Indicators of Aggressive Behaviour

Australian Institute of Criminology
Research and Public Policy Series

prepared by
David McDonald & Melanie Brown
for the Expert Working Group

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Report to the Minister for Health and Family Services
and the Minister for Family Services
from
An Expert Working Group

Canberra, August 1996

prepared by
David McDonald & Melanie Brown
for the Expert Working Group

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Introduction and Executive Summary

At the request of the Minister for Health and Family Services, the Hon. Dr Michael Wooldridge, this paper has been prepared by an Expert Working Group, under the leadership of the Australian Institute of Criminology. It presents an examination of current evidence about the links between aggressive and self-harmful behaviour, and a range of health, social and legal factors. We have been asked to review the available information in these domains and to identify the areas in which policy responses are feasible, the policy options themselves, the gaps in existing knowledge and topics for future research.

The mass killings at Port Arthur, Tasmania, on 28 April 1996 resulted in demands from the community that firm action be taken to make Australia a safer society. Under the leadership of the Prime Minister, a range of new initiatives have been put in place, most prominently concerned with reducing the availability of firearms and addressing community concerns about media depictions of violence. A Committee of Commonwealth Ministers, chaired by Senator the Hon. Richard Alston, Minister for Communications and the Arts, was established to examine the latter set of issues. A Sub-committee of the Hon. Dr Michael Wooldridge MP, Minister for Health and Family Services and the Hon. Judi Moylan MP, Minister for Family Services, was established to enquire into the evidence of whether specific health or behavioural conditions are indicators of increased risk of aggressive behaviour likely to result in self-harm or harm to members of the community. Dr Wooldridge, through the Commonwealth Department of Health and Family Services, invited the Australian Institute of Criminology (AIC) to prepare this paper examining the evidence and identifying strategic policy responses.

The expert working group identified a number of risk factors for aggressive and self-destructive behaviour, and those areas amenable to targeted policy response to reduce their incidence.

The key risk factors include:

- having a history of violent behaviour;
- being male;
- being a young adult;
- having experienced difficulties in childhood, including inadequate parenting, troubled relationships within the family and low levels of school achievement;

- having problems of psychotropic substance abuse, especially problematic alcohol use;
- having severe mental illness the symptoms of which are not being adequately identified or controlled through therapeutic regimes; and / or
- being in situations conducive to self-directed or interpersonal violence, including having access to firearms.

These factors interact and are cumulative, in the sense that the more risk factors that an individual or group has, the greater the risk of aggressive or self-harmful behaviour occurring.

Policy areas for the Minister for Health and Family Services, Minister for Schools, Vocational Education and Training, Attorney-General and Minister for Justice, Minister for Communications and the Arts, Minister for Sport, Territories and Local Government, and for Head of Government are identified on the following pages.

Since aggressive and self-destructive behaviour is widespread throughout society, and effective policy responses can be implemented through a variety of agencies and portfolios, a whole of government approach to preventing and dealing with these problems is desirable.

Adam Graycar
Director
March 1997

Acknowledgments

The approach taken, as requested by the Department, was for the Australian Institute of Criminology to convene a small Expert Working Group to examine the evidence, and the Institute wishes to acknowledge their contribution.

Having provided secretariat, research and drafting support to the National Committee on Violence in the period 1988 to 1990, the Australian Institute of Criminology was able to combine its expertise in violence prevention with that of the other Expert Working Group members to produce this report. At the request of the Minister, some of the members of the group were nominated by professional associations. The willing contribution of all members, provided on a tight timetable, is greatly appreciated. The Expert Working Group members were as follows:

Dr Adam Graycar, Australian Institute of Criminology, Project Leader
Dr Tony Adams, Commonwealth Department of Health and Family Services
Prof. Robert D. Goldney, University of Adelaide, nominee of the Royal Australian & New Zealand College of Psychiatrists
Dr Peter Grabosky, Australian Institute of Criminology
Prof. Wayne Hall, University of NSW
Ms Joan Lipscombe, Commonwealth Department of Health and Family Services
Dr Harry McGurk, Australian Institute of Family Studies
Prof. Paul E. Mullen, Monash University, nominee of the Royal Australian & New Zealand College of Psychiatrists
Dr Ann Sanson, University of Melbourne, nominee of the Australian Psychological Society

Ms Melanie Brown and Mr David McDonald of the Australian Institute of Criminology were responsible for project management, research and the drafting of this report.

Financial support for the project was provided by the Commonwealth Department of Health and Family Services.

The staff of the J V Barry Library of the Australian Institute of Criminology provided outstanding library support on a very tight timetable.

Summary of Findings and Recommended Policy Responses

A variety of risk factors exists for aggressive and self-destructive behaviour. They may be classified as follows:

1. Individual
1.1 *Psychosocial*
- 1.1.1 developmental factors
- 1.1.2 mental illness
- 1.1.3 individual histories of violence and criminal justice system involvement

1.2 *Biological*
- 1.2.1 genetics
- 1.2.2 neurobiology and brain injury
- 1.2.3 alcohol and other drugs

2. Social
2.1 *Macrosocial*
- 2.1.1 socioeconomic inequality
- 2.1.2 access to firearms, alcohol and other drugs
- 2.1.3 media influences
- 2.1.4 other aspects of culture

2.2 *Microsocial*
- 2.2.1 gender and family violence
- 2.2.2 situational factors

Although each category is important, the central issue is to note that the risk factors interact one with another. Furthermore, their effects are cumulative in that the more risk factors a person exhibits the more likely the person is to behave violently or self-destructively. The most salient risk factors are found predominantly in childhood development, in social relationships, in alcohol abuse, in poorly managed mental illness and in particular situations.

Summary of Findings

The central conclusions of this examination of the evidence concerning the links between aggressive and self-harmful behaviour and a range of causes and correlates may be summarised as follows:

No doubt exists that identifiable factors increase the likelihood that certain individuals and population groups will behave in an aggressive and/or self-destructive manner. These causal factors are found both in the long-term life experiences of the people concerned and in immediate, situational factors.

In predicting aggressive and self-destructive behaviour, it is fundamentally important to differentiate between predicting (a) at the population level and (b) at the individual level. The available

evidence enables us to conclude, with a fair degree of certainty, that population groups with certain characteristics have an elevated risk of exhibiting the behaviours of concern. That does not mean, however, that one can predict, with the same degree of certainty, that particular individuals will behave aggressively or self-destructively. Nevertheless, indicators are available to identify some individuals who are particularly at risk of behaving in this manner.

The key risk factors for aggressive and self-destructive behaviour, at the population level, are as follows:

- having a history of violent behaviour;
- being male;
- being a young adult;
- having experienced difficulties in childhood, including inadequate parenting, troubled relationships within the family and low levels of school achievement;
- having problems of psychotropic substance abuse, especially problematic alcohol use;
- having severe mental illness the symptoms of which are not being adequately identified or controlled through therapeutic regimes; and/or
- being in situations conducive to self-directed or interpersonal violence, including having access to firearms.

These factors interact and are cumulative, in the sense that the more risk factors that an individual or group has, the greater the risk of aggressive or self-harmful behaviour occurring.

The identification of a range of risk factors enhances the possibility of an accurate prediction that particular individuals may become violent or self-destructive. These are people with a history of violence and young adults (female and male) with severe mental illness, the symptoms of which are not adequately controlled through therapeutic interventions. The risk is further increased if a substance abuse problem is also present. However, it is not possible to predict with confidence that a given individual, simply by virtue of being a member of a particular population group (e.g. young males), will have an elevated risk of being violent or self-destructive.

It will always be the case that aggressive or self-destructive behaviour will be exhibited by some individuals in whom this is quite unexpected. Careful *post hoc* investigations of such cases often reveal, however, previously unnoticed risk factors.

Implementing markedly more effective controls on access to firearms will probably reduce the incidence of completed suicide and possibly homicide. People who are clinically depressed and suicidal, and those who have had more than one conviction for drunk driving, should be prohibited from owning or possessing firearms so long as they are experiencing these problems. The prohibition should also apply to people with a recent history of violent behaviour.

Policy Responses

A number of policy responses based on the central conclusions of this examination of the evidence are outlined below in terms of their application to the population generally, individuals specifically and further research requirements.

There are **population based** interventions which are aimed at ensuring that potentially at-risk individuals who would not normally be the recipients of services, as well as other members of society, can benefit from a generally healthier society with a substantial reduction in violence levels.

There are **individual oriented** interventions which are aimed specifically at identifying and treating high risk people, that is, those people who have a combination of identifiable risk factors, and reducing the likelihood that they will behave aggressively either towards themselves or others. These interventions also aim to reduce the likelihood that particular situations will result in violent behaviour.

Further research needs are highlighted, emphasising those areas in which funding would have the most productive impact.

While details are provided below, we emphasise here that policy responses that target either **individuals** at risk, or **population** groups, necessarily fall within the portfolio responsibilities of several Ministers, for example:

Head of Government

- National Violence Prevention Awards
- pro-family social policies, built upon a firm social and economic foundation, especially housing and employment

Minister for Health and Family Services and/or Minister for Family Services

- mental health initiatives
- family policy (early intervention, positive parenting, etc.)
- "Here for Life" (youth in distress)
- general practitioner and nurse training
- disability programs (including dealing with brain injury)
- primary health care
- health promotion (including programs in schools and suicide prevention)
- National Drug Strategy

Attorney-General and Minister for Justice

- National Campaign Against Violence and Crime (including focus on police training to become aware of early warning violence signals)
- firearm regulation and licensing
- film and literature classification
- relationships counselling

Minister for Employment, Education and Youth Affairs and Minister for Schools, Vocational Education and Training

- labour market programs for at-risk populations
- literacy programs
- adult community education (violence awareness and prevention)
- focus on conflict resolution in curricula, and civics education
- strategy for making teachers aware of early warning violence signals

Minister for Sport, Territories and Local Government

- address issues relating to violence in sport

Minister for Communications and the Arts

- television (including the V-chip)
- violence on the Internet

Policy responses in these and other areas can be grouped under a number of functional headings, as follows.

Population Level and Individual Level Policy Responses

We list here a variety of policy responses that flow from the examination of the evidence about aggressive and self-destructive behaviour detailed in this report. The responses are targeted at different levels: towards the community generally and towards the individual. Some apply at both levels.

1. Developmental factors

1.1 Enabling children, from an early age, to have a sense of personal competence and achievement, along with the enhancement of life skills generally, must be central elements of long-term programs which will produce adults who will be able to function well in society without resorting to violence as a means of coping with frustration and stress. The Health Promoting Schools program is one strategic framework for these interventions and a broader framework is the National Health Promotion Partnership recently agreed to by all Governments. Under its umbrella an infrastructure should be developed for injury and violence prevention.

1.2 An increased effort is needed to recognise the early warning signs of maltreatment or behavioural problems in order to intervene as early as possible. This can best be done within the school and primary health care settings.

1.3 There are a number of interventions which can have an impact in reducing the risk of children growing up to be self-destructive and otherwise aggressive. These include:

- parenting training and social support;
- pre-school and later intellectual enrichment programs;
- skills training; and
- cognitive-behavioural work with children (in later childhood).

The earlier children are exposed to these interventions the greater the likelihood of success. Special emphasis should be placed upon pre-school enrichment programs, literacy and reducing bullying.

2. Family policy

2.1 In this area the need is for proactive family policies aimed explicitly at strengthening the family. It could include further development and implementation of education programs for the community generally and key professional groups (e.g. police and primary health care providers) regarding the incidence and seriousness of family violence.

2.2 Information and early intervention programs, particularly in primary care settings, have been shown to be effective in meeting the needs of people experiencing difficulties with relationships within the family. This includes both relationship and parenting roles, including managing spousal, children's and teenagers' behavioural problems along with perinatal screening for indicators of potential child abuse and neglect. These programs should be more fully supported and made more widely available.

2.3 Home visiting programs for families in which there is a potential risk for child abuse or where child abuse occurs have potential for breaking the intergenerational transmission of abusive behaviour. These programs could be strengthened and expanded. In this context, prevention programs could be specifically targeted at children with neuromotor deficits in dysfunctional families.

3. Mental health and illness

3.1 Policy on the subject of mental illness and violence must be formulated with care in order to minimise the

possibility that people suffering from mental illness will be stigmatised or discriminated against as a result.

3.2 Early intervention programs, such as those outlined in the section on developmental factors, may reduce the development or persistence of anti-social personality traits, and subsequent violence in the anti-social personality group.

3.3 General practitioners (GPs) and other community-based service providers are frequently in contact with people at risk of self-destructive and aggressive behaviour, including depressed suicidal young people who may well have access to firearms. In the rural and remote areas community nurses are often the first and/or only point of contact with the helping professions. While it is important that privacy is maintained wherever possible and that individuals who are at-risk are not deterred from seeking help from these care givers, there should not be legal obstacles to GPs, community nurses and others reporting to the authorities individuals whom they believe to be at particularly high risk of using a firearm either against themselves or others.

3.4 Since some 15 to 20 per cent of the population have emotional problems, and a proportion of these are severe psychiatric conditions which can be associated with violent behaviour, early identification, diagnosis and prompt treatment of these conditions has the potential to reduce subsequent disinhibited behaviour. Intervention strategies are needed in this area.

3.5 Although there is an increased chance that members of some groups of people with mental illness will behave in a violent or self-destructive manner, this is best understood as a consequence of inadequacies in the treatment and management of patients, particularly those in community settings with inadequate contacts with the helping professions. Since comprehensive treatment of those with severe mental illness and/or brain disorder, both in hospital and particularly in the community, has the potential to reduce violence, the resources need to be made available to all who can benefit from them. The National Mental Health Policy provides a framework for this.

3.6 The careful monitoring of community care programs is needed to ensure that patients receive adequate care when no longer under direct institutional supervision. (Without adequate support in the community, people with mental illness may commit suicide or violent crime, and may become the victims of violent crime.)

3.7 Since the interaction of mental illness and substance abuse (especially problematic alcohol use) is heavily implicated in the aetiology of aggressive and self-destructive behaviour, the resourcing of both these areas is a priority for a comprehensive violence prevention program.

3.8 General medical practitioners and other providers of health and community services (including youth workers) are ideally placed to recognise people at risk of self-harming, suicidal or other forms of violent behaviour. This includes, in particular, people who are suffering from mental illness. Increased supports, including training in the antecedents of violent and suicidal behaviour and mental illness, along with diagnostic skills and the availability of expert consultations, are needed.

3.9 Since problems still exist in communication and cooperation between police and community mental health services, more work is needed to enhance the effectiveness of their joint handling of mental health crisis situations. This is best developed in the context of the National Mental Health Strategy, highlighting the need for the long-term continuation,

improvement and resourcing of the Strategy.

4. Firearms

4.1 Full and effective nation-wide implementation of the resolutions of the 10 May 1996 meeting of the Australasian Police Ministers' Conference regarding controls on firearms is needed. This will include:

- national registration of all firearms and strict maintenance of records regarding firearm sales;
- limiting firearm availability to people who have genuine reasons for having and using a firearm;
- effective implementation of strict criteria for the grant or renewal of a licence to possess and use a firearm;
- safety training for all first-time applicants for a firearm licence;
- ensuring that licences are refused or revoked, and that firearms are seized, where the person does not meet the licensing requirements agreed to by Ministers and discussed in this report;
- the strict enforcement of the agreed-upon provisions for the security and storage of firearms and ammunition, particularly ensuring that only the licensee has access to the firearm;
- full implementation and evaluation of mass media based and more narrowly targeted educational campaigns to encourage people to comply with the new provisions and to use their firearms responsibly and safely.

4.2 Progressively moving to a position in which the community sees the possession and/or use of an unregistered firearm to be a serious offence warranting heavy criminal justice system sanctions. This position may be attained through legislation, law enforcement, public education and community action.

4.3 Provision of funding and other supports to community-based initiatives concerned with the prevention of suicide and outwardly-directed aggression using firearms.

4.4 Firearm licence renewals should be subject to the same conditions as the initial grant of a licence, including demonstrating that the firearms are stored safely and that the licensee can demonstrate adequate knowledge of safe handling procedures. Retraining of licensees will be required in some cases.

5. Alcohol and other drugs

5.1 The Alcohol Strategic Plan that is being developed by the Commonwealth as part of the National Drug Strategy should specifically address the relationship between alcohol and violence.

5.2 Consideration should be given to ways of reducing the availability of cheap forms of high alcohol content beverages in settings that encourage intoxication. This should include increasing the price of alcoholic beverages, and calibrating their price to their alcohol content.

5.3 Educate the community about the relationship between alcohol use and aggressive behaviours with a view to discouraging attitudes that excuse or trivialise violence committed by intoxicated persons. Broad community education aiming at lower levels and safer patterns of alcohol consumption across the board are also important.

5.4 Limit the access to firearms of persons who are known to have an alcohol use disorder and especially if they have a history of violent behaviour, and enable police to remove firearms from persons who develop or are discovered to suffer from such disorders. People who have firearm licences and are convicted of (say) two drunk driving offences should lose both their driving and firearm licences.

6. Situational factors

6.1 Although interventions focusing on the long-term causes of suicide and violence are essential, benefits in terms of violence prevention can be attained through interventions addressing the immediate physical and social conditions in which violence is particularly concentrated. This approach is known as "situational" prevention; one prominent Australian example is the Surfers Paradise Safety Action project discussed in this report. Evaluation research demonstrates the effectiveness of these approaches; the National Campaign Against Violence and Crime and the National Drug Strategy should provide frameworks and resources for the further development of these interventions.

7. Individuals with histories of violence and criminal justice system involvement

7.1 Preventive training in prosocial behaviours, and programs for restitution, reparation, and reintegration of offenders, should be pursued in preference to the conventional practices of punishment. Imprisonment should remain an option of last resort.

8. Brain injury

8.1 Aggression is sometimes linked to disability caused by brain injury and other neurological problems. The Commonwealth/State Disability Program provides a framework for the further development of a comprehensive range of services supporting brain injured people in the community, including broadly-based rehabilitation which could include, on a case-by-case basis, pharmacotherapy, behavioural therapies and psychotherapy. The current Commonwealth/State Disability Agreement expires in 1997. The importance of providing a comprehensive range of services to support brain injured people in the context of violence prevention should be drawn to the attention of officials currently considering future disability policies and programs.

9. Broad social policy

9.1 Adequate support for individuals and families who are unemployed, suffering economic hardship or living in inadequate housing provides a basis of healthy childhood development and a basis for meeting the special needs of at-risk populations. This applies both to youth and young adults (who are particularly at risk of committing violent acts) and to families generally. The goal is to increase people's life chances through having a more stable lifestyle and a greater stake in society.

9.2 Elements of labour market programs should be focusing strategically on people who otherwise miss out on employment and other supports that tend to produce stability in life. These could include training and educational programs in prisons and in post-release programs tied to the actual employment opportunities available to former offenders once they are back in the community.

10. Culture and society

10.1 A range of interventions by government and non-government organisations aimed at creating a less violent culture could include:

- improving the standard of behaviour of public figures (e.g. politicians, sports people). The work of the International Conflict Resolution Centre in this regard provides one action model which could be further developed: through this process, a large number of Parliamentarians, including the Prime Minister, have committed themselves to

action aimed at "Building a Conflict-Resolving Government".

- denouncing violence and promoting non-violent means of conflict resolution. Violence in sport should be acknowledged as criminal behaviour and dealt with as such.
- public education about these issues.
- supporting locally-based community action aimed at producing a less violent society through initiatives such as the Heads of Governments' National Violence Prevention Awards scheme, along with broadening the categories of awards within the scheme.

11. Media

11.1 Implement the Government's decisions regarding parental supervision of children's television viewing habits through the introduction of the V-chip technology and related initiatives.

11.2 School and youth group based education campaigns to teach children the discriminatory skills necessary for healthy use of the entertainment and information media generally. This could take a similar format to traditional literature classes or drug and sex education classes. It is best implemented as part of comprehensive life skills training.

11.3 Public health and health promotion campaigns to inform people about the potential detrimental impact (especially on children) that television and video violence can have. A potentially effective communication channel is the local community based study circles which are a component of Adult Community Education Programs.

11.4 The maintenance and periodic review of media codes of practice aiming to minimise the risk of imitative aggressive behaviour and suicide.

Suggestions for Further Research

Evaluation of policy responses generally

The Commonwealth should co-ordinate an evaluation strategy of policy interventions which purport to address violence, including a process for the systematic evaluation of such interventions.

Mental illness

Promising results are coming from research into early intervention in first episode psychotic illness with close long-term follow-up; this approach seems to have the potential to reduce the disinhibited violent behaviour that is sometimes associated with such psychotic illness. Studies in this and related areas which have the potential to improve the outcomes of early intervention form part of the National Mental Health Strategy, and a strategic approach to further research should be identified and managed by the National Health and Medical Research Council (NH&MRC).

Case identification

Having identified the categories of people who have risk factors for aggressive and self-destructive behaviour, the next step should lie in research which leads to the development of guidelines to be used by police, general practitioners and other community-based professionals to identify individuals particularly at risk of aggressive or self-harmful behaviour. A best practice approach to the implementation of these guidelines could form the basis of an action research project or demonstration projects.

The family

A study should be undertaken to review the literature on exhibited patterns of violence in families experiencing a variety of problems, and from this literature review, recommend a demonstration project on activities to limit violence.

Data from the Australian Institute of Criminology's National Homicide Monitoring Program show that in a number of Australian homicides there are multiple victims, all from the same family (wife and children often killed by a male with a history of domestic violence). While strong pressures now exist for criminal justice system interventions when men assault their spouses or other family members, the evaluations have not demonstrated a strong, consistent deterrent effect. A need exists, then, for systematic monitoring and evaluation of the outcomes of police interventions in such situations and the application of best practice based upon evaluation research.

Little is known of the efficacy of non-police preventive interventions in the area of family violence and their relative efficacy. Accordingly, evaluation research is needed into the range of potential interventions such as mass media awareness campaigns, group and individual therapies addressing violence and alcohol and other drug treatment interventions where this is part of the aetiology of the violence.

Anger management programs in both community and prison settings are increasingly being used as a means of reducing violent behaviour but little is known of their impacts. Evaluation research is required here.

Alcohol & other drugs

Research is necessary into situational prevention strategies, such as more effective liquor licensing regulations, for preventing violence in and around licensed premises.

Research the feasibility and effectiveness of identifying and intervening with persons who have alcohol and drug use disorders and a history of violence.

Further funding is required to research the prevalence of steroid use and aggressive behaviours among "bouncers" and other groups who may be at increased risk of violence. Although the limited research evidence currently available indicates that steroid use is not a cause of violence, the apparently increasing level of use of these drugs is a cause for concern. Research should be conducted to assess the accuracy of the widespread belief that steroids do, in fact, cause and/or precipitate aggressive behaviour in some people.

Individuals with histories of violence and criminal justice system involvement

More research and evaluation are required to identify the most effective and efficient ways of helping violent offenders to break what is often a cycle of offending.

Genetics

Since the research on genetic causes of violence does not (at present) facilitate the development of predictive or preventive interventions relating to aggression and self-harmful behaviour, the emphasis in research funding through agencies such as the NH&MRC should be to the social, psychological and psychiatric areas rather than to genetic research.

PART A Background, Framework and Key Concepts

Origins, context and scope of the project

Australian Governments, led by the Prime Minister, have responded in a variety of ways since the Port Arthur incident, most prominently through establishing a process aiming to further restrict the availability of certain categories of firearms and addressing the portrayal of violence in the media.

A Committee of Commonwealth Ministers was established to examine issues concerning the portrayal of violence in the media. It has requested an examination of evidence of whether specific health or behavioural conditions are indicators of increased risk of the aggressive behaviour likely to result in self-harm or harm to the community. A sub-committee comprising the Commonwealth Minister for Health and Family Services and the Minister for Family Services has been established for this purpose. To contribute to this examination, the Commonwealth Department of Health and Family Services has commissioned the Expert Working Group to prepare this overview paper.

The scope of the review reported upon here, as set out in the terms of reference, is to examine current evidence and determine whether causal links exist between aggressive and self-harmful behaviour (on the one hand) and a range of health, social and legal factors (on the other). We have been asked to review the available information and to identify the areas in which policy responses are feasible (including issues related to firearms legislation), policy options, gaps in existing knowledge and topics for future research.

While our remit is broad, we are conscious that part of the context of the review is the current reconsideration of the criteria for the lawful possession and use of firearms. We note that the Australasian Police Ministers' Conference has established a Working Party which is examining the options for new controls on firearms, particularly the grounds for the refusal or cancellation of firearms licences and seizure of firearms. The potential role of community health services personnel in this control regime is an important part of its considerations.

Aggressive, destructive behaviour

The terms "aggression" and "violence" are generally used interchangeably with the

former more common in the health arena and the latter more common in the criminology and justice area. We do not seek to differentiate between them here.

We have been asked to cover violence directed both towards others and towards oneself. Accordingly, for the purposes of this paper we have defined violent or aggressive behaviour as "behaviours by individuals that intentionally threaten, attempt or inflict physical harm on others or on oneself".[1] This approach excludes violence against property, and violence which is entirely psychological in nature, i.e. emotional abuse and induction of fear and anxiety.

Key concepts: risk factors and causality

We frequently use the term "risk factors for aggressive behaviour" in this review. A risk factor may be defined as:

> *An aspect of personal behaviour or lifestyle, an environmental exposure, or an inborn or inherited characteristic, which on the basis of epidemiological evidence is known to be associated with health-related condition(s) considered important to prevent (Last 1995, p. 148).*

Critical in the definition is the expression "associated with": it is crucial to attempt to identify both the nature and strength of the associations. An association may be causal. On the other hand, the risk factor may be associated with the behaviour of concern in a less direct manner, perhaps operating only in combination with other factors; perhaps having their potentiality determined by associations with other factors. In these cases they are sometimes called risk markers. A contemporary example is the fact that Aboriginal people in Australia are more likely to be victims of homicide than the rest of the population. This is not because they are Aboriginal, but because of the historical and social factors which affect the Aboriginal communities.

To understand the risk factors discussed in this paper it is necessary to be cautious about simplistic, unitary causal links. Aggressive, destructive behaviour is complex and generally has complex antecedents and precipitating factors. In reality, multiple factors, interacting, are correlated with an elevated probability of violence. The nature of the links has been summarised as follows:

> *The correlations are low by conventional standards, inconsistent across settings, and usually specific to particular types of violent events. The causal mechanisms that underlie the correlations are not well understood. Nonetheless, awareness of these factors does suggest opportunities for understanding and preventing particular types of violent events (Reiss & Roth 1993, p. 19).*

Although predicting violent events is difficult, a great deal of knowledge exists which enables the identification of certain groups of individuals who are more likely than others to behave violently.

The risk factors

While much has been written on the topic, two comprehensive reviews have been particularly influential. In the Australian context, the 1990 report of the National Committee on Violence and from the USA the 1993 report from the National Research Council's Panel on the Understanding and Control of Violent Behaviour (Reiss & Roth 1993) cover much of the ground of this review and are recommended as sources of further information. Both expert groups developed lists of risk factors for violent behaviour and we have adapted their

[1] This is adapted from Reiss & Roth 1993, p.2.

approaches for this review. The balance of this paper discusses the risk factors using the following framework.

1. Individual

1.1. Psychosocial

1.1.1. developmental factors
1.1.2. mental illness
1.1.3. individual histories of violence and criminal justice system involvement

1.2. Biological

1.2.1. genetics
1.2.2. neurobiology and brain injury
1.2.3. alcohol and other drugs

1. Social

1.1. Macrosocial

1.1.1. socioeconomic inequality
1.1.2. access to firearms, alcohol and other drugs
1.1.3. media influences
1.1.4. other aspects of culture

1.2. Microsocial

1.2.1. gender and family violence
1.2.2. situational factors

PART B Indicators of Aggressive Behaviour

1. Individual indicators

1.1 Psychosocial Indicators

1.1.1 Developmental factors[2]

People embark on paths to antisocial behaviour in early childhood; a substantial proportion of those with aggressive behaviour problems (destructive, disruptive, fighting and bullying) in childhood go on to have problems in adulthood. In fact the early onset of misconduct is the best predictor of delinquency and further aggressive behaviour. Almost all antisocial adults were aggressive as children. Longitudinal studies have shown that the more aggressive 8-year-olds tend to progress to be the more aggressive 30-year-olds (Huesmann et al. 1984). The evidence suggests that aggressive children have the *potential* to become aggressive adults. However, it is not an inevitable outcome, and with the appropriate interventions aggressive children can develop into healthy non-violent adults.

Children are influenced by any violence to which they are exposed in the home. This includes violence in the media, as discussed above. Violent families tend to rear violent children

Children whose parents are violent towards them, whether by means of physical discipline or through being abusive, are themselves at increased risk of becoming aggressive and violent. The majority of parents who abuse their children were themselves abused as children. However, protective factors, such as the support of at least one caring adult, can operate to reduce the risk of intergenerational transfer and often do so. In fact, the majority of children who have been abused do not themselves become abusive parents.

Research by Widom (1995) concluded that:

> *Abused and neglected children have a higher likelihood of arrests for delinquency, adult criminality, and violent criminal behaviour than matched controls.*
>
> *Abused and neglected children are involved in delinquency and criminality earlier, commit more offences, and more often become chronic or repeat offenders than control children.*

Children whose parents are violent towards each other are also more likely to behave violently than children reared in non-violent homes. Much inter-spousal violence, perhaps as much as 80 per cent, is witnessed by children. In these circumstances significant adults are modelling violent methods of relationship management for their

[2] This summary is based on reviews by Farrington 1996, Pepler & Slaby 1994 and the National Committee on Violence 1990.

children. It is therefore not surprising that such children should incorporate such strategies into their own behaviour.

There are certain personality traits most often associated with children who develop a tendency for aggressive behaviour. They tend to exhibit a fearless, uninhibited and difficult temperament, are hyperactive and have a low attention span (Pepler & Slaby 1994). Impulsivity is also associated with aggressive behaviour (Farrington 1996).

Low intelligence and school attainment are important risk factors for offending. A number of longitudinal studies cited by Farrington (1996) conclude that low intelligence (IQ) measured at three and four years of age significantly predicted arrest and offending rates up to age thirty. Juvenile convictions and self-reported offending were predicted equally by low non-verbal intelligence, low verbal intelligence and low school attainment. Delinquents also tended to leave school at the earliest possible age, with few or no qualifications. Farrington (1996) explains the link between intelligence and offending as the offenders' lack of ability to manipulate abstract concepts, thus being less likely to foresee the consequences of offending or to empathise with victims.

Pre-school intellectual enrichment programs, such as the Perry Preschool program in Michigan have effectively reduced the likelihood of offending (Farrington 1996). Those children who were assigned to the program's experimental group at age three or four were significantly better in terms of school achievement at age fourteen, behaviour and offending at age fifteen, and had been arrested only half as many times as the control group by age twenty-seven. The experimental group were also more likely than the control group to graduate from high-school, receive a college training, earn a higher income and own their own homes, and the female members of the group were less likely to become unmarried mothers. Evidently this type of program can have many positive outcomes, and is a particularly wise investment, considering that for every $1 invested in the Perry program there was a long-term saving of $7, in the form of savings in crime, welfare benefits, remedial education and criminal justice system costs (Farrington 1996).

Peers and the school environment also influence childhood development. Aggressive children are more likely to associate with aggressive peers, who may in turn reinforce the aggressive behaviour; thus the relationship can be bi-directional. School factors which influence behavioural development include not only peer contact but class management practices used by teachers. Effective punishment and praise methods can reduce the levels of aggressive behaviour displayed (Farrington 1996). The National Committee on Violence (1990) concluded, however, that the influence of peers and schooling on aggressive behaviour is secondary to the influence of the family environment and personality traits.

Policy issues

It follows from all of the above that, just as children can acquire negative, aggressive and violent strategies of social interaction and relationship management through exposure learning and modelling, they can, by the same means, also acquire more constructive, non-violent strategies for behaving in social situations.

Parenting training, social support, pre-school and later intellectual enrichment programs, skills training, and (in later childhood) cognitive-behavioural work with children, can all have an impact in reducing the likelihood that aggressive children will develop into aggressive adults.

The Australian Psychological Society (1995) and the Australian Institute of Family Studies (Tomison 1996) recommend that society demonstrate that violence is unacceptable, that training is required in non-violent conflict resolution methods, problem-solving and child-rearing techniques, and that there needs to be an increased effort to recognise the early warning signs of maltreatment or behavioural problems in order to intervene as early as possible.

1.1.2 Mental illness

Fifteen years ago there was a consensus that violence was not associated with mental illness. However, that view has been challenged. Although the vast majority of persons with psychiatric illness are not likely to offend in a violent manner, as Monahan (1992) concludes, denying that there is a relationship between mental disorder and violence is disingenuous and counter-productive. Thus a number of studies have demonstrated that there is an association between mental illness and violence or aggressive behaviour. This is hardly unexpected, as for many decades Mental Health Acts have been formulated on the basis that some patients with mental illness may at times require compulsory detention and treatment for either their safety or that of others.[3]

The research shows that there is a link between mental illness and violence, even when demographic variables are controlled. This link is strongest among those with more severe mental illnesses such as schizophrenia, major depression, mania or bipolar disorder, and those with alcohol or substance use disorders. The presence of psychotic symptoms, such as distorted perceptions, faulty reasoning and disordered control of emotions, are better predictors of an individual's propensity for violence than a particular diagnostic label.

Hodgins et al. (1996, p. 489), noted that there was "an association between psychiatric hospitalisation and criminal convictions...patients discharged from psychiatric wards are more likely than other persons living in the same community to commit crimes...". Substance abuse is a particularly important intervening variable in this relationship between mental illness and violent behaviour. Where substance abuse is involved there is a higher risk of violent behaviour.

Whilst there is this relationship between psychiatric illness and the potential for violence, it is sobering to place it in the perspective of Mullen's (1992, p.48) observation that the elevated report of violence in schizophrenia only "approximates to that level in young men from lower socioeconomic groups".

The relationship between mental illness and suicide is confounded by social variables. Although popular opinion suggests that all people who commit suicide must be mentally ill, the fact is that social or environmental factors, such as isolation, financial and relationship problems, play an important contributory role (Hassan 1996). Nevertheless, about 10 per cent of people suffering from schizophrenia commit suicide indicating that mental illness is a strong risk factor for suicide.

A pragmatic attempt to understand the association of mental illness with aggression is to consider that there are two groups of persons with a tendency to aggression. The first group of those persons who have long-standing anti-social personality disorders, and the second group of persons have disinhibition with associated aggression, and the disinhibition has been caused by non-developmental factors, usually with the onset in adulthood.

[3] These issues have been addressed in an excellent series of articles in a recent edition of the *Archives of General Psychiatry*, June 1996.

With regard to the anti-social personality disorder, those persons have characteristics which tend to begin in childhood and persist through the lifespan. These include: lack of empathy or regard for the feelings of others; lack of emotional identification with others; diminished capacity for guilt or remorse; impulsiveness; inability to defer gratification; a seeming lack of anxiety or distress over social maladjustment; a tendency to project blame onto others; lack of dependability or willingness to accept responsibility.

The relationship between perpetrators of violence and anti-social personality disorder is circular, in so far as individuals with anti-social or sociopathic traits tend to display aggressive or violent behaviour, and individuals who behave aggressively or violently tend to be labelled anti-social or sociopathic. To what extent anti-social personality disorder can be called a mental illness is disputed among mental health experts. Regardless of whether these personality traits are considered to constitute mental illness or not, they are associated with criminal and violent behaviour.

Those issues associated with adult onset disinhibition and aggression include emerging mental illness such as schizophrenia, bipolar disorder, substance abuse (particularly alcohol) and brain injury, with the most common cause in our society being head injury. Less common causes include the residual effects of infections such as meningitis and encephalitis.

Naturally the risk for aggression and violence would be greater in persons who had both the longstanding propensity to aggression due to anti-social personality factors combined with mental illness/brain disorder. When that is coupled with the observation that the majority of violent offending occurs in men between the ages of 15 and 30, one can gain a general picture of the person who is most likely to offend in a violent manner. That is, he will be a young man with a longstanding history of anti-social personality traits and behaviour who has developed some form of mental illness/
brain disorder. When one couples that substrate with environmental factors such as frustration/rejection and isolation, then one has a potent predisposition to aggression.

It should also be emphasised that aggression is a relatively infrequent phenomenon and there are marked limitations in our statistical ability to predict infrequent events. Indeed, it has been stated that “sadly, there are no statistical or actuarial measures available that offer the prediction of dangerousness in either so-called normal or mentally disordered offenders with any degree of certainty” (Prins 1990, p. 503).

Probably the most comprehensive review of “risk assessment” has been provided by Prins (1996), where he acknowledges that although actuarial techniques can discriminate between high risk and low risk groups, the dilemma is that there is the “residual majority” in which prediction is no greater than chance.

Nevertheless, Prins (1996, p. 57), emphasised the importance of communication between professionals and individuals who are potentially at-risk, and people associated with them such as family members; the need to recognise those who are vulnerable, on the basis of the above factors; and also the importance of what he stated as “achieving an effective baseline”. The latter point is particularly important as it indicates that a full history, not only of the present problem, but of past difficulties, should be gained to determine the appropriate interventions.

Policy issues

It is important to acknowledge that although mental illness is to some extent associated with violence, the relationship is complex and multifactorial. Despite the complexities of the relationship, there are certain measures which could effectively reduce the likelihood that someone with a mental illness will behave violently.

Comprehensive treatment of those with severe mental illness/brain disorder, both in hospital and particularly in the community, has the potential to reduce violence. The Government has recently released promising figures on the National Mental Health Strategy showing an increase in the availability of community based mental health services. This progress must be encouraged.

Early intervention programs may reduce the development or persistence of anti-social personality traits, and subsequent violence in the anti-social personality group.

Care must be taken when forming policy which affects people suffering from mental illness in order to minimise the possibility that they will be stigmatised or discriminated against.

1.1.3 Individual histories of violence and criminal justice system involvement

The most confident generalisations in the literature on violence are that the best predictor of future violence is a history of violence, and the more violence that an individual has committed the more likely it is that he or she will commit further violent offences in the future.

Studies reviewed by the US National Research Council's Panel on the Understanding and Control of Violent Behaviour (Reiss & Roth 1993), found that most of the juvenile violent offenders went on to commit violent offences in adulthood. While only a minority of adult violent offenders had committed violent offences as juveniles, more than half of them had committed non-violent offences as juveniles. This indicates that violent offenders also break the law in other ways which would seem to be linked to general patterns of antisocial behaviour.

Studies reviewed by Monahan (1990) found that the probability of someone being arrested again after four previous arrests was 80 per cent, and after ten previous arrests was 90 per cent, or almost certain, although the arrests were not always related to violent crimes. Repeat offenders were found to be responsible for a large proportion of the general crime in society. It was found that repeat offenders with a history of violent crimes committed a disproportionate amount of violence.

The developmental, socialisation and personality factors discussed previously go a long way towards explaining this phenomenon. It would appear from longitudinal studies that the aggressive preschooler tends to become an aggressive teenager who in turn becomes an aggressive adult (National Committee on Violence 1990).

It is apparent from the research that the criminal justice system in its present form is not successful at preventing recidivism, although it does effectively incapacitate offenders, preventing them from committing further crimes in the community for the duration of their sentence. The Australian Psychological Society (1995) has criticised the punitive approaches currently being employed by the criminal justice system because it does not teach alternative acceptable behaviours. The Society states:

> *...The evidence is strong that punitive approaches as currently used in the justice system do not succeed in rehabilitating offenders or in deterring them from reoffence, and will often have the opposite effect. The current formal justice system cannot apply punishments with the required consistency and timing, is often perceived as illegitimate by the*

offender, and does not avoid stigmatising and alienating effects (Australian Psychological Society 1995).

Policy issues

A number of strategies, based on established psychological principles, would be effective in reducing recidivism. These include developmental interventions such as family-, school- and community-based programs targeted at children and adolescents. It is likely to be more cost effective for society to allocate resources to preventing the development of these behaviours, through, than to attempt to treat them once established.

The Australian Psychological Society (1995) notes the potential for preventive training in prosocial behaviours, and rehabilitation programs for offenders, as suitable alternatives to the conventional criminal justice system. More evaluative research is needed to examine the efficacy of these programs.

1.2 Biological Indicators

1.2.1 Genetics

While aggressive parents tend to have aggressive offspring, it does not follow that the link is genetically determined: complex interactions of nature and nurture are involved. Much of what is known about the role of genetics in aggression comes from animal studies (generally with rats and mice rather than the non-human primates). Extrapolating from these to violence in humans is problematic.

A number of studies in humans have been conducted, mainly twin studies in Scandinavia[4]. They have serious methodological limitations in assessing the role of genetics in aggression and are generally empirical but atheoretical, not directly aiming to tease out the different social and genetic influences on violence. A conclusion drawn from the Scandinavian studies is that there is probably a genetic influence on the antisocial personality disorder in adults, and violence is one of the characteristics leading to this diagnosis. (As discussed above, the meaning and utility of the concept of "antisocial personality disorder" is, however, seriously questioned.) On the other hand, little evidence exists of a genetic origin of violence as such.

The studies of adopted twins have consistently reported a relationship between antisocial behaviour in the adoptees and factors which intervene between birth and placement in the adopting home. The patterns here have not been studied but suggest that environmental influences are operating to a greater extent than genetic.

While physically violent behaviour is predominantly a male characteristic, the existing evidence is that the Y chromosome does not contain a major gene which could be associated with antisocial or violent behaviour. Evidence is building for complex genetic influence on the development of problematic alcohol use which, in turn, is linked to violence.

Policy issues

In summary, if genetic factors are operating in the aetiology of violence they are weak and unable to be identified using current knowledge and technology. The emphasis for future research should be on more comprehensive, evaluative social and psychological studies rather than biological or genetic research. The research on genetic causes of violence does not (at present) facilitate the development of predictive or preventive interventions.

1.2.2 Neurobiology and brain injury

A number of neurobiological factors may be associated to some degree with aggressive behaviour, including prenatal

[4] The conclusions in this section are drawn, in the main, from Carey 1994.

and perinatal factors, hormones, neurotransmitters (chemical messengers in the brain) and brain damage.

Particular prenatal factors such as parental substance abuse, producing babies born with foetal alcohol syndrome or other addictions and low birth weight, can have a long-term impact on the child, not only in terms of health problems but in behavioural problems, as a result of a combination of physical and environmental risk factors. Similarly, perinatal factors, such as forceps delivery, have been indicated in the potential development of aggressive behaviour due to possible brain damage.

The relationship between hormones and aggression is not well understood, in that hormones can influence and be influenced by aggression. Considering the extensive functions of hormones throughout the body and their influences on behaviour in general, it is likely that they could have some sort of indirect or secondary effects on aggression.

Neurotransmitters (chemical messengers) in the brain appear to be associated with aggressive or violent behaviour, in that neurochemical changes seem to occur with the expression of aggressive behaviour. However, the relationship is not believed to be causal. As Miczek et al. (1994) conclude:

> *It is highly unlikely that the problem of violence can be reduced to a dysfunction in a single enzyme, receptor, or molecular component of a nerve cell (Miczek et al. 1994 p. 246).*

Some 60 000 people in Australia suffer from some form of brain damage (AIHW 1996, p. 13), with motor vehicle crashes being a major cause. The prevalence of brain injury in the community is increasing as a significantly higher proportion of brain injured people survive now than in the past. This is the result of more effective emergency care and evacuation of casualties (especially in motor vehicle crashes) and improved hospital-based treatment. Many of the survivors are young men with many years of life before them. Generally speaking, they live in the community with few of the special supports needed to maximise the quality of life for them and their carers.

A small number of studies (reviewed in Mirsky & Siegel 1994) explore the link between brain damage and violence and most conclude that some association exists. However, most of the studies appear to have been conducted on men already identified as violent offenders, including those on death row in the USA or facing murder or manslaughter charges. While intriguing findings from studies investigating brain damage in violent sex offenders are appearing, we do not have uniform conclusions that any particular site or sites in the brain, nor processes of brain physiology, are closely associated with violent sex offences. The high prevalence of problematic alcohol and other drug use in these offender populations suggests that caution is needed in assessing the strength and nature of brain damage as an independent risk factor for violent crimes.

A particular brain damage syndrome in Miller's (1994) classification is *premorbid aggression and antisociality*, described by Miller as "the relationship between behaviour disorder, acquired brain damage, and premorbid personality and cognitive style". He makes the point that this is "perhaps the single most vexing clinical and theoretical conundrum with brain injured patients" (1994, p. 94). Frequently, psychological and behavioural problems that existed prior to injury only become really apparent following injury; they may be exacerbated by it. This is a classical "chicken-and-the-egg" situation: head injuries are more likely to occur in people with premorbid impulsive and aggressive lifestyles, the very group of people most

likely to have adverse reactions to brain injury.

Policy issues: management and treatment
A range of pharmacological treatments, including anticonvulsants, psychostimulants and beta-blockers are helpful in individual cases, though there are tradeoffs in terms of the side effects of some of these drugs, and their effects tend to disappear when the person ceases use of the medication. Behavioural and cognitive behavioural therapy and psychotherapy have been demonstrated to be helpful for some patients. In summary, what is needed is a comprehensive range of services, perhaps as part of the Commonwealth/State Disability Program, supporting brain injured people in the community, including broadly-based rehabilitation which could include, on a case-by-case basis, pharmacotherapy, behavioural therapies and psychotherapy.

1.2.3 Alcohol and other drugs

Alcohol
The drug which is most often associated with violent behaviour in Australian society is alcohol. There is reasonably consistent evidence that alcohol use is associated with increased rates of aggressive and violent behaviours (White & Humenuik 1994). Violent offenders are often intoxicated with alcohol when they commit offences and persons with alcohol abuse and dependence have higher rates of involvement in violence (Reiss & Roth 1993). A large number of violent offences in Australia occur in or around licensed premises among young patrons who are intoxicated with alcohol (Homel et al. 1992; Stockwell 1994).

As with the relationship between other factors and violence, there is controversy about whether the association observed between alcohol and violence is causal. The main reason for uncertainty is that there are personal and social factors which predispose some individuals to both engage in violence and to use large quantities of alcohol.

There is reasonable experimental evidence in animals that aggressive acts increase with moderate degrees of alcohol intoxication and there is some limited experimental evidence in humans that the risk of milder forms of aggression may be enhanced by alcohol (White & Humenuik 1994). At higher levels of alcohol intoxication there is a decrease in the propensity to violence. This biphasic effect of alcohol is often attributed to the "disinhibiting" effects and the impairment of judgement at moderate levels of alcohol while at very high blood levels alcohol has a sedative effect (White & Humenuik 1994).

Although the risk of violence may be increased by moderate doses of alcohol, violence is not a specific pharmacological effect of alcohol. Alcohol is not strongly associated with violent behaviour in non-violent persons; rather, moderate doses of alcohol appear to enhance existing propensities to violence (White & Humenuik 1994). The effects of alcohol also depend upon situational factors. The risk of violence is increased when large groups of intoxicated young males congregate in noisy and crowded licensed premises which have a reputation as a venue for violence (Homel et al. 1992; Stockwell 1994). The effects of alcohol are also influenced by cultural beliefs about the effects that alcohol has on violence and, in particular, beliefs about the extent to which intoxicated individuals are responsible for their violent acts (Brady 1990; MacAndrew & Edgerton 1969).

Other drugs
There is suggestive evidence that the use of a number of other types of drug is associated with violence. In all these cases, the evidence for a causal relationship is weaker than for alcohol. It consists of case histories of individuals who use large doses of these drugs committing crimes of violence while intoxicated by these drugs. The evidence is equivocal because individuals

who become involved in these acts often have histories of violence that precede their use of these drugs.

The chronic use of high doses of psychostimulants, such as the amphetamines and cocaine, have been associated with violent acts. There are case histories of violence committed by individuals while in the thrall of psychotic symptoms, such as vivid hallucinations and paranoid delusions which can be produced by chronic high doses of amphetamines, especially when injected (Hall & Hando 1993). In Australia the amphetamines are the most widely used stimulant drugs but the proportion of users who develop amphetamine psychoses is probably small (Hall & Hando 1993). A more important concern is that the amphetamines are often used by young males in combination with large amounts of alcohol (Hando & Hall 1993).

Other drugs that have been linked with violence include Phencyclidine (PCP) and steroids. PCP can produce psychotic symptoms that may lead to violent acts and explosive rage (Kinlock 1991). There are no reports of the use of this drug in Australia. The media have reported case histories suggesting a relationship between heavy prolonged steroid use and violent acts but the evidence for such an association is weak. There has been very little research on the prevalence of steroid use in Australia (other than by athletes to enhance performance).

There does not appear to be a relationship between the use of cannabis and violence, and there is little evidence of any relationship between the use of opiates and benzodiazepines and violent behaviour (Reiss & Roth 1993). Violence associated with the use of heroin and other illicit drugs in Australia is connected with competition in illegal drug markets rather than with the pharmacological effects of these drugs on their users.

The combined effects of alcohol and others drugs on violent acts are not well researched or understood. Nonetheless, it is reasonable to expect that the combination of alcohol and other drugs, such as, the amphetamines, cocaine, and anabolic steroids, may be more likely to trigger violent behaviour in susceptible individuals than any of these drugs alone (White & Humenuik 1994).

Policy issues

In terms of public importance as a contributory cause of violence, alcohol is the drug about which we should be most concerned. It is freely available at low price in our society, it is widely used by young males, often in intoxicating doses and in situations that increase the risk of violence. Other drugs are much less available, much less often used, and even more rarely used in ways that increase the risk of violence. Moreover, when these drugs are used it is often in combination with large doses of alcohol (Hando & Hall 1993).

2. Social indicators

2.1 Macrosocial

2.1.1 Socioeconomic inequality

Violence is more common in societies which are characterised by widespread poverty and inequality. Studies have shown that countries with higher rates of income inequality have greater rates of homicide. Countries with lower levels of economic inequality, higher welfare expenditure and lower divorce rates have lower rates of homicide. Similarly, areas with higher rates of unemployment suffer from higher rates of violent crime (National Committee on Violence 1990).

It is also clear that, in Australia, both the perpetrators and victims of violent crimes are most often people who belong to socioeconomically disadvantaged groups. Similarly, violence is more likely to occur in dilapidated broken-down settings than in clean modern settings. Research by Farrington (1996) concluded that socioeconomic deprivation is a risk factor for offending and anti-social behaviour, particularly when measured in terms of low family income and poor housing.

Employment status of the father was found to be an important predictor of later offending, as is the employment status of the offender on leaving school. Offences were committed more often in periods of unemployment than when employment was secure. Studies reviewed by Monahan (1990) found that offenders who were able to find and maintain a steady job after release or while on parole were less likely to reoffend than those who had numerous short term jobs or those who remained unemployed.

Policy issues

A number of general government initiatives which target socioeconomic deprivation, such as increased employment opportunities, improved housing conditions and adequate support for those suffering economic hardship, could reduce violence associated with inequality.

2.1.2 Access to firearms, alcohol and other drugs

Firearms

The availability of firearms as weapons to be used against the self or others is considered to be a major factor increasing the number of deaths which occur as a result of suicide and homicide attempts. The lethality of this method increases the likelihood that the victim will die, as deaths rates for victims of assaults by firearms are several times higher than for victims of attacks using other weapons.

Seventy-six per cent of firearm deaths in Australia are suicides, the largest group being young men aged 15-24 years. A review by Dudley, Cantor and de Moore (1996) states that the rate of suicide in Australia, and Queensland, Tasmania and rural areas in particular, has increased in association with increased rates of gun ownership. A number of overseas studies come to the same conclusion. Canadian figures show that after the introduction of restrictive firearms legislation, there was a decrease in the proportion of violent crimes, suicides and accidents committed with firearms. Research has also shown that the number of firearms deaths in Australian states varies inversely with the severity of gun laws.

Fifteen per cent of firearms deaths are homicides (Australian Bureau of Statistics 1994 (unpub.), Mortality Tabulations), and 18 per cent of homicides involve the use of firearms (Australian Bureau of Statistics 1995). Three out of five firearm homicides result from disputes between intimates, family-members or friends. It is argued that these attacks are impulsive acts, which may not have resulted in death had the firearm not been available. Many women and children are frequently threatened in their home with the use of a firearm against them, and again this particular threat would not exist if the firearm was not available.

Access to alcohol and other drugs

Drugs, particularly alcohol, are often implicated as a causal factor for aggressive behaviour or violent events. The association between alcohol and other drugs and violence is discussed in more detail elsewhere in this paper. It is relevant, however, to mention here, in terms of access to alcohol and other drugs, that violence occurs as a result of the social

and legal context in which the drugs are used, not only as a result of the chemical effects of these substances. In the case of illegal drugs, violence occurs mainly as a result of the illegal markets in which they are bought and sold. Therefore the level of violence associated with some drugs is related more to their legal status and availability than their pharmacological properties.

Policy issues

The research suggests that reducing the availability of firearms, particularly the most lethal, in high-risk situations, for example in families where there is a history of domestic violence or where someone has suicidal tendencies, may reduce the number of fatal injuries caused by firearms (Kellerman 1993). The Royal Australian and New Zealand College of Psychiatrists (1992) supports the recommendations of the National Committee on Violence (1990) for new firearms legislation in Australia, similar to the proposals now being considered by the governments of Australia. The Australian Psychological Society also publicly supports these proposals and has endorsed the National Charter on Gun Control.

A similar policy conclusion applies to alcohol and other drugs. Although drugs themselves rarely *cause* violence, the ready availability of alcohol (the most problematic drug) and the social settings in which alcohol is often consumed and intoxicated people are found, are linked to the high incidence of drug-related violence.

2.1.3 Media influences[5]

Researchers and professionals have argued for decades about whether or not the portrayal of violence in the various media has *caused* violence in society. It is difficult to prove causality when, for obvious ethical reasons, researchers cannot intentionally expose individuals to high doses of violence. Nevertheless, most laboratory and field studies have shown that there is some sort of relationship or association. They suggest that exposure to media depictions of violence enhances the risk that the viewer will engage in subsequent aggressive behaviour. The effects of exposure to violence in the media are by no means inevitable and may be amplified or reduced by a variety of other factors. Research into the effects of pornography and violent video-/computer-games, while less voluminous than television research, has begun to show similar conclusions.

The relationship between media depictions of violence and subsequent violent behaviour is extremely complex. There are a number of interacting variables which play an important role in determining who will be affected, by what material, and in what way.

The impact of on-screen violence

The main findings from the research are:

- watching violence on-screen is related to increased aggression, desensitisation to violence and increased fear of crime;
- violence in the media may contribute to violent crime, but is not a single cause, because there are many other variables which contribute to violent behaviour;
- some people may imitate what they see on television and video. For example, research has shown that reporting of suicide in the media is associated with subsequent increases in suicide rates (Hassan 1996), and there is some suggestion that reporting of mass murders may be associated with subsequent "copy cat" events (Cantor & Sheehan in press);
- violence on-screen may reinforce the behaviour of already aggressive people;

[5] This summary is based on a review of the literature by Brown 1996.

- the relationship between viewing violent screen images and exhibiting aggressive behaviour appears to be bi-directional. That is, aggressive people are more likely to watch violence, and people who watch violence are more likely to be aggressive;
- the context in which violence is portrayed plays a critically important role in relation to its effects;
- the effects from on-screen violence can be short or long term;
- children are most at risk from these effects;
- young adults may also be at risk; (Note, however, that most of the research has involved children and young adults, and that slow cumulative effects on attitudes, values and behaviour are most likely.)
- males appear to be slightly more at risk than females;
- the general public is concerned about the effects of on-screen violence;
- parents have an important role to play in supervising their children's viewing, teaching children about the differences between television or film violence and real-life situations, and encouraging critical evaluation of on-screen images;
- despite the potential influence of violent entertainment on violence in society, it is not clear whether the impact is significant in comparison to the impact of other environmental variables such as family circumstances, violence or abuse in the home, parental influence, poverty, health, education, racism, cultural disintegration, substance abuse. However, acceptance of high levels of violence in the media sends messages about the sort of society in which we live, and about what behaviour is considered "normal" or acceptable.

The context in which the violence is portrayed is probably the most important variable for determining its potential impact, together with the viewer's ability to discriminate between fantasy and reality, between justified and unjustified violence, and the capacity to critically evaluate the portrayal of violence within a social and moral framework. For example, if the perpetrators of violent acts are rewarded or remain unpunished for their actions, the vulnerable viewer, whether it be a child learning about the world or an already aggressive person, could interpret this to mean that violent behaviour is acceptable or even desirable. Similarly, the images may have an effect if the aggressive action is seen by the viewer to be justified, if there are few or no consequences portrayed, if the viewer identifies strongly with the perpetrator or associates the cues for the violent behaviour with real-life cues, or if the viewer is predisposed to aggression. The violent images can act as a trigger to release existing aggressive feelings.

Policy issues

The policy challenge is to enhance media violence awareness and responsibility amongst the public and to avoid mechanisms which could trigger unacceptable behaviour in vulnerable individuals. This is best achieved by inter-sectional collaboration, balancing:

- ***education*** campaigns to teach children (and adults) the discriminatory skills necessary for healthy use of the entertainment and information media, taking the form of general life-skills training;
- ***public health*** and ***health promotion*** campaigns which inform people of the potential harmful effects;
- ***new technology*** which can empower individuals to control what information is received or accessed in their own homes; and
- ***censorship*** and ***regulation*** which have limitations in the extent to which they can control what people see and do.

A Committee of Ministers on the Portrayal of Violence has recently

examined some of the evidence and it has been decided that the "V-chip" (violence-chip) is to be introduced in Australia. In conjunction with educational approaches, this type of measure can be successful.

2.1.4 Other aspects of culture[6]

Violence has always been part of Australian society and in fact the past was more violent than the present. Today's society, however, is much less tolerant of violence. Cultural factors determine the general levels of violence which are considered acceptable, and violent offences need to be seen in this context. In addition to the economic factors, access to firearms, alcohol and other drugs, and media influences already discussed, other aspects of society also dictate what is seen as acceptable behaviour.

The norms of behaviour in any given society will influence the behaviour of the individuals in that society who tend to adopt those norms. Australian society demonstrates a general acceptance for violence on the sporting field, in the home and in schools. Most parents accept the use of physical punishment as a method of discipline, and many Australians advocate capital punishment for the crime of murder. Violence committed while intoxicated by alcohol is accepted by some as normal behaviour and dismissed by others as not a serious offence.

Cultural disintegration is often characterised by violence. Some groups of people in society who feel marginalised may believe that the norms of society do not apply to them, and that they have no stake in society's future. This may explain why many young people, particularly in rural areas, commit suicide at a greater rate than the rest of the population, and why some ethnic minority groups such as Indigenous people and some Asian communities in Australia, tend to experience greater levels of violence than other Australians.

The relationship between gender and violence is to a certain extent culturally determined. The perpetrators of physical violence are usually men. In some societies the use of physical force against women is accepted, and in others it is totally unacceptable. The degree to which violence against women is seen as acceptable depends in part on the power relationship between men and women in a given society, the hierarchical organisation of society, and whether it be patriarchal or matriarchal. Men tend to use violence against women when they are politically, socially and economically dominant over the women. The issue, however, is extremely complex and, in Australia, although the law and the majority of public opinion condemns the use of violence against women, it is still a large problem in this society, the scale of which is often underestimated.

Policy issues

The public face of society must demonstrate that violence is unacceptable in any form. Government and non-government organisations can show their commitment to this position by encouraging a range of interventions aimed at creating a less violent culture, and by denouncing violence and promoting non-violent means of conflict resolution.

Appropriate non-violent behaviour by public Australian role models should be encouraged, and inappropriate behaviour strongly discouraged. Governments can provide appropriate leadership in areas of media violence, gun control, sporting violence, corporal punishment and treatment of offenders.

6 This section draws upon the National Committee on Violence (1990).

2.2 Microsocial Indicators

2.2.1 Gender and family violence[7]

Most violent crime is committed by males. With regard to violence within the family, levels of reporting are probably still low, despite increases in reporting rates in recent years. Nevertheless, the dominant form of serious violence in the family is violence by men against other family members.

While evidence exists for basic sex differences in aggression in humans, the research is not unequivocal.[8] Clearly the influences of the environment in terms of child development and socialisation and adult social roles are also powerful determinants. Nonetheless, a recent review of the research concluded that:

> *1. Men aggress more than women when they have the opportunity to aggress physically rather than psychologically; and*
>
> *2. Gender differences are larger when women perceive that aggression produces harm to others or anxiety, guilt, or danger for themselves.*
>
> *... these results point to the importance of contextual variables in the magnitude of the noted association (Kruttschnitt 1994, p. 328).*

Considerable gaps in knowledge exist as to how social, situational and cultural factors interact with any innate sex differences in propensity to violence.

As the National Committee on Violence concluded in 1990, "attitudes of gender inequality are deeply embedded in Australian culture, and both rape and domestic assault can be viewed as violent expressions of this cultural norm" (p. 62). Data from the Australian Institute of Criminology's National Homicide Monitoring Program reveal that approximately one-thirds of Australian homicides take place within the family and two-thirds of these occur between spouses (current or separated). Some 90 per cent of these homicides are committed by men. Children were the victims in 20 per cent of family homicides with the balance having other relationships such as parents, siblings, aunts/uncles, etc.

American data suggest that assaults between family members are almost twice as likely to be part of a chronic pattern of violence than are assaults between strangers. Antecedents and/or correlates of this familial violence, frequently pointed to, are problematic patterns of alcohol use, social isolation of the family, depressive mental illness and intergenerational processes through which elevated potentials for violence are passed from parent to child.

An example of the interaction of variables which can result in violent behaviour is the research by Raine et al. (1996) which examined the rate of violence and other behavioural problems in males with both early neuromotor deficits (which are discussed in more detail later in this paper), and unstable family environments. They found that a combination of both early neuromotor deficits and negative family factors was more associated with criminal and violent behaviour than either poverty or obstetric risk factors alone.

Policy issues

Home visiting programs for the prevention of child abuse and neglect have the potential for breaking the intergenerational transmission of abusive behaviour. A recent report conducted on behalf of the National Child Protection Council (1996) examined the effectiveness of home visiting programs in Australia

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[7] This section is based particularly on Kruttschnitt 1994 and Reiss & Roth 1993.

[8] Here we use the word "sex" to refer to the genetic or chromosomal basis of female/male differences, and "gender" to refer to the social, psychological and cultural patterns that produce different female/male roles in a particular society at a particular time.

and found them to be beneficial for the prevention of child abuse and neglect, in addition to enhancing general family health.

Additional family support can be provided through other early intervention programs such as the "Triple P Program" (Positive Parenting of Preschoolers Program) in Queensland, which helps parents to deal effectively with children who are exhibiting behavioural problems, and helps adults cope with their own relationship problems (Sanders 1995). These programs should be more fully supported and made more widely available.

There is a general lack of information available about the effectiveness of interventions, either within or outside the criminal justice system, for adults who are violent towards their spouse, including anger management programs in both community and prison settings. Accordingly, evaluation research is needed into the range of potential interventions such as mass media awareness campaigns, group and individual therapies addressing violence and alcohol and other drug treatment interventions where this is part of the aetiology of the violence.

2.2.2 Situational factors

Violence is neither randomly nor evenly distributed throughout society. It tends to be concentrated in particular population groups, localities and types of encounters. For this reason, situational analyses of risk factors and the development of situational violence prevention techniques have received considerable attention in recent years, and should continue to do so as part of the National Campaign Against Violence and Crime.

Particular *types of encounters* precipitate aggressive and destructive behaviour. For example, while drugs (other than alcohol) are not important risk factors for violence, the illegal markets within which they are distributed are characterised by violence. Interactions between young males drinking in public places and police officers frequently result in violent conflicts between the parties, resulting in the young men being charged with the "trifecta" of offensive behaviour, assault police, and resist arrest. Gang violence is not nearly as common in Australia as in some other countries (especially the USA), although spectacular instances occasionally occur, such as the 1984 Milperra (NSW) incident when two motorcycle gangs had a shoot-out killing seven people including a 14-year-old girl.

Certain *places* are known to be loci of violence and destructive behaviour. Licensed premises represent the outstanding example: in Australia most assaults outside the home occur in or near licensed premises. Australian research has demonstrated that the violence is not attributable mainly to the availability of alcohol; rather, a range of other situational risk factors is implicated. Prominent among these are

- the type of patron (especially young, working class males who are strangers to each other);
- the atmosphere of the premises (roughness, low levels of comfort, crowding and boredom);
- drinking, especially levels of intoxication; and
- the behaviour of doormen/bouncers (rather than of bar staff) (Tomsen, Homel & Thommeny 1991).

Firearms availability is also a situational issue. Although there is apparently no firm conclusion in the international literature as to the link between the availability of firearms and the risk of violence, the issue is hotly debated. The US National Research Council's Panel on the Understanding and Control of Violent Behaviour (Reiss & Roth 1993, p. 18) review concluded that:

> *Available research does not demonstrate that greater gun availability is linked to greater numbers of violent events or injuries. However, what is clear is that gun-inflicted injuries have more lethal consequences than injuries inflicted by other weapons.*

In contrast, a contemporary Australian overview of the epidemiological research has led to the conclusion that, with the exception of one unpublished study,

> *... case-control and other studies attest that gun ownership is positively associated with firearm suicides and homicides. The frequency and strength of this association, and the temporal relationship between the variables, make a causal relationship highly likely. Some authors, because of their data's limitations, refrain from this conclusion. However, no strong 'third' variable (including mental illness) accounts for the association ... (Dudley, Cantor & de Moore 1996, p. 377).*

This expert group supports the views of Dudley et al., that firearm suicide and homicide rates are positively related to rates of firearm ownership. Most of the available data, including that examined by the National Research Council's Panel (Reiss & Roth 1993), suggest this association. In fact the conclusions reached by that Panel are rather conservative considering the weight of the evidence they examined.

Most authorities agree that limiting access to firearms is a necessary component of a comprehensive program to reduce violence generally, and to reduce deaths from firearms specifically.

Policy issues

The theory and practice of situational crime prevention, based on empirical studies, suggest that three classes of interventions are helpful. They are

- increasing the efforts an offender has to make to commit the offence;
- increasing the risks involved; and
- reducing the rewards (Clarke 1995).

Examples of best practice in crime prevention documented by the Australian Institute of Criminology (Grabosky & James 1995) include some prominent examples of the application of these principles. For example, the Surfers Paradise Safety Action Program, which involved the introduction of responsible hospitality practices in licensed premises in the region, using a community development approach, has been effective in reducing violence in and around the licensed premises. Applying Clarke's schema, this program succeeded in increasing the efforts a person has to make to commit a violent offence and also increases the risks (to the offender) of doing so.

Cooperative action between the Victorian Police, motorcycle enthusiasts and Monash University researchers to involve motorcyclists in contributing positively to the 1989 Grand Prix in Melbourne resulted in a low level of conflict there between motorcyclists and police, compared to that seen for many years when the Grand Prix was held in Bathurst, NSW. Environmental violence prevention approaches, often called "designing out crime" (such as the strategic location of streetlighting and pedestrian traffic management) have also shown beneficial outcomes.

These and other examples demonstrate that strategic situational violence prevention initiatives can be effective.

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Are specific health or behavioural conditions indicators of increased risk of aggressive behaviour? What is the evidence?

Indicators of Aggressive Behaviour was prepared at the request of the Minister for Health and Family Services, the Hon. Dr Michael Wooldridge in August 1996. This report by an Expert Working Group (under the leadership of the Australian Institute of Criminology) examines the current evidence concerning the links between aggressive and self-harmful behaviour and a range of health, social and legal factors. In addition, where appropriate, recommendations are made for strategic policy responses.

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