VIOLENCE PREVENTION IN SCHOOLS: RESILIENCE PROMOTION IN THE FRAMEWORK OF A EUROPEAN PRACTICE RESEARCH PROJECT

Katharina Rauh
Evangelische Hochschule Freiburg – Alemanha

Klaus Fröhlich-Gildhoff
Evangelische Hochschule Freiburg – Alemanha
froehlich-gildhoff@eh-freiburg.de
Resumo
Este artigo apresenta o quadro teórico, a conceção e a avaliação dos resultados do projeto internacional Strong de investigação prática no que à implementação de estratégias de prevenção da violência nas escolas diz respeito através da promoção da resiliência. Após a apresentação breve dos resultados quantitativos e qualitativos, serão realçados os fatores de sucesso de uma estratégia de prevenção.

Palavras-chave
Resiliência; Promoção da resiliência; Prevenção da violência; Desenvolvimento escolar; Investigação prática.

Abstract
The following article presents the theoretical background, design and evaluation results of the international practice research project Strong implementing strategies of violence prevention in schools by means of resilience promotion. After presenting the results from the quantitative and qualitative results briefly, success factors for the implementation of a prevention strategy are highlighted.

Keywords
Resilience; Resilience promotion; Violence prevention; School development; Practice research

Résumé
Cet article présente le cadre théorique, la conception et l’évaluation des résultats du projet international de recherche pratique Strong dans la mise en œuvre de stratégies visant à prévenir la violence dans les écoles pré-occupations en favorisant la résilience. Après la brève présentation des résultats quantitatifs et qualitatifs seront mis en évidence les facteurs de réussite d’une stratégie de prévention.

Mots-clés
Résilience; Promotion de la résilience; Prévention de la violence; Rendement scolaire; Recherche opérationnelle.

Resumen
En este artículo se presenta el marco teórico, el diseño y la evaluación de los resultados del proyecto internacional de investigación práctica Strong de la implementación de estrategias para prevenir la violencia en las escuelas mediante la promoción de la resiliencia. Después de la breve presentación de los resultados cuantitativos y cualitativos se destacarán los factores de éxito de una estrategia de prevención.

Palabras clave
Resiliencia; Promoción de la resiliencia; Prevención de la violencia; Rendimiento escolar; Investigación práctica.
1. Introduction to the STRONG project and its goals

Between 2011 and 2013, an international consortium of five institutions (ZfK Freiburg, Germany; IRTS Rennes, France; Breakwater Foundation Krakow, Poland; PFSE Porto, Portugal; University of Halmstad, Sweden) from five different European countries aimed to implement an empirically-based strategy of violence prevention and resilience promotion in schools. The goals of the STRONG project were specified for different target groups involved in the multi-level approach:

1. The school is supported in developing a prevention and intervention concept, in establishing a philosophy that focuses on the strengths and resources of the pupils and the staff and in reinforcing its co-operations with families and external partners and stakeholders.

2. The teachers, social workers and other pedagogical staff receive training to be able to promote the resilience factors in their pupils, to become more self-efficient in tackling violence and thus experience less strain in their everyday work.

3. The pupils’ well-being and attitude towards the school improves through the strength orientation, they become more self-efficient in dealing with violent and aggressive behaviour through in-classroom activities of prevention and resilience promotion and they exhibit less violent behaviour and aggressive tendencies and experience less anxiety towards peers.

4. The parents are offered participation in school processes and good co-operation with the school is maintained before problematic situations occur.

2. Resilience promotion as means of violence prevention in schools

To reach the aforementioned goals in the most effective way, findings from research have to be taken into account and an empirically sound base has to be applied.

2.1 The development of violent behavioural tendencies

Approaching the concept of violence from a theoretical perspective, the spectrum of applied definitions of violence and violent behaviour is vast and highly dependent on the scientific traditions from which they originate, their cultural embedding or the focus of underlying empirical designs. Most of these definitions consider either biological, psychological or social determinants of violent behaviour, however a holistic combination model of all three factors is highly promising. Therefore the bio-psycho-social explanation model (figure 1) has served as a theoretical basis in the STRONG project.
Individual mental structure
There are four key components of the personality structure of children and adolescents who display aggressive/violent behaviour or suffer from disorders in social behaviour (Schmeck, 2003; Resch, 2004; Wurmser & Papousek, 2004; Essau & Conradt, 2004; Fröhlich-Gildhoff, 2006):

1. **Limited, aggressively biased information processing:** a tendency to perceive situations or persons as suspicious or hostile resulting in building up aggression as a defence strategy to find vindication
2. **Low abilities of self-regulation concerning affect and arousal:** difficulties to regulate and control strong emotions, such as anger or rage
3. **Lack of social competences, especially when it comes to solving social conflicts without aggression**
4. **Low self-esteem which will temporarily be compensated for with aggressive behaviour:** the display of aggressive behaviour can lead to the short-term self-perception of efficacy and control, however violent behaviour is being restricted and punished which in the long run leads to the reduction of self-esteem.

Social environment and situational triggers
In addition to biological preconditions, individual psychological dispositions and the structure of the social environment, there are situational triggers, which facilitate the realisation of aggressive or violent behaviour:
- ambiguous social situations,
- excessive situational demand or confrontation without flight possibilities,
- social environments which tolerate violence (e.g. peer groups with a positive attitude towards violent behaviour),
- influence of drugs and alcohol
- media can trigger psychologically unstable children and adolescents (Borg-Laufs, 1997; von Salisch et al. 2005; Selg, 2003).

Prevention programmes
When it comes to the prevention of violent behaviour usually two types of programmes are implemented: the first focuses on the violent behaviour and aggressive tendencies of the individual to address these patterns directly (e.g. Cierpka, 2001), the second type focuses on strengthening the child’s abilities to develop general life skills and resilience (e.g. Fröhlich-Gildhoff et al, 2012). Results from prevention research has shown (summarised from Beelmann, 2006, Bengel et al. 2009, Durlak & Wells, 1997; Durlak 2003; Heinrichs et al., 2002)
- that the promotion of general developmental capabilities produces better long-term effects than the prevention of isolated behavioural disorders.
- that preventions programmes are more successful if they follow a multi-systemic approach (e.g. including children, parents and professionals).
- that programmes longer than six months have more sustainable effects than short-term interventions or isolated training sessions.
- that well-structured programmes providing behaviour-oriented strategies are more successful than open and less structured programmes.

The STRONG project aimed to take into account these success factors identified by previous prevention research, with the promotion of general developmental capabilities being a main building block of the project design.
2.2 The resilience approach to prevent violent behaviour

In the last 15 years, there has been a shift in paradigms regarding the development of behavioural disorders and mental illness. Multiple disciplines, such as developmental psychology and public health sciences are focussing on protective factors in people’s lives. This shift signifies a change in perspective from a deficit-oriented view towards a strength- and resource-oriented view instead (Lösel & Bender, 2007; Luthar, 2006; Opp & Fingerle, 2007; Petermann et al. 2004; Werner 2007). Longitudinal studies, for example the Kauai-study (Werner, 2000; 2007) or the Mannheimer risk child study (Laucht et al. 2000), have shown the high risk environments did not cause mental illness or behavioural disorders in all the children living under these high-risk conditions. Therefore the key question of resilience research is: which factors are conducive to successful development?

Resilience describes the individual’s abilities to manage crisis, difficult situations and developmental tasks successfully. Resilience research has identified several factors that can be referred to when analysing strengthening resources and coping capabilities in children (Lösel & Bender, 2007; Bengel et al. 2009; Werner, 2007; Wustmann, 2004; Fröhlich-Gildhoff & Rönnau-Böse, 2014).

The most important protective factor for mental well-being is the experience of a secure and stable relation to a ‘significant’ adult, the experience of secure attachment (Werner, 2007; Rönnau-Böse, 2013). Luthar (2006) summarizes the results of 50 years of resilience research as follows: “resilience rests, fundamentally, on relationships” (Luthar, 2006, p. 780).

On a personal level there are six competencies, which promote resilience:

- Good and realistic perception of self and others
- Belief in ability to succeed
- Regulation of emotions and arousal
- Strategies to analyse and solve problems
- Asking for support, self-assertion and conflict solving
- To know about one’s own competencies to solve stressful situations

Operationalisation: 

sex resilience factors

Development tasks, actual crisis and claims

perception of self and others
sense of self-efficacy
self-regulation/self-control
problem-solving skills
social competencies
stress-coping abilities

Figure 2: 
Six resilience factors

Resilience is not an inherited characteristic, but is developed during the course of life, and it is dynamic, meaning that its development depends on experiences made whilst managing difficult tasks in real life. In this respect it fits well, but is not identical to the life skills concept (WHO, 1994; UNICEF 2011). Current research shows the special importance of (early) childhood years for the development of cognitive, emotional and social development of children (e. g. Dornes, 1997; 2009; Hüther, 2005; Petermann et al., 2004). This in turn leads to the special importance of early preventative promotion of self-esteem, self-efficacy, exercising self-control, social competences and problem-solving strategies to generally enhance the management of changes and crisis. A lot of prevention programmes have been created and evaluated for school children. Focussing on this age group offers various opportunities:

- being able to reach almost the whole age cohort through compulsory schooling in most European countries,
- applying the setting approach and by that including children, parents, teachers, social workers and the school as an institution,
- catering for local needs by using the information the school has by being a well-established institution in the area,
- using the fundamental influence of teachers and social workers on the development of children (e. g. Murdock & Bolch, 2005; DuBois & Silverthorn, 2005; Baker, 2006; Opp & Wenzel, 2003).
3. Implementation process

The findings of violence prevention and resilience promotion research have been translated into the design and implementation of STRONG:

- It follows the setting approach and addresses children and their families, teacher, pedagogical staff and the school as an institution.
- It empowers pedagogical staff to implement in-classroom activities to tackle violence and promote resilience by special training sessions and though practical guidance.
- It supports the school to take a resilience perspective through organisational development and thus improve the children’s and the staffs’ well-being at school.

Due to different preconditions in the consortium countries different implementation strategies were applied, however a common core implementation was defined which consisted of the implementation of four mandatory teacher training session on the topics of violence prevention and resilience promotion, implementing in-classroom activities to promote the pupils resilience, co-operation with parents and the discussion of the mapping results. Addressing the schools specific needs, topics for three additional training sessions were compiled, such as staff’s resilience, team development and securing the sustainability of STRONG. These training sessions were supported by additional voluntary coaching sessions. These coaching could either be used for specific topic of teachers or as means of support when implementing and reflecting the in-classroom activities. The implementation of the in-classroom activities was also part of the core components of STRONG, which were implemented by the teachers and pedagogical staff and in some countries by the researchers themselves.

4. Evaluation design

As previously discussed, the multi-level approach proved to be the most powerful strategy in resilience promotion. Therefore pupils as well as teachers and other pedagogical staff participated in the evaluation process. Figure 3 shows the scheme of the evaluation design, which consisted of a pre-post test mixed methods design with additional process evaluation components. The implemented methods will be discussed in chapter 4.1 for the pupil level and in chapter 4.2 for the teacher and pedagogical staff.

![Figure 3: evaluation design (only containing instruments implemented in all countries)](image)

4.1 Evaluation instruments on the pupils level

Qualitative methods

*Mapping:* One important qualitative evaluation component was the Mapping techniques which was introduced by the Swedish project team and was applied on one hand for an analysis of the perceived feelings of safety and well-being connected to specific spaces and on the other hand as an in-classroom activity to initiate communication on the pivotal areas in their school environment and encourage pupil participation in processes of change. Mapping was a novel technique for all consortium countries but Sweden, where it has been implemented for several years (Alvant, Elgemyr & Gustafsson Figueroa, 2012). Also open-ended questions to assess the reaction patterns of the teachers concerning incidents involving violence in the school were included in the pupils’ questionnaire.
Quantitative methods
The quantitative sections of the pupils’ questionnaire consisted of five different scales from two standardised instruments:

- the **social acceptance and bullying scale** (assessment of feelings of rejection by peers and anxiety towards peers) and the **school environment scale** (assessment of feelings towards the school and teachers) from the KIDSCREEN Group (2006), which is an inventory available in several languages and for different reference values and with satisfying psychometric properties.
- the **problem-oriented behaviour scale** (assessment of adaptive strategies of emotional regulation), the **aggressive behaviour scale** (assessment of maladaptive strategies of emotional regulation) and the **social support scale** (assessing the activation of the social surrounding as a coping mechanism) of the FEEL-KJ (Grob & Smolensky, 2005) which only provides reference values from a German speaking norm sample, so prudence in the interpretation of comparisons with reference values is required.

Additional items covering the awareness of rules for preventing violence, frequencies of different types of violence and perpetrators in schools and witnessing incidents of violence were also implemented in closed format in the pupils’ questionnaire for quantitative analysis.

4.2 Evaluation instruments on the teacher and pedagogical staff level

Qualitative methods
At teacher level, different qualitative methods were implemented as part of the outcome and the process evaluation. For the process evaluation, **semi-structured process evaluation sheets** were filled in by the researchers after each training session to document the developments in the schools, the changes that were agreed on and the conflicts that arose during the process. To enrich the quantitative data, **pre-structured group interviews** were conducted at the pre and post measuring points on the topics of the perceived occurrence of violence in their school, on personal resources and on feedback on the trainings and the in-classroom toolbox of activities for violence prevention and resilience promotion. The interviews were analysed using the content analysis method (Mayring, 2003) and provided more in-depth information on the organisational development processes in the individual schools. The feedback on and rating of the impact of STRONG has also been part of the open-ended post-evaluation questionnaire to gain insight into the sustainability of the project implementation.

Quantitative methods
The quantitative instruments, which have been applied, consisted of three scales from two standardized instruments:

- the **job satisfaction scale** (assessment of the degree of satisfaction with the job situation) and the **emotional exhaustion scale** (assessment of the extent of feeling drained by the job) from the Hamburger Burnout Inventory (Burisch, 2006) for which only German norm values are available. The instrument provides a rating of being at risk to suffer from burn-out syndrome though individual scores.
- the **general self-efficacy scale** (assessment of a positive self-belief including confidence in the capacity to perform difficult tasks successfully) (Schwarzer & Jerusalem, 1995), which is available in several languages and with different national reference values.

Several questions in closed format were added to the standardised items concerning their reaction to incidents involving violence, the strategy of the school to tackle violence, their co-operation with colleagues and external experts and their perception of the well-being of the pupils.

5. Project results

In this chapter the quantitative results will be presented. It should be clarified that the term “national” is being used as a descriptive term referring to the specific subsamples of the project, but does not make representative statements about the five participating countries in general. As mentioned before, some quantitative instruments were only available in German and with German-speaking reference values. For these instruments the results should be interpreted with caution. Whenever international reference values were available, they have been applied.

5.1. Sample description
The following table shows the pupils and teachers sample differentiated by country and measuring point.
5.2 Results from the pupils sample

For the scales taken from the KIDSCREEN inventory, different national reference values are available for four age and gender-divided subgroups. In the following only the analysis of the complete pupils sample will be discussed. Figure 4 shows that in the pre and post evaluation the ratings of the pupils concerning the school atmosphere are rather consistent. Accordingly, in the conducted repeated measures ANOVA neither significant main effects between the two measuring points could be found ($F_{main}(1, 550)=0.680; p>.05$), nor significant interactions between the country and the measuring points ($F_{int}(4, 550)=2.226; p>.05$). Nevertheless, the national mean values are distribute in a score range of less that ± half a standard deviation and can thus be classified as normal scores. Additional questions of the questionnaire supported a rather positive perception of the school atmosphere.

The same procedure was conducted with the data of the bullying scale and the mean values can be seen in Figure 5. Here a statistically highly significant main effect between both measuring points could be shown ($F_{main}(1, 539)=16.103; p<.005$), as well as highly significant interactions between the country and the measuring points ($F_{int}(4, 539)=4.036; p<.005$). In the multiple comparisons, the pre- and post values of the Swedish pupils proved to be significantly above the values of the other countries. This, in general, describes a positive development for the participating schools, meaning that pupils experience anxiety towards their peers less often, feel more socially accepted and are less likely to become a victim of bullying by the end of the project. However the degree of this development differs from country to country. In the pupils’ questionnaire, there has also been a shift concerning the types of violence that pupils perceived: from a mix of verbal and physical violence before the project to less physical forms of violence, however analysis of the frequency of the occurrence of the different forms could not be conducted.

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Table 1: sample description

<table>
<thead>
<tr>
<th>country</th>
<th>measuring point</th>
<th>n pupils (male/female)</th>
<th>average age (in years)</th>
<th>n teachers (male/female)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$t_0$</td>
<td>147(61/78)</td>
<td>11,14</td>
<td>24 (9/15)</td>
</tr>
<tr>
<td>France</td>
<td>$t_1$</td>
<td>101 (41/57)</td>
<td>11,84</td>
<td>15 (2/11)</td>
</tr>
<tr>
<td>Germany</td>
<td>$t_0$</td>
<td>196 (112/83)</td>
<td>11,18</td>
<td>23 (6/12)</td>
</tr>
<tr>
<td></td>
<td>$t_1$</td>
<td>182 (107/74)</td>
<td>11,60</td>
<td>13 (4/9)</td>
</tr>
<tr>
<td>Poland</td>
<td>$t_0$</td>
<td>184 (91/93)</td>
<td>11,02</td>
<td>53 (8/44)</td>
</tr>
<tr>
<td></td>
<td>$t_1$</td>
<td>137 (60/75)</td>
<td>11,78</td>
<td>37 (4/29)</td>
</tr>
<tr>
<td>Portugal</td>
<td>$t_0$</td>
<td>182 (93/87)</td>
<td>10,80</td>
<td>35 (8/27)</td>
</tr>
<tr>
<td></td>
<td>$t_1$</td>
<td>153 (78/73)</td>
<td>11,41</td>
<td>32 (7/23)</td>
</tr>
<tr>
<td>Sweden</td>
<td>$t_0$</td>
<td>110 (53/45)</td>
<td>12,36</td>
<td>34 (10/22)</td>
</tr>
<tr>
<td></td>
<td>$t_1$</td>
<td>116 (57/49)</td>
<td>12,84</td>
<td>29 (11/16)</td>
</tr>
<tr>
<td>Portugal</td>
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<td>819 (420/386)</td>
<td>11,06</td>
<td>169 (41/125)</td>
</tr>
<tr>
<td></td>
<td>$t_1$</td>
<td>689 (353/328)</td>
<td>11,60</td>
<td>126 (28/88)</td>
</tr>
</tbody>
</table>

Figure 4: Means from the school environment scale divided by country (higher score signifies a more positive perception of the school environment)
The pre-post-analysis of the social support scale shows heterogeneous developments: between the two measuring points no statistically significant main effects (F_{main}(4, 429)=0.362; p>.05) or interactions (F_{int}(4, 481)=0.481; p>.05) could be found. Polish and Portuguese pupils achieved higher values at the second measuring point, thus are more likely to activate their social surrounding when experiencing difficult situations after the project, German pupils show a decrease in the social support scale data and Swedish and French pupils remaining on almost the same score.

The aggressive behaviour scale also shows inconsistent developments across participating countries, accordingly no statistically significant main effects (F_{main}(1, 429)=1.358; p>.05) or interactions (F_{int}(4, 429)=0.362; p>.05) could be found: France, Poland and Sweden achieved lower scores in the post evaluation than in the pre-evaluation, indicating a positive development by pupils being less likely to use aggressive behaviour as a coping strategy. In Portugal, however, the pupils showed higher values of aggressive behaviour after the project and in Germany the scores remained almost the same.

In the discussion of the pupils’ Mapping results several similarities were discovered in all the participating countries:

- The perceived safety of the pupils is strongly connected to adult surveillance: Pupils marked areas as unsafe when there was a lack of adult contact persons, such as hidden or badly visible areas of the schoolyard during breaks, restrooms and changing rooms in the gym. The reactions of the school staff varied from wearing bright safety vest to increase the visibility of the surveillance person to raising money for remodeling parts of the building, but in all countries they led to more awareness among the teachers of sensitive areas in the school environment.

- Hidden accessibility structures in the school envi-
ronment were discovered by the teacher through the discussion with the pupils: It became obvious to the school staff that some areas of the schoolyard are only accessible to certain pupils. In some cases the class cohort was the differentiating factor (e. g. five-graders are not allowed in the soccer field, but can only go to the playing ground during breaks) in other schools a gender-segregation could be found.

- The presence of older pupils causes discomfort in some younger pupils, which in some cases make younger pupils take long or dangerous detours to other school buildings.
- The way to and from school proved to also be a factor when pupils detected incidences involving violence (e. g. during waiting for the school bus), when in some schools caused some discussion, because the teacher are not accountable for the safety of the children outside the school premises.

5.3 Results from the pedagogical staff sample

In the questionnaires for the pedagogical staff an inventory for burn-out syndrome was applied, which does not provide norm values, but categorizes ratings of people into risk groups of experiencing the syndrome. It provides different scores for male and female participants, but due to reasons of anonymity male and female participants are represented in the same figure, but have been categorised by their gender scores.

More teachers seem to experience emotional exhaustion in their job, but not a general dissatisfaction with their job shows a slight decrease between the two measuring point in the German, Polish, Portuguese and Swedish sample. However, from 169 participating teachers in total at the first measuring point only two persons at the most were at risk of being affected by the experience of job dissatisfaction.

Figure 9: Emotional exhaustion by country (persons by risk group)

Figure 10: Job satisfaction scale by country (persons by risk group)

A positive development could also be discovered for the general self-efficacy scale, as all national samples show higher scores in the end of the project, meaning that teachers feel more self-efficient, however there was neither a statistically significant main effect between both measuring points, nor a significant interaction between the measuring points and the country ($F_{\text{main}}(1, 58)=3.591; p>.05; F_{\text{int}}(4, 58)=0.070; p>.05$).

Figure 11: Scores from the general self-efficacy scale by country (higher score signifying feeling more self-efficient)

Other quantitative and qualitative evaluation components have shown similarities in all five countries:

- Participation of and insight though externals is...
helpful to receive an outside view on their school and the needs. Almost all teachers emphasised that they experienced the approach through the need and strength analysis and the thereof resulting school-specific strategy development as very beneficial.

- Providing time to address issues of prevention and the support of the school board was crucial to the success and sustainability of the project. Teachers said that the trainings and the toolbox of in-classroom activities will elongate the effects of the project, but a certain timeframe outside of the content-packed curriculum teachers have to live up to, school board should make prevention and resilience promotion a priority and provide it with adequate resources.

Endnotes

1 The STRONG project was funded with financial support from the Daphne III program of the European Commission [JUST/2009-2010/ DAPs/AG/1198]. This article presents results from the final report of the project in excerpts, more detailed information on the project can be found in Fröhlich-Gildhoff et al (2013) including the toolbox for in-classroom activities.

2 For a comparison of both concepts see Fröhlich-Gildhoff & Rönnau-Böse (2014)

3 For a description of an important method in the Swedish implementation see Kjellman & Högdin in this issue.

4 In this article only the mandatory evaluation components will be described. In some consortium countries additional qualitative and quantitative instruments, e.g. additional questionnaire scales or qualitative group interviews with pupils have been used. Explorative questionnaires have also been used in two pre-studies by the French and Portuguese consortium countries.

References


