The Future of Research on Evidence-based Developmental Violence Prevention in Europe – Introduction to the Focus Section

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Across Europe, there is an increasing demand for good evidence that can inform policies aimed at reducing violence against and among children and adolescents. However, there are wide differences between countries in the extent to which research supports prevention policy: In some countries evidence-based principles have become an important basis for policy implementation. In others, the underlying principles of evidence-based prevention are hardly known among policy-makers.

Overall, significant progress has been made: Across northern Europe, in particular, the past ten years have seen policy-makers increasingly interested in evidence-based prevention and intervention. In the United Kingdom, for example, the recent Allen Report on Early Intervention (Allen 2011) – which makes a strong case for evidence-based early prevention of child maladjustments – demonstrates broad support for research-based strategies to promote children’s development. Also, centres such as the Centre for Evidence-Based Intervention (Oxford), the Centre for Evidence-Based Early Intervention (Bangor), the National Evaluation of Sure Start (Birkbeck College), and the Centre of Experimental Criminology (Cambridge) are home to internationally recognized prevention research conducted in the United Kingdom. Major foundations such as the Dartington Foundation in the United Kingdom, Atlantic Philanthropies in Ireland, and the Jacobs Foundation in Switzerland have also committed significant resources to supporting research on evidence-based prevention. Scandinavian countries, as so often, lead the way. In Sweden, for example, the government has identified the dissemination of evidence-based research knowledge into mainstream services as a major challenge, and the Swedish government now considers evidence-based practice as an essential vehicle for improving the quality of care and services. Finally, there are encouraging signs of increased European co-operation: the European Crime Prevention Network, founded in 2001, is committed to identifying and disseminating good practice in crime prevention. Since 2006, the Stockholm Symposium of Criminol-
ogy has brought together policy-makers, practitioners, and researchers with the goal of finding better ways of reducing violence and crime. And in 2009, almost twenty years after its American sister organisation, the *European Society of Prevention Research* was founded.

Despite undeniable progress and increasing interest amongst governments in understanding how violence prevention can be made more effective, daunting challenges persist. To address some of these the *Institute of Criminology at the University of Cambridge* organized a conference on Evidence-Based Prevention of Bullying and Youth Violence: European Innovations and Experiences on 5 and 6 July 2011. Supported by the *European Science Foundation* and the *Jacobs Foundation*, its purpose was to bring together researchers, policy-makers, and practitioners to discuss innovative research. The conference also sought to identify areas where progress is essential to provide policy-makers with better knowledge about how to support positive child development and reduce the substantial harm resulting from violence and aggression.

1. What is the Issue?

The perpetration of bullying and aggression by young people is a widespread problem in Europe. According to the 2005/6 *Health Behaviour of School-Aged Children* survey, which covers almost all countries in Europe, an average of 42 percent of eleven-year olds and 35 percent of fifteen-year olds reported having been involved in a physical fight at least once during the previous twelve months (Currie et al. 2008). Aggressive behaviour can have serious and long-term negative effects on young people’s health and emotional well-being. For example, children and adolescents actively involved in bullying and violence are at a significantly greater risk of later problem behaviours such as substance abuse, academic failure, unemployment, and criminal convictions (Fergusson, Horwood, and Ridder 2005; Loeber and Hay 1997).

Violence is also an important source of suffering amongst victims. According to the same *Health Behaviour of School-Aged Children* survey, 37 percent of eleven-year olds and 27 percent of fifteen-year olds reported having been the victim of bullying at least once during the previous couple of months. Experiences of violent victimisation have been found to be associated with a range of negative effects including social withdrawal, academic difficulties, substance use, and future anxiety and depressive symptoms (Averdijk et al. 2009; Ttofi et al. 2011).

Over the past ten years, new forms of coercive and threatening behaviour have emerged while others may have declined. For example, cyber-bullying (threatening or hurtful behaviour towards the victim via electronic media) has become a serious problem in line with increasing use of social media and mobile telephones (Perren et al. 2012; Slonje and Smith 2008). Also, sexually coercive behaviours among adolescents are emerging as a pressing issue (Averdijk, Mueller-Johnson, and Eisner 2011).

2. General Principles of Effective Prevention

Due to the high numbers of children and adolescents involved in violence, the significant negative consequences for victims and perpetrators, and the emergence of new manifestations of bullying and violence, prevention of violence should be high on the agenda of public health policies. But what is needed to make the prevention of bullying and youth violence more effective?

Evidence-based prevention needs to be based on the correct identification of the causal risk factors and mechanisms that lead to violence and aggressive behaviour, as well as knowledge about the mechanisms that impede the manifestation of problem behaviours even where risk factors are present (i.e., protective factors). Prevention is likely to be effective if it reduces risk factors and/or builds up protective factors (Coie et al. 1993). Recent research, in particular, has shifted away from the more traditional concern with risk factors to paying more attention to protective factors, and how a better understanding of protective factors can help to build resilience and inform prevention policy (Lösel and Farrington 2012; Pardini et al. 2012; Rutter 2012). Table 1 gives examples for risk and protective factors at the level of the individual, family, school, and neighbourhood/society at large.
There is now widespread agreement amongst prevention specialists about the general principles that underlie effective prevention of aggression, bullying, and violence across the life-course. These principles include (Allen 2011; Eisner, Ribeaud and Locher, 2009; Krug et al. 2002; World Health Organization 2010):

1. The need to start prevention during the first years of life by reducing risk factors and promoting protective factors during a time when humans have a high degree of plasticity (“start early in life”).
2. The need to have developmentally adequate prevention strategies in place across the whole life course from conception to adulthood (“developmentally adequate provision across the life course”).
3. The principle of embedding violence prevention into a general public health strategy that aims at reducing a range of negative outcomes including school dropout, teen pregnancy, substance abuse, delinquency and violence, unhealthy eating, and physical inactivity. These behaviours share many risk factors and should hence be considered as elements of a larger prevention strategy (“a public health perspective”).
4. The combining of universal, indicated, and selective prevention so that the largest resources reach the children and adolescents with the greatest needs (“adapt intervention intensity to risk exposure”).
5. The consideration of a socio-ecological model that recognizes the interplay of influences at the levels of the individual, the family, the school, peers and leisure-time activities, the neighbourhood, and the wider social, cultural and political context (“an ecological perspective of multi-layered prevention”).
6. An approach that integrates policy-making and research by using high-quality basic research to guide innovation in prevention programmes and strategies, by rigorously testing prevention strategies in methodologically sound outcome evaluations, and by working with governments and policy-makers to achieve real-world effects (“an evidence-based approach to policy change”).

See Lösel and Farrington (2012) for a more extensive discussion.

<table>
<thead>
<tr>
<th>Risk factor</th>
<th>Protective factor</th>
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<tr>
<td>Individual</td>
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<tr>
<td>perinatal complications</td>
<td>positive mood</td>
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<td>impulsivity</td>
<td>low irritability</td>
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<td>restlessness and irritability</td>
<td>emotion regulation skills</td>
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<td>low empathy</td>
<td>self-efficacy</td>
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<td>social-cognitive biases</td>
<td>high academic achievement</td>
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<tr>
<td>low academic achievement</td>
<td>social competencies</td>
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<td>antisocial beliefs</td>
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<td>alcohol and other drug use</td>
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<td>Parents and family</td>
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<td>child abuse and neglect</td>
<td>parental support</td>
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<td>poor parental monitoring</td>
<td>secure attachment and bonding</td>
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<td>erratic parenting</td>
<td>intensive supervision</td>
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<td>partner conflict and separation</td>
<td>parental disapproval of antisocial behaviour</td>
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<td>parental and sibling antisocial behaviour</td>
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<td>School and peers</td>
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<td>truancy</td>
<td>positive teacher-child bonds</td>
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<td>poor teacher-child bond</td>
<td>academic motivation and success</td>
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<td>high school disorder</td>
<td>high school-level discipline and clear rules</td>
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<td>association with delinquent peers</td>
<td>non-deviant best friends</td>
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<td>negative school climate</td>
<td>involvement in structured prosocial activities</td>
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<td>Neighbourhood and society</td>
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<td>social inequality and deprivation</td>
<td>high social cohesion and trust</td>
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<td></td>
<td>community involvement and access to social support</td>
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Table 1: Examples of risk and protective factors underlying bullying and violence

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We believe that governments could achieve noticeable population-wide reductions in bullying and aggressive behaviour by adopting an evidence-based prevention and intervention policy (Cartwright and Hardie 2012). This requires close co-operation between local and national governments and prevention researchers. Currently many European countries do not have the requisite research capacity or the evidence base to provide effective support in their societies. In the following postulates, we propose nine domains where research is needed to contribute to more effective violence prevention.

3. Nine Recommendations for Future Priorities

3.1. Expanding the Evidence Base

A move towards more effective prevention of aggression and violence requires efforts to expand the scientific evidence on what works (Sherman et al. 2002). The creation of a better evidence-base entails a staged process that includes small-scale efficacy trials of innovations or adaptations, effectiveness trials of the most promising approaches, and large-scale field trials of programmes that are planned to be taken to scale. Despite progress over the past twenty years the current knowledge base is generally still thin in Europe (Lösel and Beelmann 2003). Also, significant differences remain between European countries in the amount of research done.

More and better evaluation research is needed to create the knowledge base required for achieving a major population-level reduction in youth violence. This demands more coherent European financial and organisational support for high-quality evaluations and the encouragement of collaboration between academic institutions and practitioners. Also, systematic reviews for different types of preventive interventions suggest that more knowledge has been accumulated in respect of short-term effects and effects found in relatively small efficacy trials (Lösel and Beelmann 2003; Ttofi and Farrington 2011). In contrast, there are several areas where the lack of studies is particularly acute. These include field trials examining whether violence prevention programmes work under real-life conditions and studies examining long-term effects over months or even years. For this reason the present volume includes several studies that contribute to closing this gap. In particular, the studies by Lösel und Stemmler (2012) on long-term outcomes of an early intervention, the overview by Hutchings on the implementation and evaluation of Incredible Years in Wales, the study by Goossens, Gooren, Orobio de Castro, Van Overveld, Buijs, Monshouwer, Onrust, and Paulussen (2012) on a routine implementation of PATHS in the Netherlands, the article by Little, Berry, Morpeth, Blower, Axford, Taylor, Bywater, Lehtonen, and Tobin (2012) on the large scale evaluation of PATHS, Triple-P, and Incredible Years in Birmingham, and the paper by Salmivalli and Poskiparta (2012) on the national evaluation of the KiVa bullying prevention programme in Finland represent remarkable progress in knowledge about what is required to make interventions work under real-world conditions.

3.2. Promoting Innovation in Programme Development

Progress in effective prevention depends on the development of interventions that reflect advances in research. Over the past two decades many impulses for evidence-based prevention strategies – such as parent training programmes, early support for at-risk mothers, and school-based social skills programmes – have come to Europe from elsewhere. As a result, many evaluations have examined whether existing products can be transferred into the European context (e.g. Hutchings 2012). In contrast, few innovations in research-based prevention have been initiated in Europe (but see Kärnä et al. 2011; Lösel and Stemmler 2012).

Testing the transportability of interventions will remain important in the future. The paper by Hutchings (2012) provides insight on the critical issues that need to be considered for the successful introduction of a programme in a new context. However, there is also potential for developing new approaches that have a better fit to the structure of social services, education systems, and cultural expectations in European societies. In the present volume, articles by Loesel and Stemmler (2012), Salmivalli and Poskiparta (2012), Ortega-Ruiz, Del Rey, and Casas (2012), and Menesini, Nocentini, and Palladino (2012) present evaluations of innovative programmes developed in Europe. Future funding should support the further development of innovative interventions for individuals, schools, families, and neigh-
bourhoods. These interventions should be tailored to meet the needs of different systems of services, specific target groups, and diverse groups of children with diverse manifestations of aggression and violence (Perren et al. 2012).

3.3. A Better Link Between Basic and Applied Research
Preventive interventions are more likely to be effective if they are based on empirically validated models of the causation of violence. There is therefore an important link between basic research on the causes of youth violence and the development of more effective interventions (see Stokes 1997). Too many preventive programmes in Europe are still implemented with little basis in developmental research. This increases the risk that significant resources will be invested in ineffective programmes.

We believe that improved collaboration between basic research and applied prevention research will produce a better knowledge base for effective youth violence prevention. Examples where this potential is particularly clear include the preventive implications of the link between developmental neuroscience and aggression (Bradshaw et al. 2012; Séguin et al. 2004), the implications of research on social networks for group-based prevention (Salmivalli, Huttunen, and Lagerspetz 1997), the lessons for violence prevention to be learned from research on moral development (Malti and Krettenauer 2012), or the ways in which research on judgement and decision-making can inform prevention strategies (Nagin 2007; Wikström et al. 2012). In the present volume, the contribution by Perren, Corcoran, Cowie, Dehue, Garcia, Mc Guckin, Sevcikova, Tsatsou, and Völlink (2012) shows how high-quality basic research on the responses of parents, teachers, and victims to cyberbullying can inform the development of better intervention and prevention strategies.

3.4. Evaluation of Embedded Practices and System Change
Much prevention research has examined the effects of standardized programmes that are added to an existing system. However, social services and education systems comprise many activities with a preventative purpose (Little 2010). For example, if a pupil shows disruptive behaviour in a classroom, teachers, head-teachers, and social workers may intervene in various ways. However, we lack knowledge about the effectiveness of these interventions, and how they can be improved. Also, many evaluations test commercially distributed products. Yet local and national authorities often deliver services that are similar in purpose and structure (e.g. support for young mothers, parenting advice, anti-bullying programmes, social competencies in school curricula). Little is currently known about the effectiveness of practices embedded in mainstream services. But some findings suggest that interventions delivered as part of mainstream services may sometimes be as effective as new products (de Graaf et al. 2008). Finally, most policy changes in education, social welfare, family affairs, and policing and youth justice are implemented without any consideration of their effectiveness, and very few studies have attempted to assess whether new policies achieve their goals.

A better understanding of how whole systems can be made more effective could have considerable benefits for youth violence reduction (Little 2010). However, good research on this question requires that prevention science partly moves beyond classical randomized controlled experiments and broadens its methodological scope. Also, we believe that substantial progress could be made by building evaluation components into the process of policy change (Cartwright and Hardie 2012). For example, the paper by Spiel, Wagner, and Strohmeier (2012) in this volume presents a research-led violence prevention strategy for Austria that incorporated evaluation components during the roll-out phase.

3.5. Integrate Situational and Developmental Approaches to Violence Prevention
Researchers often distinguish between developmental approaches that try to influence the propensity to engage in violent acts over the life-course (i.e. change the person and his or her social, emotional, cognitive, and moral development; see Tremblay and Craig 1995) and situational approaches that try to influence the likelihood of a violent act happening. Situational approaches include CCTV cameras in public space, targeted police patrols in crime and violence hot-spots, firearm controls, school-surveillance in corridors, strengthening peer interventions against bullying, surveillance mechanisms on the internet, and alcohol sales policies (Clarke 1995). For historic reasons situational and
developmental approaches to violence prevention have been seen as opposites rather than as complementary strategies.

We believe that the most promising approach to violence prevention combines developmental and situational interventions. However, evaluation research that addresses both components has been rare, both in Europe and internationally. Strategic support for innovative research that combines situational and developmental components is likely to yield highly interesting findings with a direct impact on policy making across areas such as policing, urban planning, social and family policies and education.

3.6. Developing and Testing Tailored Prevention Strategies
Many risk and protective factors are similar for different types of aggression and violence. Also, most risk factors are relevant in different cultures and societies rather than being specific to any particular society. This suggests that an effective prevention strategy should be based on similar principles across all of Europe and that it should target a broad range of problem behaviours rather than being highly specific.

However, there is controversy about the extent to which delivery format, recruitment, and framing need cultural adaptation. For example, some evidence suggests that regular parent training programmes may be less effective for single parents than for two-parent families (Gardner et al. 2009). Also, children and adolescents differ in the extent to which they are exposed to specific risk factors, and different combinations of environmental and individual risks may require different approaches. For example, the approach required for socially isolated adolescents with concurrent attention deficits and academic difficulties may differ from the approach required for more dominant, sociable, and academically successful bullies. Future research should therefore examine how prevention programmes can be tailored to the specific needs of different risk groups or different types of aggression (Malti and Noam 2009). In the present volume, the article by Noam, Malti, and Guhn (2012) proposes a new measurement tool for assessing levels of resilience amongst children, which could facilitate the implementation of targeted intervention strategies.

3.7. Improving Quality Standards in Prevention Evaluation Research
Reviews suggest much variation in the methodological quality of outcome evaluations. While some studies meet high methodological standards, the methodological limitations of many make it difficult to draw firm conclusions about genuine treatment effects (Eisner 2009). Such limitations include poor overall study design, low validity of core outcome measures, limited or no measures of the implementation process, and insufficient reporting of study characteristics and analytic approaches.

There is significant scope for improving the quality standards of outcome evaluations conducted in Europe. Better-quality studies would provide more valid and generalizable information for policy-makers and practitioners on what works and what does not. For example, the study by Forster, Kling, and Sundell (2012, in this volume) shows the importance of developing uniform standards for assessing the clinical relevance of treatment effects when different studies are compared. Other measures for improving methodological standards include compulsory registration of all outcome evaluations, guidelines on the design and reporting of outcome studies, training in evaluation design, and greater transparency concerning potential conflicts of interest. Where there is likely to be a conflict of interest between the role of evaluator and of programme provider funding agencies should request an independent review of the study design and the data analyses.

Progress in evidence-based prevention is often hampered by obstacles to co-operation between researchers, intervention providers, and local stakeholders. Introducing evidence-led development and design into education, public health policy, social services, or family services requires that policy-makers and practitioners have a good understanding of the principles of evaluation research.

3.8. Improving Knowledge of Mechanisms and Active Components
Despite some success in identifying effective programmes, we still have a very limited understanding of the causal mechanisms that make them work. Also, we know little about the active components that render a preventive intervention effective. A better understanding of the active components of preventive interventions is essential for further...
Only if we understand the principles of why some interventions work can we make progress in designing the next generation of prevention approaches.

Progress on these issues has been difficult. The most frequent approach is to conduct analyses of mediators (mechanisms transporting the causal effect from the intervention to the outcome) and moderators (factors that are associated with variation in the achieved effect). For example, in the present volume Malti, Ribeaud, and Eisner (2012) examine whether a school-based intervention was more or less effective for children from different socio-economic backgrounds. At the level of meta-analyses, Hahn Fox, Ttofi, and Farrington (2012, in this volume) present important results on the factors that influence the effectiveness of anti-bullying programmes. It shows, for example, that bullying prevention programmes tend to be more effective if they are more intensive and if they include a parent training component (Hahn Fox, Ttofi, and Farrington 2012). However, we believe that further progress requires a new and innovative type of evaluation research. Rather than randomly allocating participants to whole packages of interventions (“programmes”) researchers will need to improve their capacity to isolate, on the basis of prior findings and theoretical considerations, promising elements of an intervention whose effects can then be examined. To the extent that innovative research could identify the active building blocks of prevention activities it could help to progressively tailor more effective interventions.

### 3.9. Upscaling and Mainstreaming

While a lot has been learned about how prevention approaches can be made to work in efficacy trials, much less is known about how programmes can be taken to scale without losing their effectiveness. Several studies in this volume suggest that certain evidence-based programmes fail to produce desirable effects when examined in large field trials (Goossens et al. 2012; Little et al. 2012). We therefore believe that more well-designed, large-scale field trials that assess long term-effects are necessary (Farrington and Welsh 2007). Such trials can provide policy makers with realistic estimates of effects that are replicable at the level of whole populations. Often, such evaluations should be conducted as independent evaluations, in which the role of the evaluators and programme developers are institutionally separated. Large-scale dissemination trials are costly and it is essential that they are carefully planned and adequately resourced, and that their findings are effectively communicated amongst researchers and policy-makers in Europe. Also, more translational research on programmes and policies that can effectively be inserted into mainstream services is necessary (Woolf 2008).

### 4. Conclusion

In the past, the development and implementation of more effective violence prevention supported by research evidence has often been hampered by a lack of regular research collaboration across Europe.

The contributions in the present volume represent an attempt to bridge this gap and to encourage exchange amongst researchers from different academic backgrounds across Europe. Taken together, they show that violence prevention in Europe has become a dynamic field of research where knowledge is increasingly consolidated. In particular, there is growing evidence that high-quality prevention research may help to achieve substantial population-wide reductions in youth violence over the coming decade.
References


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