



# Literature Review on Children and Risk-Taking: Implications for Education on Small Arms



**SEESAC**

South Eastern and Eastern Europe Clearinghouse  
for the Control of Small Arms and Light Weapons



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The **South Eastern and Eastern Europe Clearinghouse for the Control of Small Arms and Light Weapons** (SEESAC) has a mandate from the United Nations Development Programme (UNDP) and the Stability Pact for South Eastern Europe (SCSP) to further support all international and national stakeholders by strengthening national and regional capacity to control and reduce the proliferation and misuse of small arms and light weapons, and thus contribute to enhanced stability, security and development in South Eastern and Eastern Europe.

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*For further information contact:*

**Head, SEESAC**  
**Internacionalnih Brigada 56**  
**11000 Belgrade**  
**Serbia**

Tel: (+381) (11) 344 63 53  
Fax: (+381) (11) 344 63 56  
[www.seesac.org](http://www.seesac.org)

## **Literature Review on Children and Risk-Taking: Implications for Education on Small Arms, SEESAC, 2007**

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## Acronyms

|        |  |
|--------|--|
| CDC    | Centre for Disease Control   |
| HIV    | Human Immunodeficiency Virus   |
| MRE    | Mine Risk Education  |
| NSW    | New South Wales  |
| RMDS/G | Regional Micro-Disarmament Standard/ Guideline                         |
| SALW   | Small Arms and Light Weapons   |
| SCSP   | Stability Pact for South East Europe                                   |
| SEE    | South Eastern Europe   |
| SEESAC | South Eastern and Eastern Europe Clearinghouse for the Control of SALW |
| STD    | Sexually Transmitted Disease   |
| UNDP   | United Nations Development Programme                                   |
| UNICEF | United Nations Children's Fund   |
| UNISDR | United Nations International Strategy for Disaster Management          |
| UXO    | Unexploded Ordnance  |
| WHO    | World Health Organization  |



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## 1 Introduction

In the burgeoning literature on small arms,<sup>1</sup> there is a tendency to rush to judgment in proposing risk education for children and young people. There is no evidence that an analysis of the psychological and paediatric literature on the subject of risk-taking has been undertaken. The aim of this literature review is to gather together significant knowledge on risk-taking, children and young people that is relevant to any preliminary discussion on the impact of small arms on children.

While very little research has been done on risk-taking and children, there is a large literature on adolescents.

“A considerable amount of research has sought to understand the nature of risk-taking in adolescence and factors within the adolescent environment that might shape or influence risk-taking behaviour. What has emerged from this large body of research is that **risk-taking and reducing risk-taking behaviour is highly complex**”.<sup>2</sup>

### 1.1 Definitions

“**Risk taking involves the implementation of options that could lead to negative consequences**”.<sup>3</sup> This definition is very broad and includes some behaviours that are not dangerous. It is important to include behaviours which the person performing may not consider risky, but that can have negative consequences.<sup>4</sup> For example, a child playing with a gun may not consider this dangerous as he/she may have seen people on TV doing this, or even an adult known to them, but clearly it is potentially dangerous.

The context of the behaviour must also be taken into consideration when assessing risk-taking. For example, a boy who has been taught how to look after a hunting rifle by his father or other male relative may consider that he is skilled (and may in fact be skilled) in using the rifle safely.

“**Risk-taking as an experience of human behaviour can be defined as an action with an unclear outcome; it is an action with a chance of loss or negative outcome**” (Ben-Zur & Reshef-Kfir, 2003).<sup>5</sup>

### 1.2 Perceptions of Risk

The concept of risk is very complex, and very little research has been done on children, young people and risk. In relation to children, adults' perceptions of the risk of having firearms in the house are crucial to questions of the impact of small arms on children.

<sup>1</sup> SEESAC uses the term SALW (Small Arms and Light Weapons), which is defined as ‘all lethal conventional munitions that can be carried by an individual combatant or a light vehicle, that also do not require a substantial logistic and maintenance capability’ (see SEESAC’s Regional Micro-Disarmament Standards and Guidelines [RMDS/G] Glossary 4th Edition. For the general reader, perhaps an educator or NGO staff involved in policy development on children’s issues, the term SALW is unnecessarily technical and confusing. Light weapons are not relevant to the issues of children and youth, except in relation to armed conflict and its impact. Many sources referring to children use the term ‘small arms’, or ‘guns’, ‘weapons’ and ‘firearms’ interchangeably. (Note the IRIN/OCHA news publication, “Guns out of Control: the continuing threat of small arms”, May 2006, <http://www.irinnews.org/webspecials/small-arms/default.asp>, accessed on 04 October 2006.) For the purposes of this paper, however, the term ‘small arms’ will be used to refer to ‘weapons designed for individual use. They include, inter alia, revolvers and self-loading pistols, rifles and carbines, sub-machine guns, assault rifles and light machine guns’, which is the definition used by the United Nations (see <http://www.un.org/events/smallarms2006/faq.html>, accessed on 04 October 2006). In the Education section of the SEESAC web site, the term ‘small arms’ is used in preference to SALW (see <http://www.seesac.org/index.php?content=55&section=2>, accessed on 04 October 2006).

<sup>2</sup> Buckley, Lisa *Adolescents’ perspective of transport related risk-taking and injury: Definitions, consequences and risk and protective factors*, [http://www.carrsq.qut.edu.au/docs/publication\\_026.pdf](http://www.carrsq.qut.edu.au/docs/publication_026.pdf), accessed 16 May 2006 (emphasis added).

<sup>3</sup> James P. Byrnes, David C. Miller, and William D. Schafer *Gender Differences in Risk Taking: A Meta-Analysis*, *Psychological Bulletin* 1999, Vol. 125, No. 3, 367-383, p. 367.

<sup>4</sup> *Ibid*, p. 368.

<sup>5</sup> Buckley, Lisa *Adolescents’ perspective of transport related risk-taking and injury: Definitions, consequences, and risk and protective factors*, [http://www.carrsq.qut.edu.au/documents/publication\\_026.pdf](http://www.carrsq.qut.edu.au/documents/publication_026.pdf), accessed 16 May 2006.



It is generally accepted that people are resistant to the idea that they are at risk from any particular hazard, as they see themselves as less at risk than the 'average' person, at least with regard to health risks. Most people consider themselves to be better drivers than the average, and feel that they are less likely to get cancer than others. There is a sense of unreal optimism, or even of infallibility. The data from small arms surveys in the region suggest that many men who keep guns at home give security as their main reason. It is highly likely that they have not considered any possible risk to their own or visiting children, or perceive it as a minor risk. Women, in contrast, are much more likely to see the presence of guns in the community and in homes as a threat.

The perception of risk is strongly influenced by cultural, social and gender factors. Friends, family and the wider community can transmit perception of risk or individuals can form a view based on reasoning.<sup>6</sup> People who feel safe and have some knowledge about the particular risk are more able to change or modify their behaviour (for example, handing in a weapon or storing the weapon safely) than those who are defensive.

The Pan American Health Organization, the Regional Office of WHO, has identified a wide range of factors that influence perception of risk:

- **Dread:** The most feared risks are ones that worry people the most, rather than those that are the most likely. For example, cancer causes dread because people perceive it as a terrible way to die. "Fear is a clear example of what we think about a risk in terms of our intuitive feelings, a process which is called the heuristic effect";<sup>7</sup>
- **Control:** People feel more secure in situations in which they feel they have control. One could surmise that gun owners in SEE feel in control because they have access to a gun;
- **Natural or man-made risk:** Most people perceive radiation from nuclear power stations or mobile phones as more dangerous than radiation from the sun, even though the latter causes more ill health and death through skin cancer;
- **Choice:** People feel that a risk they take is less dangerous than the same risk taken by others. In the case of small arms this would suggest that people may perceive that the fact that other people have guns in the home is dangerous, but not their own gun ownership;
- **Effects on children:** Risks experienced by children are seen as more serious than for adults. It is possible that this accounts in part for the gender difference between men and women in regard to small arms ownership. Women see the risk to their own (and possibly other) children of guns in the home, while men are either unaware of this risk, or believe they have control;
- **New risks:** New risks, for example new diseases, are perceived as more dangerous than those that people have lived with for long periods;
- **Awareness:** Awareness of certain risks can be high or low, depending on the attention given to them. For example, SARS is perceived as more risky than ordinary flu. It is likely that gun ownership is not seen as risky as there has been relatively little awareness raising about the issue in SEE;
- **Possibility of personal impact:** Statistical probability plays a small role in people's awareness of risk compared to personal experience. A number of campaigns have been started in the UK in response to gun violence by parents whose children were murdered; the number of such cases is, however, quite small;
- **Cost-benefit ration:** Some analysts propose that the main factor in risk perception is whether people perceive that there will be a benefit. If there is, then the risk is seen as smaller;
- **Trust:** People are less afraid of specific risks if they trust the relevant authorities to protect them and if they trust the information given to them. Small arms surveys in SEE reveal that there is a relationship between increasing trust in police and governments and reduced desire to keep guns at home for protection;
- **Memory of risks:** People who have experienced the negative consequences of a particular risk remember it and are more likely to see that risk as an important one compared to other equally likely ones. It is

<sup>6</sup> *Ibid*, p 1.

<sup>7</sup> Source: [http://www.cepis.ops-oms.org/tutorial6/i/pdf/topic\\_04.pdf](http://www.cepis.ops-oms.org/tutorial6/i/pdf/topic_04.pdf), p.2 accessed 26 May 2006.



possible that some men in SEE who have guns in the home continue to do so in response to the memory of not having weapons during the conflicts of the 1990s, and therefore feeling that they could not protect themselves and their families;

- **Spread over space and time:** Unusual events are perceived as riskier than common ones;
- **Effects on personal safety and personal property:** Risks that affect our basic values, health, housing, property and our own future are seen as risky;
- **Fairness:** People believe that risk should be fairly distributed, so those who are more at risk see this as unfair, and often act to draw attention to their risk; and
- **Process:** There is a negative impact on perception of risk if authorities are not open and honest and do not consult the public about the issue and respond to their concerns.

Clearly there are many aspects of risk perception in regard to small arms in SEE where we simply lack the data about how people make risk assessments, and therefore how they respond to weapons collection programmes. Research on risk perception has attempted to develop a taxonomy for understanding and predicting how individuals will react to dangers. The main result of this research has been the discovery of heuristic strategies used by people to cope in an uncertain world. While these strategies may be valid in some situations, in others they result in very high and persistent biases.

*“Laboratory research into knowledge and basic perceptions has shown that the difficulties in understanding probabilistic processes, the biased coverage of the mass media, misleading personal experiences, and anxieties produced by problems in life cause the denial of uncertainty, the deficient judgments of risks (sometimes they are overestimated and sometimes underestimated) and judgments on facts that are held without guaranteed confidence.”<sup>8</sup>*

There are two main types of biases, “optimistic bias” and “outrage bias”, which account for the seemingly irrational points of view held by some people. Unreal optimism is a serious challenge for any risk communication programme. People may acknowledge the risk, but deny that it could happen to them. The more knowledge they feel they have of the risk, the more control they feel they have. For example, a gun owner who believes his children have been taught ‘gun safety’ (by himself and/or school) and who believes he has stored the gun safely, will perceive that he and his family are immune to any risk of accidents.

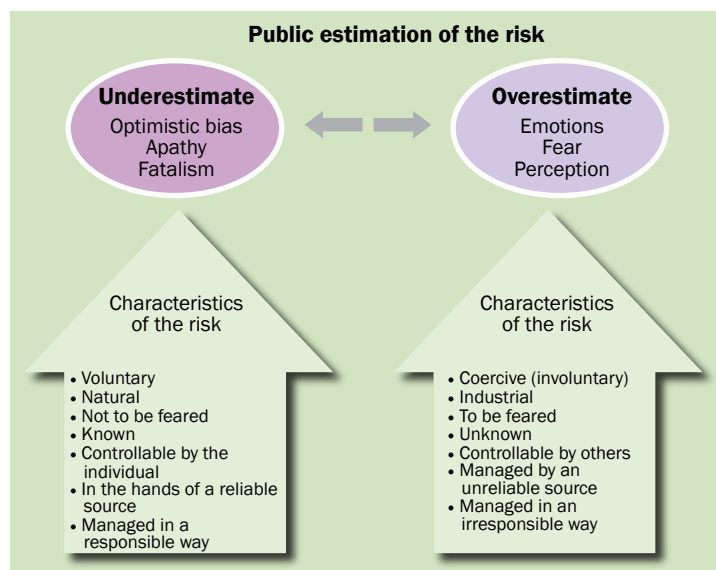


Figure 1: Diagram of how people estimate risk.<sup>9</sup>

<sup>8</sup> Source: [http://www.cepis.ops-oms.org/tutorial6/i/pdf/topic\\_04.pdf](http://www.cepis.ops-oms.org/tutorial6/i/pdf/topic_04.pdf), p.6, accessed 26 May 2006.

<sup>9</sup> Source: [http://www.cepis.ops-oms.org/tutorial6/i/pdf/topic\\_04.pdf](http://www.cepis.ops-oms.org/tutorial6/i/pdf/topic_04.pdf), accessed 26 May 2006. The website of the Pan-American Health Organization, the Regional Office of the World Health Organization, has an excellent online course on Risk, including a PowerPoint presentation – this is highly recommended.





It is interesting to speculate on the risk assessment made by gun owners in SEE. They may feel the risks of having guns and other weapons in the house is voluntary, not to be feared, known, controllable by them, in the hands of a reliable source and managed in a responsible way, therefore underestimating the risk to themselves of using the weapon in domestic violence, committing suicide and the risk to other family members and visiting children, thus showing optimistic bias.

This review of data about risk assessment suggests that the approach to 'risk communication' in relation to small arms is simplistic and not based on any detailed information about how gun owners make risk assessments.

### **1.3 Implications for a strategy to reduce the risk to children and young people from firearms:**

- Government intervention is essential, in terms of laws on gun ownership, implementation of these laws, and strategies to deal with illegal weapons;
- The belief that owning a gun contributes to personal and family security needs to be challenged, based on evidence;
- It is essential that policy and practice focus on adults and responsible organizations: the police to implement relevant laws on gun ownership, enforce the law in relation to firing guns in public (so-called 'celebratory fire'), and for hunting and gun owners' organisations to support the law and encourage members in safe practices;
- The role of the media in glamourising guns and violence through films, TV and computer games, needs to be considered. It is essential to raise awareness within the media industry about their role in glamourising gun use, and to encourage a code of social responsibility and civil society monitoring of the media;
- Research is needed to evaluate what kinds of media campaigns against gun use actually work;
- Organisations and individuals who support gun ownership need financial incentives and consequences to promote responsible gun ownership, use and safe storage. For example, sports shooting and hunting associations should take responsibility for safety training and promotion of safe storage practices; and
- The data available on risk-taking among children and young people does not support the concept of 'small arms risk education'.





## 2 Risk-Taking and Children

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| <b>Title:</b>  | <b>Do children's intentions to risk take relate to actual risk taking?</b>  |
| <b>Publisher:</b>  | <b><i>Injury Prevention</i>, 2004, No. 10, 62-64</b>  |
| <b>Author (s):</b>   | <b>B.A. Morrongiello</b>  |
| <b>Summary of Content:</b>   |   |
| <ul style="list-style-type: none"> <li>■ It is very difficult to study children's risk taking behaviour due to concerns about safety and ethics.</li> <li>■ Unintentional injury is the main cause of death for children over two years.</li> <li>■ Up to school age most accidents occur at home.</li> <li>■ From school age to adolescence most injuries occur outside the home.</li> <li>■ Most studies of risk-taking among school age children look at attitudes and behaviours, which means that often what is studied is intention to take risk.</li> <li>■ "There is evidence that children's self reports about risk taking correlate with teacher, parent, and peer ratings, as well as with their injury history". This suggests that children's statements are valid as reports of their intentions to risk take when assessed in a non-risk situation.</li> <li>■ However, there are no studies of children's reported intentions and then actual behaviour in risk situations.</li> <li>■ This study aimed to redress this deficiency by studying three age groups: young (six and seven years old); intermediate (eight and nine years old) and old (10 and 11 years old).</li> <li>■ The study found a close correspondence between children's expressed intentions to risk-take and their actual behaviour, indicating that "children's intentions to risk-take can serve as useful proxy measures for actual risk-taking".</li> <li>■ However, there was a weaker relationship between intention and actual behaviour among the youngest group of children.</li> </ul> |   |
| <b>Location:</b>   | <a href="http://ip.bmj.com/cgi/content/full/10/1/62?maxtoshow=&amp;HITS=10&amp;hits=10&amp;RESULTFORMAT=&amp;fulltext=children+risk&amp;andorexactfulltext=and&amp;searchid=1&amp;FIRSTINDEX=0&amp;sortspec=relevance&amp;resourcetype=HWCIT">http://ip.bmj.com/cgi/content/full/10/1/62?maxtoshow=&amp;HITS=10&amp;hits=10&amp;RESULTFORMAT=&amp;fulltext=children+risk&amp;andorexactfulltext=and&amp;searchid=1&amp;FIRSTINDEX=0&amp;sortspec=relevance&amp;resourcetype=HWCIT</a> |
| <b>Accessed:</b>   | <b>28 April 2006</b>  |

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| <b>Title:</b>  | <b>Identifying Factors that Relate to Children's Risk-Taking Decisions</b>  |
| <b>Publisher:</b>  | <b><i>Canadian Journal of Behavioral Science</i>, October 2004, Vol. 36, No. 4, 255-266</b>   |
| <b>Author (s):</b>   | <b>B.A. Morrongiello and T. Dawber</b>  |
| <b>Summary of Content:</b>   |   |
| <ul style="list-style-type: none"> <li>■ Girls show higher levels of concern about injury when making risk-taking decisions than boys.</li> <li>■ The data from this study generally support the finding that risk-taking increases with age.</li> </ul> |   |
| <b>Location:</b>   | <a href="http://www.sciencedirect.com/science?_ob=MIimg&amp;_imagekey=B6X0C-4DNHX0F-1-1&amp;_cdi=7211&amp;_user=10&amp;_orig=browse&amp;_coverDate=10%2F31%2F2004&amp;_sk=999639995&amp;view=c&amp;wchp=dGLbVtb-zSkWA&amp;md5=2c96a1639594e544eb3a14bc35a1edcc&amp;ie=/sdarticle.pdf">http://www.sciencedirect.com/science?_ob=MIimg&amp;_imagekey=B6X0C-4DNHX0F-1-1&amp;_cdi=7211&amp;_user=10&amp;_orig=browse&amp;_coverDate=10%2F31%2F2004&amp;_sk=999639995&amp;view=c&amp;wchp=dGLbVtb-zSkWA&amp;md5=2c96a1639594e544eb3a14bc35a1edcc&amp;ie=/sdarticle.pdf</a> |
| <b>Accessed:</b>   | <b>07 March 2006</b>  |



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| <b>Title:</b>   | <b>Children's Risk Taking Behaviours: The Role of Child-Based Perceptions of Vulnerability and Temperament</b>  |
| <b>Publisher:</b>   | <i>Journal of Pediatric Psychology</i> , 2005, Vol. 30, No. 7, 562-570  |
| <b>Author (s):</b>  | Richard E. Boles, Michael C. Roberts, Keri J. Brown and Sunnye Mayes  |
| <b>Summary of Content:</b>  |   |
| Research with caregivers showed that children whose activity levels were higher and who perceived themselves as less vulnerable to injury were more likely to show risky behaviour in the home. |   |
| <b>Location:</b>  | <a href="http://jpepsy.oxfordjournals.org/cgi/content/full/30/7/562?maxto=show=&amp;HITS=10&amp;hits=10&amp;RESULTFORMAT=&amp;fulltext=childrenpercent27s+risk-taking+behaviors&amp;searchid=1&amp;FIRSTINDEX=0&amp;resourcetype=HWCIT">http://jpepsy.oxfordjournals.org/cgi/content/full/30/7/562?maxto=show=&amp;HITS=10&amp;hits=10&amp;RESULTFORMAT=&amp;fulltext=childrenpercent27s+risk-taking+behaviors&amp;searchid=1&amp;FIRSTINDEX=0&amp;resourcetype=HWCIT</a> |
| <b>Accessed:</b>  | 07 March 2006   |

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| <b>Title:</b>  | <b>Children's risk perception and parents' views of levels of risk that children attach to outdoor activities</b>         |
| <b>Publisher:</b>  | <i>Saudi Medical Journal</i> , 2000, Vol. 21, No. 5, 455-60   |
| <b>Author (s):</b>   | H. Soori  |
| <b>Summary of Content:</b>   |   |
| <ul style="list-style-type: none"> <li>■ Older children, boys and more economically deprived children were more likely to see potentially dangerous outdoor activities (crossing a busy road, climbing a wall, playing in the street) as safe.</li> <li>■ "These findings may partly explain the higher rate of accidental injuries among older children, boys and more deprived children. The results may inform how education of primary schoolchildren about dealing with activities such as crossing a busy road, climbing walls and playing in street and how parents should be conscious of their children's outdoor activities".</li> </ul> |   |
| <b>Location:</b>   | <a href="http://www.smj.org.sa/DetailArticle.asp?ArticleId=422">http://www.smj.org.sa/DetailArticle.asp?ArticleId=422</a> |
| <b>Accessed:</b>   | 07 March 2006   |

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| <b>Title:</b>  | <b>Risk-Taking Behaviours (young children)</b>                     |
| <b>Publisher:</b>  | <i>Every Child, Clever Kids Consultancy</i> , 2004, Vol. 10, No. 2 |
| <b>Author (s):</b>   | Mimi Wellisch  |
| <b>Summary of Content:</b>   |  |
| <ul style="list-style-type: none"> <li>■ Risk taking and violent behaviour are more common in males and children can learn such behaviour from watching others, either at home, in pre-school and school or from the media.</li> <li>■ There is evidence that viewing real or "pretend" violence as well as actions without consequences increases copycat behaviour. "This is concerning, as a recent study of children's television programmes found that there was at least one instance of unsafe, imitable behaviour without consequences (without the person being hurt) in 47 percent of these programmes".</li> <li>■ The following signs or characteristics are likely to be found in a child who engages in risk-taking behaviour:             <ul style="list-style-type: none"> <li>▪ Impulsivity:                 <ul style="list-style-type: none"> <li>- Underestimating uncertainties;</li> <li>- Overestimating the probability of a successful outcome; and</li> <li>- Seeking excitement and novelty;</li> </ul> </li> <li>▪ Learning difficulties;</li> <li>▪ Low IQ;</li> <li>▪ Fearlessness.</li> </ul> </li> <li>■ Psychologists suggest that there are a number of causes for risk-taking among young children: focussing on only selected information; seeing risks as insignificant and consequently being unable to see cause and effect and wanting to be in control over events rather than letting adults maintain control.</li> </ul> |  |



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| <b>Title:</b>    | <b>Risk-Taking Behaviours (young children)</b>   |
|                  | <ul style="list-style-type: none"> <li>■ The American Psychological Association has recommended early identification and intervention with risk taking young children. Such intervention would involve: <ul style="list-style-type: none"> <li>▪ Assessing the amount of media (including computer) violence the child is exposed to and encouraging parents to put away all violent toys, guns and super-hero figures for a time and substitute the child's risk-taking/violent media viewing with more socially constructive games and programmes; and</li> <li>▪ Parents and caregivers in early childhood settings encouraged to teach impulse control, problem solving, anger control, exploration of the difference between socially constructive and destructive risk taking and decision making techniques.</li> </ul> </li> </ul> |
| <b>Location:</b> | <a href="http://www.cleverkidsconsultancy.com/Articles/Riskpercent20Takingpercent20Behaviours.htm">http://www.cleverkidsconsultancy.com/Articles/Riskpercent20Takingpercent20Behaviours.htm</a>  |
| <b>Accessed:</b> | 07 March 2006  |

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| <b>Title:</b>  | <b>Identifying Factors that Relate to Children's Risk-Taking Decisions</b>  |
| <b>Publisher:</b>  | <b>Canadian Journal of Behavioral Science, October 2004, Vol.36, No. 4, 255-266</b>   |
| <b>Author (s):</b>   | <b>B.A. Morrongiello and T. Dawber</b>  |
| <b>Summary of Content:</b>   |   |
| <p>This study of risk-taking and young children attempted to identify factors relating to risk-taking. Key points:</p> <ul style="list-style-type: none"> <li>■ Unintentional injuries are the main cause of death to children aged two and older and result in high rates of hospitalisation and emergency department visits;</li> <li>■ For very young children, most injuries occur at home, so the attitudes and behaviours of caregivers are crucial;</li> <li>■ For children of school age, most injuries occur when they are away from home, "usually when making independent decisions about risk-taking or doing so in the company of peers";</li> <li>■ Since most injuries occur in the presence of other children, some have argued that a key factor in risk-taking and resultant injury is the interpersonal context;</li> <li>■ However, there has been very little research on this, hence the present study, which researched 40 best friend dyads among children aged seven to 10;</li> <li>■ Most parents assume that their children know what is expected and behave appropriately in high-risk situations, but again there has been very little research on this issue;</li> <li>■ There has also been very little research on whether there is a relationship between children's risk-taking behaviour and their perception of the potential fun to be experienced by the behaviour. Many education programmes that attempt to teach risk avoidance to young children simply try to increase their awareness of potential dangers;</li> <li>■ The researchers designed a laboratory task in which children had to choose between low, medium and high-risk paths when engaged in physical activities such as cycling, roller blading, crossing a stream and tobogganing. The results showed that when children were experienced in a particular activity, they rated the fun potential as higher than the danger potential, and parents assumed less chance of injury. (There is no research data to support this, that is, no studies that show that children who are more skilled in a particular physical activity are less likely to be injured);</li> <li>■ Perceived danger was associated with risk avoidance for both boys and girls, but boys were more likely to take risks in an activity that was more fun;</li> <li>■ The study also looked at children's perceptions of how their parents would want them to act. Girls were much more likely to agree to a level of risk-taking that they thought would be acceptable to their parents than boys;</li> <li>■ The study also found that best friends were able to persuade each other to change their risk-taking behaviour, in the majority of cases to increase their risk-taking. Long-term (three years) best friends were more able to persuade each other to change behaviour than short-tem friends or siblings.</li> <li>■ The study concluded that "Programmes to deter risk-taking among school-age children may benefit from expanding the focus from the individual to the broader context of friends, with the emphasis being to communicate a message of shared responsibility for safety".</li> </ul> |   |
| <b>Location:</b>   | <a href="http://www.sciencedirect.com/science?_ob=MIimg&amp;_imagekey=B6X0C-4DNHX0F-1-1&amp;_cdi=7211&amp;_user=10&amp;_orig=browse&amp;_coverDate=10%2F31%2F2004&amp;_sk=999639995&amp;view=c&amp;wchp=dGLbVtb-zSkWA&amp;md5=2c96a1639594e544eb3a14bc35a1edcc&amp;ie=/sdarticle.pdf">http://www.sciencedirect.com/science?_ob=MIimg&amp;_imagekey=B6X0C-4DNHX0F-1-1&amp;_cdi=7211&amp;_user=10&amp;_orig=browse&amp;_coverDate=10%2F31%2F2004&amp;_sk=999639995&amp;view=c&amp;wchp=dGLbVtb-zSkWA&amp;md5=2c96a1639594e544eb3a14bc35a1edcc&amp;ie=/sdarticle.pdf</a> |
| <b>Accessed:</b>   | 07 March 2006   |



### 3 Risk-Taking and Adolescents

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| <b>Title:</b>   | <b>Adolescents' perspective of transport related risk-taking and injury: Definitions, consequences and risk and protective factors</b> |
| <b>Publisher:</b>   |  |
| <b>Author (s):</b>  | <b>Lisa Buckley</b>  |
| <b>Summary of Content:</b>  |  |
| <p>"Injury is the leading cause of death for adolescents in Australia. This is of particularly great concern as the leading cause of these injuries (those that are transport related) could be largely preventable by reducing risk-taking behaviour. In order to reduce such behaviour, effective road safety interventions should seek the input of the target participants. A series of focus groups were conducted with 30 high-risk adolescents, to seek information on their understanding of transport related risk-taking and injury. Primarily risk-taking involved car use, motorbike use, bicycle use, pedestrian behaviour and skateboarding. Further alcohol and drug use in the context of such behaviours were frequently reported. Most injuries were minor (for example, cuts and bruises) however participants identified more serious injury consequences (for example, head injuries and miscarriage). It was also found that the risk-taking was done in the context of peers, who exert a direct and indirect pressure to conform. Multiple risk and protective factors were also identified related to the individual and their environment. The results will be further discussed in terms of the value of seeking target participants' perspective of road safety issues and how this information will be used to design a prevention program".</p> |  |
| <b>Location:</b>  | <a href="http://eprints.qut.edu.au/archive/00003886/">http://eprints.qut.edu.au/archive/00003886/</a>                                  |
| <b>Accessed:</b>  | <b>16 May 2006</b>   |

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| <b>Title:</b>   | <b>Risk Behaviours in Adolescence</b>                  |
| <b>Publisher:</b>   | <b>Child Study Center, Sept-Oct 1998, Vol. 3, No.1</b> |
| <b>Author (s):</b>  |  |
| <b>Summary of Content:</b>  |  |
| <p>Risk behaviours are the main cause of morbidity and death in youth aged 12 to 21. "Risk behaviours are the choices, actions and events that threaten an adolescent's health." They increase the likelihood that he or she will experience physical or mental disability or death through illness or injury. The most significant behaviours include:</p> <ul style="list-style-type: none"> <li>■ Abuse of substances such as drugs, alcohol and tobacco;</li> <li>■ Sexual activity;</li> <li>■ Interpersonal violence;</li> <li>■ Carrying weapons;</li> <li>■ Self-harm and suicidal actions;</li> <li>■ Health habits such as poor nutritional and eating practices, lack of exercise;</li> <li>■ Failure to follow safety rules, to operate vehicles safely, and to use safety equipment.</li> </ul> <p><b>Classification of Risk Behaviours</b></p> <p>"Acute risk behaviours are those that place the young person in danger of serious bodily injury, e.g. involvement in interpersonal violence, while chronic risk behaviours are long-term, less visible behaviours, such as beer drinking. Risk behaviours can be intentional, e.g. carrying weapons or unintentional, e.g. car crashes, but it is sometimes difficult to distinguish between the two".</p> <p><b>Prevalence</b></p> <p>The high costs – social, emotional, physical and economic – of risk-taking behaviour to young people themselves and their parents and communities have resulted in the Center for Disease Control (CDC) giving the study of such behaviours high priority.</p> <p>A summary of recent research on high school students, based on anonymous self-reports, gave the following results:</p> <ul style="list-style-type: none"> <li>■ 33 percent engaged in episodes of heavy drinking;</li> <li>■ 52 percent used alcohol;</li> <li>■ 39 percent had been in a vehicle with a driver affected by alcohol;</li> <li>■ 20 percent had carried a weapon;</li> <li>■ 24 percent had seriously thought about attempting suicide;</li> <li>■ 46 percent of sexually active students did not use condoms.</li> </ul> |  |



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| <b>Title:</b>  | <b>Risk Behaviours in Adolescence</b>   |
| <p><b>Risk Factors:</b></p> <ul style="list-style-type: none"> <li>■ Poverty;</li> <li>■ Lack of access to health care;</li> <li>■ Homelessness;</li> <li>■ Minority status.</li> </ul> <p>“The presence of firearms in the house is associated with an increased risk for suicide and violence.”</p> <p><b>Risk Behaviours and Normal Behaviour</b></p> <p>Some exposure to risky situations is part of normal adolescent development, allowing young people to develop ways of making decisions about situations that they may face throughout their lives. Developing independence and learning how to make decisions is part of growing up. However, there is no way of knowing whether a particular young person is ready to handle a particular risk safely.</p> <p><b>Risk Behaviours</b></p> <p>Recurring and severe risk behaviours may be signs of mental illness. Violent behaviour and weapons use may be signs of developing mental disorders.</p> <p><b>Preventing and Reducing Risks</b></p> <p>Young people need to learn how to make choices for themselves, based on the consequences. Part of growing up is increased independence from parents and other adults, and therefore greater opportunities for risk-taking. The kinds of decisions that young people will make in risky situations partly depend on their previous experiences.</p> <p>Developmental needs of teenagers:</p> <ul style="list-style-type: none"> <li>■ Ages 11-15: Need to be involved in more activities with less supervision by adults – involvement in school or community groups ensures some level of supervision, as does participation in after school programmes;</li> <li>■ Ages 16-19: Need to spend more time away from adults, therefore increasing the level of risk in such activities as driving.</li> </ul> <p><b>Role of Families</b></p> <p>Families where young people spend time with parents, share activities and respond to expectations for good academic performance are protected from excessive risks. Parents are also significant as role models. Clearly if a parent owns a weapon and does not store it safely, this will influence the attitudes and behaviour of young people. The more safe and healthy behaviour children have learned in their early years within the family, the more likely they are to make good decisions and avoid risky behaviour. As young people grow up, the role of the peer group can take on a bigger part in their lives; young people involved with a risk-taking peer group are more likely to take risks and not discuss such situations with their parents.</p> <p><b>Protective role of responsible adults</b></p> <p>Even if a young person is influenced by a negative peer group and life circumstances, involvement with a responsible adult can have protective effects. Schools and teachers can also offer protection to such young people. It is still not clear if specific interventions consistently reduce risk behaviour and the resultant negative outcomes. More research is needed in this area.</p> <p><b>Role of Health Professionals</b></p> <p>In the USA health professionals have taken a pro-active role in trying to prevent injuries to young people, in particular through counselling, supporting parents as role models for healthy behaviour and reducing the availability of firearms.<sup>10</sup></p> <p><b>Conclusion</b></p> <p>“Risk behaviours are often a sign of normal adolescent exploration that can be discussed, understood and eliminated before harm occurs”. However, adults should be alert to the fact that persistent risk taking may be a sign of deeper problems.</p> |   |
| <b>Location:</b>   | <a href="http://www.aboutourkids.org/aboutour/letter/1998/sep_oct.pdf">http://www.aboutourkids.org/aboutour/letter/1998/sep_oct.pdf</a> |
| <b>Accessed:</b>   | 23 October 2006   |

<sup>10</sup> Guidelines have been developed by the American Medical Association and the Centers for Disease Control.



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| <b>Title:</b>   | <b>Will I Be Alive in 2005? Adolescent Level of Involvement in Risk Behaviors and Belief in Near-Future Death</b>                          |
| <b>Publisher:</b>   | <b><i>Pediatrics</i>, 2005, Vol. 116, No. 1, 24-31</b>   |
| <b>Author (s):</b>  | <b>Ada Valadez-Meltzer, Tomas J. Silber, Arthur A. Meltzer and Lawrence J. D'Angelo</b>  |
| <b>Summary of Content:</b>  |  |
| <ul style="list-style-type: none"> <li>■ There is a general finding that if a young person has several risk factors then their general level of risk is higher. There is increasing evidence that risk behaviours in adolescents tend to occur together, especially for boys, and older youths.</li> <li>■ This study looked at the association between adolescents' belief in their future mortality and various risk behaviours: alcohol use and drink driving, use and selling of drugs, carrying a gun and injury by a weapon within the last year. The subjects were 2694 urban black youths, aged 15 to 21.</li> <li>■ The results showed that 160 young people, 7.1 percent of the boys and 5.4 percent of the girls, believed that they would die within the next two years. The researchers had already identified such young people through their clinical work:<br/><br/>                     "In our clinical encounters, we became aware that many of our patients held a belief that their life would be cut short. They described vividly the conviction that their misery and threatening surroundings would not allow them to make things better for themselves. We could see them developing an attitude of hopelessness combined with increasing involvement in risky behaviors (e.g., drug and alcohol use, violent physical and criminal acts)".<sup>11</sup> </li> <li>■ The study was based on a survey, to which more girls (67.4 percent) than boys (32.6 percent) responded.</li> <li>■ The study found that higher odds of belief in their death in the near future were consistently associated with higher levels of risk-taking behaviour. Of particular relevance for the issue of small arms and young people, the study found that the strongest association was with adolescents who both carried a gun and reported having been injured by a gun.</li> <li>■ The findings of this study do not support the view that adolescents' minimize or misinterpret the degree of risk involved in a particular behaviour. The researchers suggest that these young people may have made an exaggerated assessment of the likelihood of their own death, based on a distorted view of the frequency of violent deaths in their communities.<br/><br/>                     "Thus, it is possible for those adolescents to think that a truncated life is a universal and unavoidable phenomenon. This would fit with the knowledge that lack of safety, security, and hope does not allow for long-term plans, when adolescents are convinced that 'nothing is ever going to change' and may be the road that leads to the high-risk behaviors".                 </li> <li>■ The authors conclude that although these finding cannot be generalised, they do suggest the need for health professionals to include questions about adolescents' beliefs in an early death when there is a pattern of high risk behaviours.</li> </ul> |  |
| <b>Location:</b>  | <b><a href="http://pediatrics.aappublications.org/cgi/reprint/116/1/24">http://pediatrics.aappublications.org/cgi/reprint/116/1/24</a></b> |
| <b>Accessed:</b>  | <b>23 October 2006</b>   |

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| <b>Title:</b>  | <b>Adolescent Risk and Vulnerability: Concepts and Measurement</b>                 |
| <b>Publisher:</b>  | <b>The National Academies Press, Washington</b>                                    |
| <b>Author (s):</b>   | <b>Baruch Fischhoff, Elena O. Nightingale and Joah G. Iannotta, <i>Editors</i></b> |
| <b>Summary of Content:</b>   |  |
| <ul style="list-style-type: none"> <li>■ Downloadable book on adolescents and risk.</li> <li>■ Extensive discussion of ways of measuring adolescent risk and vulnerability about issues such as violence, disease, the substance use and sexuality.</li> <li>■ The issue of adolescents and risk is a serious one, as adolescents "do not always act in ways that serve their own best interests, even as defined by them".</li> <li>■ There is solid research evidence that adolescents have different perceptions of risk from adults, and that what adults say about the probability of harm from a risky behaviour may even have the opposite meaning to adolescents.</li> <li>■ Previous approaches to risk taking in young people include a developmental psychosocial model (Levitt et al., 1991). This model encompasses three elements: knowledge about the risk, management skills to deal with it and the personal meaning of the risk, all within a developmental perspective. The developmental changes in the personal meaning of risks are of particular relevance here.</li> </ul> |  |

<sup>11</sup> Op. cit., p. 24.





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| <b>Title:</b>    | <b>Adolescent Risk and Vulnerability: Concepts and Measurement</b>  |
|                  | <ul style="list-style-type: none"> <li>■ They both underestimate and overestimate the risks of particular actions or behaviours.</li> <li>■ The conventional view is that adolescents engage in risks because they feel invulnerable, but equally they may do so because they feel vulnerable to the point of hopelessness.</li> <li>■ Young people have serious concerns about the economy and other issues.</li> <li>■ “Adolescents today face complex and changing environments in which many things can go right and wrong. If we are to serve and protect them, we must have a full appreciation of these environments as well as society’s opportunities to shape them. Research that can conceptualize, measure, and evaluate the total burden of adolescent vulnerability is sorely needed”.</li> </ul> |
| <b>Location:</b> | <a href="http://www.nap.edu/catalog/10209.html">http://www.nap.edu/catalog/10209.html</a>   |
| <b>Accessed:</b> | 07 July 2006  |

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| <b>Title:</b>              | <b>Risk-taking behaviour of young women in Australia: screening for health-risk behaviours</b>   |
| <b>Publisher:</b>          | <i>Medical Journal of Australia</i> , 2003, Vol. 178, No. 12, 601-604  |
| <b>Author (s):</b>         | Michael R.C. Carr-Gregg, Kate C. Enderby and Sonia R. Grover   |
| <b>Summary of Content:</b> |  |
|                            | <ul style="list-style-type: none"> <li>■ “Adolescence is a time of great change, when young people take on new roles and responsibilities, renegotiate relationships with adults, peers and the community, and experiment with things symbolic of adult life. These developmental tasks are often accompanied by the adoption of risk-taking behaviours that compromise health. Healthy risk-taking is a positive tool in an adolescent’s life for discovering, developing, and consolidating <b>his or her identity</b>. It is the extent to which an adolescent engages in health-risk behaviours, and the overall impact of these behaviours on personal health and development, that are of increasing public health concern. The research suggests that young people who participate in multiple risk-taking behaviours increase the chance of damaging their health”.</li> <li>■ In looking at adolescents’ risk taking behaviour, it is important to be aware of ‘the four worlds of the adolescent’: family; school; peer and inner.</li> <li>■ “Known risk factors for health-risk behaviour of adolescents include:             <ul style="list-style-type: none"> <li>▪ Poverty;</li> <li>▪ Poor academic performance;</li> <li>▪ Role models for antisocial/deviant behaviour;</li> <li>▪ Low self-esteem, a sense of hopelessness;</li> <li>▪ Family history of mental and physical health problems.</li> </ul> </li> <li>■ Protective factors include:             <ul style="list-style-type: none"> <li>▪ Attachment to an adult carer (possibly a healthcare provider);</li> <li>▪ Independence and competency;</li> <li>▪ High aspirations with adult support;</li> <li>▪ Effective schooling; connectedness with teachers;</li> <li>▪ Good health;</li> <li>▪ Motivation to access resources”.</li> </ul> </li> </ul> |
| <b>Location:</b>           | <a href="http://www.mja.com.au/public/issues/178_12_160603/car10800_fm.html">www.mja.com.au/public/issues/178_12_160603/car10800_fm.html</a>   |
| <b>Accessed:</b>           | 09 May 2006  |





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| <b>Title:</b>  | <b>Adolescent perceptions of their risk-taking behaviour</b>   |
| <b>Publisher:</b>  | <b>Adolescence, Fall, 1994</b>   |
| <b>Author (s):</b>   | <b>Jeanette Gonzalez</b>   |
| <b>Summary of Content:</b>   |  |
| <ul style="list-style-type: none"> <li>■ Report on a study that showed that driving behaviours which adults regarded as 'risky' (driving fast, driving too close to the vehicle in front, driving through yellow lights) was often seen as 'good' by young drivers. While it seems that adolescents have different interpretations of risk, they can also discriminate risky behaviours. This raises the question of why adolescents engage in risky behaviours that they know are dangerous. It may be that they are either deliberately seeking out danger or are prevented from seeing the severity by the belief in their own immunity from negative consequences (called the 'personal fable' by the well-known developmental psychologist, Elkind).</li> <li>■ Gonzalez quotes Jessor and Jessor (1977), who suggest that risky behaviour allows young people to: <ul style="list-style-type: none"> <li>▪ "Take control of their lives;</li> <li>▪ Express opposition to adult authority and conventional society;</li> <li>▪ Deal with anxiety, frustration, inadequacy, and failure;</li> <li>▪ Gain admission to peer groups and demonstrate identification with a youth subculture;</li> <li>▪ Confirm personal identity;</li> <li>▪ Affirm maturity and mark a developmental transition into young adulthood".</li> </ul> </li> <li>■ The authors link this set of behaviours with the concept of 'sensation seeking', following Zuckerman. Their finding that young people who engage in one risk behaviour are more likely to engage in others has been confirmed by subsequent research. Their own research showed that substance abuse, precocious sexual intercourse, minor delinquency, aggressiveness and social risk-taking were consistently interrelated.</li> <li>■ It seems obvious that such young people would also take risks by using guns.</li> <li>■ Gonzalez' study supported the view that there is a category of young people who are general risk takers, both in terms of engaging in dangerous/risky sports and reporting other dangerous behaviours. However, it is not clear if they actually engage in such behaviour, or merely report it, reflecting 'bravado' or misplaced courage.</li> </ul> |  |
| <b>Location:</b>   | <b><a href="http://www.findarticles.com/p/articles/mi_m2248/is_n115_v29/ai_16423342">http://www.findarticles.com/p/articles/mi_m2248/is_n115_v29/ai_16423342</a></b> |
| <b>Accessed:</b>   | <b>09 May 2006</b>   |

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| <b>Title:</b>  | <b>Community based intervention on adolescent risk taking: using research for community action</b> |
| <b>Publisher:</b>  | <b>Injury Prevention, 1998, Vol. 4, 58-61</b>  |
| <b>Author (s):</b>   | <b>Carolyn Coggan, Barbara Disley and Pam Patterson</b>  |
| <b>Summary of Content:</b>   |  |
| <ul style="list-style-type: none"> <li>■ Internationally and in New Zealand, injury is the main cause of adolescent death.</li> <li>■ Adolescence is a time when risk-taking is at a maximum: not wearing bicycle or motorbike helmets and seatbelts, drink-driving, substance abuse, unprotected sexual intercourse, physical violence and self-mutilation.</li> <li>■ Recent research has shown that these behaviours may be interrelated.</li> <li>■ A comprehensive approach targeting adolescent risk-taking in general may be more effective than approaches focusing on specific injury problems.</li> <li>■ The study was based on a community action model of research, which looks at issues in context, uses local data as it has more impact on the community than general national data, and involves the local community in tackling its own problems.</li> <li>■ A community meeting decided that risk-taking involving alcohol should be the focus.</li> <li>■ The programme had four components: advocacy, education, legal/regulatory change and environmental modification.</li> <li>■ Only one specifically targeted guns: support for regulations to restrict carrying of weapons by adolescents.</li> <li>■ Results: the time frame (18 months) was short for a community-based intervention; employment of two community organisers raised awareness of adolescent risk-taking and ensured that local institutions took a greater part in injury prevention.</li> </ul> |  |



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| <b>Title:</b>    | <b>Community based intervention on adolescent risk taking: using research for community action</b>  |
|                  | <ul style="list-style-type: none"> <li>In conclusion, the researchers stated that the project: "Illustrated how providing a community with information can act as a stimulus for the development of injury prevention initiatives. It also suggests that using a comprehensive approach focusing on risk taking behaviour rather than on isolated unintentional or intentional injury problems may be an appropriate way to address escalating adolescent injury rates".</li> </ul> |
| <b>Location:</b> | <a href="http://ip.bmj.com/cgi/content/full/4/1/58?maxtoshow=&amp;HITS=10&amp;hits=10&amp;RESULTFORMAT=&amp;fulltext=adolescent+risk&amp;andexactfulltext=and&amp;searchid=1&amp;FIRSTINDEX=0&amp;sortspec=relevance&amp;resourcetype=HWCIT">http://ip.bmj.com/cgi/content/full/4/1/58?maxtoshow=&amp;HITS=10&amp;hits=10&amp;RESULTFORMAT=&amp;fulltext=adolescent+risk&amp;andexactfulltext=and&amp;searchid=1&amp;FIRSTINDEX=0&amp;sortspec=relevance&amp;resourcetype=HWCIT</a> |
| <b>Accessed:</b> | 09 May 2006   |

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| <b>Title:</b>              | <b>Adolescents and Risk-Taking: A 'Very Likely' Danger May Not Mean the Same to a Teen as to an Adult</b>   |
| <b>Publisher:</b>          | <b>University of California, San Francisco</b>  |
| <b>Author (s):</b>         |   |
| <b>Summary of Content:</b> |   |
|                            | <ul style="list-style-type: none"> <li>Reports on a study by Halpern-Felshar &amp; Biehl, 1999, in the USA that showed that adolescents interpret such terms as 'likely', 'rarely' and even 'never' differently from adults in the context of information and advice about potential risks/harm.</li> <li>Adults interpreted the phrase "will definitely happen" as meaning that there was a 97 percent chance the event would happen, whereas young people in grades nine and seven (ages 15 and 13) thought the probability was 86 percent and 81 percent respectively.</li> <li>Children in fifth grade (11 years) thought an event that "will definitely happen" was only 69 percent likely to happen. There was a large range of judgments within each age group – up to 25 points.</li> <li>This study was based on a small sample size, but it is clear that children do not necessarily understand risk information that adults give to them in the same way, and that different children understand such information in different ways.</li> </ul> |
| <b>Location:</b>           | <a href="http://pub.ucsf.edu/newsservices/releases/2004010757/">http://pub.ucsf.edu/newsservices/releases/2004010757/</a>   |
| <b>Accessed:</b>           | 16 May 2006   |

## 4 Gender and Risk-Taking

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| <b>Title:</b>              | <b>Gender Differences in Risk Taking: A Meta-Analysis</b>   |
| <b>Publisher:</b>          | <b><i>Psychological Bulletin</i>, 1999, Vol. 125, No. 3, 367-383</b>  |
| <b>Author (s):</b>         | <b>James P. Byrnes, David C. Miller and William D. Schafer</b>  |
| <b>Summary of Content:</b> |   |
|                            | <p>Byrnes and colleagues reviewed 150 studies relating to gender and risk-taking. The risk-taking studied included hypothetical choices, self-reported behaviour and observed behaviour. The self-reported behaviours included drinking and drugs, driving, sexual activities, smoking and 'other'. The findings of the study were:</p> <ul style="list-style-type: none"> <li>That male participants consistently took more risks than females;</li> <li>Gender differences varied with age and context.<sup>12</sup> For example, risky driving was more likely among males, and increased with age, and generally males were more likely to take risks driving, than females;</li> <li>There was an apparent lack of discernment among men and boys, that is, males took more risks even when it was clearly a bad idea. (Females took fewer risks even in apparently safe situations, and thus experienced less success);</li> <li>There were developmental increases in risk-taking and therefore of the gender gap;</li> <li>The increase in the gender gap with age is due to:             <ul style="list-style-type: none"> <li>Biological maturation;</li> <li>Cognitive scope (e.g. future time perspective);</li> <li>Self-perceptions (e.g. self-esteem);</li> <li>Perceptions of the social environment (e.g. parental and peer influences);</li> </ul> </li> </ul> |

<sup>12</sup> *Psychological Bulletin*, 1999, Vol. 125, No. 3, p. 377.



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| <b>Title:</b>    | <b>Gender Differences in Risk Taking: A Meta-Analysis</b>   |
|                  | <ul style="list-style-type: none"> <li>▪ Personal values (e.g. independence);</li> <li>▪ Risk perception (e.g. optimistic bias); and</li> <li>▪ Characteristics of the peer group (e.g. peer age).</li> </ul> |
| <b>Location:</b> | <a href="http://content.apa.org/journals/bul/125/3/367.html">http://content.apa.org/journals/bul/125/3/367.html</a>   |
| <b>Accessed:</b> | <b>07 March 2006</b>  |

## 5 Other Risk Behaviours

### 5.1 Alcohol Use

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| <b>Title:</b>  | <b>Reducing Underage Drinking: A Collective Responsibility</b>                                |
| <b>Publisher:</b>  | <b>Board on Children, Youth and Families, National Research Council, 2004</b>                 |
| <b>Author (s):</b>   | <b>Richard J. Bonnie and Mary Ellen O'Connell, <i>Editors</i></b>                             |
| <b>Summary of Content:</b>   |   |
| <ul style="list-style-type: none"> <li>■ There are some similarities between the issue of alcohol and gun access/use among adolescents: both are illegal for under 18s, but young people report that it is easy to access alcohol (and guns), sometimes even from trusted adults, and both are depicted in positive terms in the media: as 'cool', grown-up, sexy, etc.</li> <li>■ In the USA the Board on Children, Youth and Families of the National Research Council conducted research on the risks of alcohol use among adolescents. Their main finding can be directly applied to the situation of weapons/guns and young people:</li> <li>■ "The committee reached the fundamental conclusion that underage drinking cannot be successfully addressed by focusing on youth alone. Youth drink within the context of a society in which alcohol use is normative behaviour and images about alcohol are pervasive. They usually obtain alcohol—either directly or indirectly—from adults. Efforts to reduce underage drinking, therefore, need to focus on adults and must engage the society at large".</li> <li>■ The Committee identified ten elements for a national strategy to reduce under-age drinking: <ol style="list-style-type: none"> <li>1. National Adult-oriented Media Campaign – most adults support a reduction in under-age drinking, but most young people obtain alcohol from adults and parents seriously underestimate the extent of alcohol use by their children;</li> <li>2. Partnership to Prevent Underage Drinking – among all parties;</li> <li>3. Alcohol Advertising;</li> <li>4. Entertainment Media – the media has a social responsibility not to portray under age drinking as glamorous or in any way desirable;</li> <li>5. Limiting Access;</li> <li>6. Youth-Oriented Interventions – although the main focus of the strategy is towards adults some activities to target youth are indicated. "A national youth-oriented media campaign to reduce and prevent underage drinking would be premature in the absence of more evidence supporting this approach. Interventions that rely on provision of information alone, or that focus on increasing self-esteem or resisting peer pressure, have not been demonstrated to be effective." The committee supports education programmes in schools and other settings where youth congregate, but makes it clear that funding should only be available for evidence-based interventions, using messages known to be effective, and part of comprehensive community-based programmes;</li> <li>7. Community-based Interventions;</li> <li>8. Government Assistance and Coordination;</li> <li>9. Alcohol Excise Taxes;</li> <li>10. Research and Evaluation.</li> </ol> </li> </ul> |   |
| <b>Location:</b>   | <a href="http://books.nap.edu/catalog/10729.html">http://books.nap.edu/catalog/10729.html</a> |
| <b>Accessed:</b>   | <b>16 May 2006</b>  |



## 5.2 Smoking

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| <b>Title:</b>  | <b>For adolescents, antismoking ads are flickering flame against smoking's allure</b>                              |
| <b>Publisher:</b>  | <b><i>Monitor on Psychology</i>, September 2001, Vol. 23, No. 8</b>  |
| <b>Author (s):</b>   | <b>J. Cohen</b>  |
| <b>Summary of Content:</b>   |  |
| <ul style="list-style-type: none"> <li>■ "When young people start smoking, they do so based on positive feelings and images, not a cold calculation of the risks", new research suggests.</li> <li>■ "As adolescents age, the sense of the risk of smoking declines and their positive feelings and images of smoking rise" says Dan Romer, PhD, Research Director of the Institute for Adolescent Risk Communication at the Annenberg Public Policy Center of the University of Pennsylvania. "By creating favorable imagery, cigarette advertising lays the groundwork for smoking initiation in young people".</li> <li>■ Perception of risk plays almost no role in deterring cigarette trial while exposure to cigarette advertising is positively related to taking up smoking, according to survey results in <i>Smoking: Risk, Perception and Policy</i>, published in June by the Annenberg Public Policy Center and the American Academy of Political and Social Science.</li> </ul> |  |
| <b>Location:</b>   | <b><a href="http://www.apa.org/monitor/sep01/smoheads.html">http://www.apa.org/monitor/sep01/smoheads.html</a></b> |
| <b>Accessed:</b>   | <b>19 July 2006</b>  |

## 5.3 Fire

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| <b>Title:</b>   | <b>Playing with fire: images of fire on toy packaging</b>  |
| <b>Publisher:</b>   | <b><i>Journal of Burn Care and Research</i>, 2003, Vol. 24, No. 3, 163-165</b>                                   |
| <b>Author (s):</b>  | <b>T.B. Curri, T.L. Palmieri, T.H. Aoki, C.K. Kaulkin, M.E. Lunn, C.M. Gregory and D.G. Greenhalgh</b>           |
| <b>Summary of Content:</b>  |  |
| <ul style="list-style-type: none"> <li>■ "Despite prevention efforts designed to teach children that fire is not a toy, each year hundreds of children, primarily male, are injured while playing with fire".</li> <li>■ Mass-produced toys and games shape children's behaviours, and the fire images on toy packaging may send the message that fire is fun rather than dangerous.</li> <li>■ The purpose of this study was to determine the frequency of male fire-related injuries at the Journal of Burn Care and Research's burn centre and to investigate the use of fire images in toy packaging. An aisle-by-aisle search was conducted at a national toy store. Toys with fire images on their packaging were identified. Target gender and the setting in which the fire was displayed also were recorded. Only toys with clearly visible flames on their packaging were included.</li> <li>■ The study reviewed their TRACS database from April 1997 to May 1999 for fire-related injuries to children admitted to the institution as a result of playing with fire.</li> <li>■ Review of toy stores revealed 404 toys with packaging containing fire images. Of these, 97 percent (393 of 404) were targeted to males. Video games were the leading category of flame-related packaging (208 of 404), followed by toy car/truck displays (84 of 404).</li> <li>■ Packaging for girls' toys had safe and contained settings, whereas boys' toys used settings that were uncontrolled and associated with speed and weapons.</li> <li>■ A total of 59 children, 52 males and seven females, with a mean age of 10 +/- 0.6 years, were admitted to their facility with fire-related injuries during the study interval.</li> <li>■ Children imitate life with toys and use play to experiment with new behaviour.</li> <li>■ Boys are receiving a powerful, consistent message from images of fire on toy packaging. These advertisements may help to contribute to the higher incidence of fire-related injuries in boys.</li> </ul> |  |
| <b>Location:</b>  | <b><a href="http://www.safetylit.org/week/2003/030630.htm">http://www.safetylit.org/week/2003/030630.htm</a></b> |
| <b>Accessed:</b>  | <b>09 May 2006</b>   |



## 6 Risk Education

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| <b>Title:</b>   | <b>Using theory in curriculum development: the future selves curriculum</b>  |
| <b>Publisher:</b>   | <b>American Journal of Health Studies, Winter 2002</b>   |
| <b>Author (s):</b>  | <b>Stephen Nagy</b>  |
| <b>Summary of Content:</b>  |  |
| <ul style="list-style-type: none"> <li>■ “This paper reviews the key steps conducted to develop a curriculum designed to reduce risk-taking behaviors among junior high school students. The process that was utilized involved four stages of development. Discussion focuses on the use of theory in conceptualizing and developing materials.</li> <li>■ The rift between practitioners and researchers is frequently present when both groups interact. Practitioners by their nature are action-oriented whereas researchers are committed to the scientific process. This difference is especially apparent when one looks at theory. Practitioners tend to shy away from theory while researchers tend to emphasize it ... Subsequently, training materials designed by practitioners generally have not utilized theory in the developmental process whereas researchers tend to place a heavier emphasis on it, at least in the conceptualization phase.</li> <li>■ This paper outlines the procedures utilized to develop a curriculum designed to reduce risk-taking behaviors among young adolescents. Unique in this approach was the utilization of theory as a developing and guiding framework. Inherent in this approach was the need to justify all key decisions through a process driven by theoretical guidance. Contrary to most curricula, this project utilized theory from the ground up and at each phase of development”.</li> </ul> |  |
| <b>Location:</b>  | <b><a href="http://www.findarticles.com/p/articles/mi_m0CTG/is_1_18/ai_96267475">http://www.findarticles.com/p/articles/mi_m0CTG/is_1_18/ai_96267475</a></b> |
| <b>Accessed:</b>  | <b>16 May 2006</b>   |

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| <b>Title:</b>  | <b>Teaching Practice in Risk Education for 5-16 year olds</b>   |
| <b>Publisher:</b>  | <b>Health and Safety Laboratory, September 2004</b>   |
| <b>Author (s):</b>   | <b>Peter Shearn</b>   |
| <b>Summary of Content:</b>   |   |
| <ul style="list-style-type: none"> <li>■ Research report on UK teachers’ approaches to teaching risk, health, safety and welfare issues for school pupils (five to 16), as part of the national curriculum. Risk education aims to assist pupils to acquire risk concepts and skills before entering the workforce.</li> <li>■ There are three basic objectives associated with risk education programmes: <ol style="list-style-type: none"> <li>1. Awareness raising - strategies designed to disseminate knowledge and understanding of sources of harm;</li> <li>2. Transferable skills - progressive approaches that aim to develop transferable life skills (relating to risk assessment and control); and</li> <li>3. Behaviour modification - approaches that aim to reduce risk-taking behaviour. In the real world these overlap.</li> </ol> </li> <li>■ Education programmes are one aspect of government risk management strategies, the others being enforcement and engineering solutions.</li> <li>■ Risk education programmes are very difficult to evaluate.</li> <li>■ Rationale for risk education in UK schools: <ul style="list-style-type: none"> <li>▪ Children have had limited opportunity to gain practical knowledge and are therefore relatively less equipped to make informed decisions about risk management;</li> <li>▪ Children are perceived as vulnerable innocents;</li> <li>▪ Children have been accorded a right to knowledge about health and risks (United Nations 1989);</li> <li>▪ Education related knowledge gains are associated with the reduction in incidence of injury and ill-health;</li> <li>▪ Learning about risk management at an early age reduces the formation of bad habits and a predilection towards risk-taking; and</li> <li>▪ Schools are well equipped to educate and are a convenient way of reaching children.</li> </ul> </li> <li>■ Findings: Teachers, like the general population, are clear about the meaning of health and safety, less so, about hazard and risk. Most teachers only spent short periods of time (minutes) discussing risks.</li> </ul> |   |
| <b>Location:</b>   | <b><a href="http://www.hse.gov.uk/research/hsl_pdf/2005/hsl0523.pdf">www.hse.gov.uk/research/hsl_pdf/2005/hsl0523.pdf</a></b> |
| <b>Accessed:</b>   | <b>28 July 2006</b>   |



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| <b>Title:</b>   | <b>Driver Qualification Handbook</b>   |
| <b>Publisher:</b>   | <b>Road Traffic Authority, NSW, Australia</b>  |
| <b>Author (s):</b>  |  |
| <b>Summary of Content:</b>  |  |
| <ul style="list-style-type: none"> <li>■ A fascinating attempt to include risk education as part of driver education for young people.</li> <li>■ Analyses risks in life, data on young people and driver crashes, including age and gender analysis, risk management, self assessment of risk-taking, sensation seeking, hazard perception.</li> </ul> |  |
| <b>Location:</b>  | <a href="http://www.rta.nsw.gov.au/licensing/downloads/driverqualifictaiontest_dl1.html">www.rta.nsw.gov.au/licensing/downloads/driverqualifictaiontest_dl1.html</a> |
| <b>Accessed:</b>  | <b>18 July 2006</b>  |

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| <b>Title:</b>  | <b>Riskland: Let's learn to prevent disasters!</b>  |  |
| <b>Publisher:</b>  | <b>UNICEF &amp; UNISDR (UN International Strategy for Disaster Management)</b>  |  |
| <b>Author (s):</b>   |   |  |
| <b>Summary of Content:</b>   |   |  |
| <ul style="list-style-type: none"> <li>■ This booklet aims to provide the educational community and children with an innovative and interactive tool for risk management. Earthquakes, floods, hurricanes, volcanic eruptions and landslides are all natural phenomena that have occurred throughout the history of humankind. However, rapid population growth, environmental pollution and degradation and increased poverty, have all contributed to turning these natural phenomena into disasters that cause enormous losses in human lives, infrastructure and material belongings.</li> <li>■ Working together continually as a community can help reduce the impact of disasters. Children play a very important role in doing this by: <ul style="list-style-type: none"> <li>▪ Carrying out school activities about this issue with the participation of the community;</li> <li>▪ Teaching their families and community about natural hazards and encouraging them to take preventive measures;</li> <li>▪ Helping to establish a real and long-lasting 'culture of prevention', both through action and new attitudes. This means that when they become adults they will have a greater understanding of natural phenomena, the effects of human actions and the consequences of poor environmental management, as well as the need to promote a new kind of development in greater harmony with nature.</li> </ul> </li> <li>■ This booklet is aimed at children between the ages of eight and 12, as a supplement to materials already available in schools. Its contents can be used in the teaching of social studies, science and environmental studies, as well as in any other studies that relate to other human groups or countries.</li> <li>■ In order to make learning about disasters fun, several activities have been included, as well as an educational board game 'Riskland' to help children learn as they play.</li> <li>■ This is a joint effort of the United Nations International Strategy for Disaster Reduction (UNISDR) and the United Nations Children's Fund (UNICEF) that will prove a useful and enjoyable contribution to the learning process.</li> </ul> |   |  |
| <b>Location:</b>   | <a href="http://www.unisdr.org/eng/public_aware/world_camp/2004/pa-camp04-riskland-eng.htm">http://www.unisdr.org/eng/public_aware/world_camp/2004/pa-camp04-riskland-eng.htm</a> |  |
| <b>Accessed:</b>   | <b>27 April 2006</b>  |  |





## 6.1 Mine Risk Education

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| <b>Title:</b>   | <b>Effective mine risk education in war-zones – a shared responsibility</b>  |
| <b>Publisher:</b>   | <b><i>Health promotion International</i>, 2005, Vol. 20, No. 3, 213</b>  |
| <b>Author (s):</b>  | <b>Joanne Durham, Sue Gillieatt and Bounpheng Sisavath</b>   |
| <b>Summary of Content:</b>  |  |
| <ul style="list-style-type: none"> <li>■ This is one of the few pieces of research on mine risk education (MRE) published in a peer-reviewed journal. The study is important as there is a tendency to frame 'small arms risk education' by analogy with mine risk education.</li> <li>■ It is an empirical study of MRE practices using data collected from 1996.</li> <li>■ "The authors argue that in a country such as Lao PDR, where communities have lived with UXO infestation for over 25 years, more mine risk education is not necessarily needed. This paper concludes that common programmes of mine risk education using top-down educational methods, based on the assumption that ignorance of landmine/UXO risk is the key factor in mine accidents, are inadequate. Evidence from the literature on health promotion and the experience of the programme indicate that there is a need to supplement or replace existing common mine risk education practices with techniques that incorporate an understanding of the economic, social and political circumstances faced by communities at risk".</li> <li>■ The authors quote Wheatley (from a forthcoming paper on MRE) that "doing something" has been the main motivator for programming, rather than trying to identify and understand the factors contributing to injury and offer realistic alternative behaviours to people.</li> <li>■ Education programmes have tended to use a top-down approach.</li> <li>■ There have been few attempts to evaluate MRE programmes. As Filipino has noted, "mine risk education programmes have generally developed in an unsystematic and ad hoc manner, with little attention given to needs analysis or systematic monitoring and evaluation procedures" (Filipino, 2000).</li> <li>■ This is even more true of education and awareness programmes about small arms.</li> <li>■ The authors conclude, "risk behaviour needs to be understood as mostly a logical and strategic response to UXO contamination". In regard to small arms ownership, it is important to understand why people retain them, in the social and political context in which they live, rather than focussing on individual behaviour.</li> </ul> |  |
| <b>Location:</b>  | <b><a href="http://heapro.oxfordjournals.org/cgi/reprint/20/3/213">http://heapro.oxfordjournals.org/cgi/reprint/20/3/213</a></b> |
| <b>Accessed:</b>  | <b>10 July 2006</b>  |





## Annex A – Child Development and Risk

### CHARACTERISTICS OF GROWING CHILDREN THAT PLACE THEM AT RISK OF INJURY

Children grow and progress through stages of physical, mental and emotional development. Children are not only smaller than adults; they also see the world differently. Consider the following characteristics of children when assessing the risk of injury from weapons in the home and community. It is strongly recommended that parents and other responsible adults do not overly rely on children to always behave in ways adults consider safe, even if they have been given rules to follow, or have been in a similar situation without experiencing harm.

#### CHILD SAFETY IS AN ADULT RESPONSIBILITY

##### **1. Toddlers and small children, 0-4 years**

Small children and toddlers lack the physical and mental capacities to avoid many hazards around the home and may even be attracted to them. They are still developing their balance and are mobile, curious and determined to explore. They have no/poor concept of danger and are easily excited or confused by multiple and sudden changes. Children 3-4 years old cannot be relied upon to follow rules and children under this age cannot understand the concepts of rules or safety. They should not be exposed to hazards in the home.

##### **2. Young children, 5-9 years**

Young children may understand basic rules, but are easily distracted by play and may forget them or not apply them across situations. They seek greater independence to play and explore the world. They lack eye-hand co-ordination and have difficulty being able to adapt or react if circumstances suddenly change. They are not ready to play in any environment where there is potential danger.

##### **3. Older children and young teenagers 10 -14 years**

Older children may have better co-ordination, but can have lapses of awkwardness. They want to prove themselves as independent and capable and may try to impress parents or peers or try out new skills without adult supervision. They lack the co-ordination and judgment skills to act quickly if something out of the ordinary were to happen. They also lack a sense of caution and have unfounded confidence in their own abilities – so they may begin to engage in risk taking behaviour.<sup>13</sup>

<sup>13</sup> Source: [www.farmsafe.org.au/images/pdfs/ripper.pdf?=childsafety](http://www.farmsafe.org.au/images/pdfs/ripper.pdf?=childsafety), accessed 17 July 2006.



## Annex B – Pamphlets prepared in the USA for Parents on Adolescents and Risk Taking<sup>14</sup>

### GUIDING A CHILD OR TEEN IN RISK ASSESSMENT

Prepared by Lynn E. Ponton, M.D.

- (1) Healthy risk-taking is a positive tool in an adolescent's life for discovering, developing, and consolidating his or her identity.
- (2) It is important to remember that learning how to assess risks is a process that we work on throughout our lives. Children and adolescents need support, tools, and practice in order to do this.
- (3) Young children give clues about how they do or don't take risks (e.g. how they ride a bike or skateboard, how they handle a new social situation). These clues contribute to styles or patterns of risk-taking.
- (4) Although there are many styles, certain patterns can be seen, such as the cautious risk-taker, the middle-of-the-roader, the adventurer or high-end risk-taker, the teen whose risk-taking increases when he or she is with friends.
- (5) Risk-taking can be accelerated in one area - social, physical, intellectual, artistic, or sexual, for example - and not in others.
- (6) Helping a child or teen understand or define his or her own risk-taking pattern is important.
- (7) This includes helping the child understand how and why he or she makes both healthy and unhealthy choices. Questions to ask:
  - Do you feel pressured to make risky choices by friends?
  - Do you rush into decisions?
  - Do you think it is 'uncool' to try things in a safe manner?
  - Are dangerous risks more exciting? Do they feel more like you?
  - Do you make dangerous choices to show others?
  - Does it feel as though it's happening 'in a dream' when you make dangerous choices?
- (8) Role-playing risk assessment with children and teens is crucial. Have them try out different roles.
- (9) Adults can share what we have learned about risk-taking. A non-judgmental and non-bragging manner is most helpful. It is often most important to share feelings and mistakes.
- (10) Risk-taking can be practiced and learned in healthy, supportive situations.

<sup>14</sup> Source: <http://www.middleweb.com/adolesrisk.html>, accessed 17 July 2006.

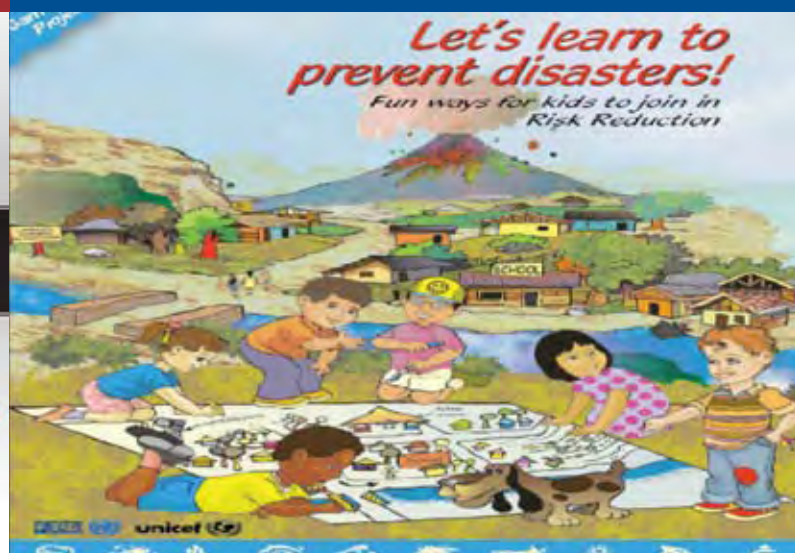


### TEN TIPS FOR PARENTS: Understanding Your Adolescent's Behaviour

*The Romance of Risk: Why Teenagers Do the Things They Do by Lynn E. Ponton, M.D. (Basic Books, 1997)*

- (1) "All teenagers take risks as a normal part of growing up. Risk-taking is the tool an adolescent uses to define and develop his or her identity, and healthy risk-taking is a valuable experience.
- (2) Healthy adolescent risk-taking behaviours which tend to have a positive impact on an adolescent's development can include participation in sports, the development of artistic and creative abilities, volunteer activities, travel, running for school office, making new friends, constructive contributions to the family or community, and others. Inherent in all of these activities is the possibility of failure. Parents must recognize and support their children with this.
- (3) Negative risk-taking behaviours, which can be dangerous for adolescents, include drinking, smoking, drug use, reckless driving, unsafe sexual activity, disordered eating, self-mutilation, running away, stealing, gang activity, and others.
- (4) Unhealthy adolescent risk-taking may appear to be "rebellion" -- an angry gesture specifically directed at parents. However, risk-taking, whether healthy or unhealthy, is simply part of a teen's struggle to test out an identity by providing self-definition and separation from others, including parents.
- (5) Some adolescent behaviours are deceptive -- a teen may genuinely try to take a healthy risk that evolves into more dangerous behaviour. For example, many adolescent girls fail to recognize the trap of dieting and fall into a pattern of disordered eating, sometimes even developing a full eating disorder. Parents need to be well informed in order to help their adolescents with such struggles.
- (6) Red flags which help identify dangerous adolescent risk-taking can include psychological problems such as persistent depression or anxiety which goes beyond more typical adolescent "moodiness"; problems at school; engaging in illegal activities; and clusters of unhealthy risk-taking behaviours (e.g., smoking, drinking and driving recklessly might be happening at the same time, as might disordered eating and self-mutilation, or running away and stealing).
- (7) Since adolescents need to take risks, parents need to help them find healthy opportunities to do so. Healthy risk-taking, not only important in itself, can help prevent unhealthy risk-taking.
- (8) Adolescents often offer subtle clues about their negative risk-taking behaviours through what they say about the behaviours of friends and family, including parents. Parents often stay silent about their own histories of risk-taking and experimenting, but it can be important to find ways to share this information with adolescents in order to serve as role models, to let teens know that mistakes are not fatal, and to encourage making healthier choices than those the parent may have made during his or her own adolescence.
- (9) Adolescents look to their parents for advice and modelling about how to assess positive and negative risks. Parents need to help their teens learn how to evaluate risks and anticipate the consequences of their choices, and develop strategies for diverting their energy into healthier activities when necessary.
- (10) Parents need to pay attention to their own current patterns of risk-taking as well. Teenagers are watching, and imitating, whether they acknowledge this or not."

**LAKO ORUŽJE**  
**TEŽAK PROBLEM**



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**SEESAC**

South Eastern and Eastern Europe Clearinghouse  
for the Control of Small Arms and Light Weapons

Internacionalnih Brigada 56, 11 000 Belgrade, Serbia  
Tel. (+381) (11) 344 6353 / Fax. (+381) (11) 344 6356  
URL: [www.seesac.org](http://www.seesac.org) / Email: [info@seesac.org](mailto:info@seesac.org)