurate assumptions about the generalisability of findings may result in inaccurate theories and inappropriate interventions (Halliday-Boykins 2004).

The literature reviewed made some recommendations for future research and intervention initiatives. Ellickson, Saner and McGuigan (1997), Gorman-Smith, Tolan and Henry (2000) and Hoffmann (2003) suggest that protective factors' interaction with risk factors need to be studied so that they may be targeted by prevention initiatives. This will enable protection for youth who are susceptible to community violence exposure and involvement. For example, Gudlaugsdottir et al. (2004) found that parents are the key support source preventing deviance and promoting health during adolescence, and these findings suggest that prevention programs incorporate parents or carers. Research also needs to be done into the interrelation of risk factors for exposure to community violence (Gorman-Smith, Tolan & Henry 2000). Similarly, Crouch et al. (2000) recommend that research examining the cultural community and familial factors that may explain high risk for exposure to community violence for minority youth should be done to coordinate prevention efforts. Ng-Mak et al. (2004) and Cooley-Quille and Lorion (1999) suggest that future research into cognitive normalisation of violence be examined to understand pathologic adaptation to community violence, and that prevention and intervention strategies be targeted to youth who are at risk for violence perpetration at the individual, family, neighbourhood and community levels. Pastore, Fisher and Friedman (1996) recommend that further research focus on the full impact of violence exposure on mental health problems and ways of preventing and intervening to alleviate this. Muller et al. (2000) would like to see the impact of community violence exposure on interpersonal relationships.

Samms-Vaughan and Jackson (2005) recommend that intervention strategies to reduce community violence exposure include school-based prevention programs

as well as community education on the impact of exposure to violence on young people. DuRant et al. (1995) also suggest that prevention efforts should focus on school- and community-based skills building violence prevention programs that are centred on conflict resolution and violence avoidance. They also recommend that these programs be accompanied by institutional and community level changes in other risk factors for involvement in community violence (DuRant et al. 1995). However, as Sheley, McGee and Wright (1992) point out, the alteration of institutional and community factors such as community social structure and culture is a very difficult undertaking. Ellickson, Saner and McGuigan (1997) recommend the use of sequentially designed prevention efforts that target different risk factors at the age of greatest vulnerability. Rountree, Land and Miethe (1994) on the other hand merely suggest their results imply that public policing efforts should be targeted at neighbourhoods with a high crime rate and a high density of residents.

The findings of Sheidow et al. (2001) have implications for tailoring prevention programs to different communities with different risk for community violence exposure. Their results suggest that in inner-city neighbourhoods with functioning social processes, it may be suitable to target families that are at high risk. On the other hand, in a neighbourhood without functioning social processes, it may be more appropriate to utilise a universal prevention effort to lessen exposure or protect against its effects (Sheidow et al 2001).

The most important predictor of subsequent community violence exposure was hypothesised to be exposure to other forms of violence by Malik, Sorenson and Aneshensel (1997), over other risk factors such as demographic variables or mediating variables. They propose that the most effective method by which to reduce youth involvement in community violence is to reduce their exposure to violence between their parents, to child abuse, to the amount of threats and assaults they witness in the community, and to reduce their exposure to weapons and violent injuries in the community (Malik, Sorenson and Aneshensel 1997). Sheidow et al (2001) recommend that future studies control for previous violence exposure, as this will confound the results using other risk factors, and Halliday-Boykins and Graham (2001) propose that more understanding is required of the relationship between community violence exposure and violent behaviour.

Care must be taken when interpreting the results of studies on the risk factors and outcomes involved in community violence among young people. While it may appear that risk factors for community violence exposure work in isolation, this is often not the case. For example, Boles and Miotto (2003) note that substance use interacts with environmental, social, situational and cultural contexts, and this influences the potential for violent outcomes. Prevention initiatives need to address all underlying risk factors for community violence exposure in order to be effective.

In addition to prevention, strategies must also be developed for reducing the negative consequences of exposure to community violence once they have emerged (Ellickson, Saner & McGuigan 1997). For youth who have been exposed to community violence and are a risk of developing a range of internalising and externalising symptoms, Sheehan et al. (1997) recommend that counseling programs be developed and evaluated. Furthermore, Singer et al. (1995) recommend that health professionals be trained to recognise and monitor violence exposure in young people, and basic mental health services be designed to address violence-related trauma symptoms.

The research thus far signifies that exposure to community violence is high among young people, however concrete reasons for this and methods for prevention are scarce. Risk factors and effects of community violence exposure have been studied mostly in the US, however it cannot be implied that these findings are applicable to Australia. Research needs to be done in large Australian samples to identify the dominant risk factors pertinent to our society that may be targeted for intervention and prevention.

5. References

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