

Evaluation of anti-bullying methods

Methodology appendix and attachments to report 353



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Methodology appendix

1 Introduction

This appendix consists of three parts, and is a detailed account of the factors considered in conjunction with implementing the National Agency for Education's evaluation of methods for combating bullying.

The first part deals with research into the effectiveness of programmes and strategic implications. This part reports earlier research on programme effectiveness and its implications for the strategy developed. The second part describes the evaluation strategy and the methodological starting points and approaches that were the basis for implementing the evaluation. The third and last part reports on different ethical factors the research team was forced to take into account in implementing this evaluation.

And finally there is a technical appendix and some attachments.

2 Research into programme effectiveness and strategy implications

2.1 Requirements for programme evaluation

2.1.1 Introduction

Evaluation of programme implementation is a relatively broad field. There is an abundance of different variants among programmes with some form of pedagogical or formative goals with their roots in different scientific disciplines. This can involve preventing obesity amongst preschool children, or challenging upper secondary students not to sit too long in front of a computer. Programmes that are implemented within a school context make up a special group. Within the school there is also significant variation between types of programmes in relation to goals, funds and contents. One can differentiate between programmes incorporated in the school's daily, societal mandate, and those programmes where the school is a manageable arena for programme implementation.

From a pedagogical perspective, the whole school mandate can be understood as a programme with the aim of achieving democratically determined educational and socialisation goals. The school should act in the place of parents, namely *in loco parentis*. The school should contribute to, nourish and socialise within the framework of its most important mission, namely equipping school pupils with the skills, insights, understanding and values required for them as adults to act as good citizens. The knowledge goals can be differentiated from the socialisation goals. From a planning perspective, the knowledge goals are less problematic. A consequence of this is that evaluation of knowledge goals has a long and relatively clear tradition through examinations and grading. As a result, didactic programmes are taken for granted as the "programme" itself is seldom questioned. Teachers do what teachers do, and outcomes can be assessed from the knowledge that is gained. Although new pedagogical methods and ideas can make an impact, it would not occur to a teacher or headteacher to consider turning to another teacher.

The socialisation goal is not straightforward. On the one hand, it is not always easy to have an overview of what these goals are, whilst on the other it is very difficult to set a limit to the teacher's and the school's responsibility. How can one equate the lack of a grade in a given subject with the lack of social skills, or insufficient skills in taking into account others, or sexual risk-taking? In addition, there is an important dividing line between goals to strive for, namely desired positive outcomes, and non-desired phenomena such as asocial behaviour, environments with risks or negative consequences resulting from ongoing social interaction in the school. How can these different efforts be balanced? Some measure of order is a prerequisite for a functioning school, but a well functioning school is by no means a safe haven against bullying, harassment, exclusion, ostracisation, and other asocial behaviour that can occur amongst youngsters.

It is within this complex world that preventative programmes are expected to function. The situational context the school makes up contains all the elements that help or restrict the social development of pupils in schools. In addition,

with regard to bullying and bullying-like behaviour, it is an absolute requirement, both ethically and legally, that schools should do all they can to detect, prevent and remedy such forms of behaviour. In other words, there already exist programmes implemented to combat bullying in one context where much is already being done, and where there is a legal obligation to act and combat bullying.

Given the background of the complex activity the school represents, in this chapter we try to report on reasonable requirements for evaluating intervention programmes in a school context, and summarise the outcomes from earlier attempts to evaluate bullying prevention programmes. We will start by reporting various meta analytical approaches.

First we report the criteria the research community considers reasonable to impose on scientifically based interventions or evidence based programmes (EBP).

2.2 Criteria for programmes' capacity to bring about change – "efficacy"

Efficacy refers to a programme's ability to bring about change, namely its potential for change (Flay, 1986; Last, 1988). Criteria for change potential should be distinguished from criteria on effectiveness (see below). The potential for change differs from effectiveness in the sense that the latter refers to actual outcomes under real conditions, whilst the former refers to theoretically based scientific arguments for effective outcomes.

In the review below, we try to examine the requirements of the specific situation that exists when evaluating programme implementation in a school context. The criteria cover the potential for change, effectiveness and the dissemination of information.

2.2.1 Criteria for potential to bring about change in anti-bullying programmes

In the school world it is a maxim that teachers expect to bring about change as a result of their ongoing teaching.¹ This also applies to the school's socialisation role. A programme should provide (i) a specific statement of its expected potential for change. A programme that is implemented should provide (ii) a clear description of how the intervention should take place and what outcomes can be expected. Outcomes should be operationalised in a way that facilitates an objective assessment of change. In this respect, it is desirable, though not necessary, to include measures of proximal outcomes (i.e. indices that can cover actual causes and effects). Outcomes should reflect the actual intervention as they are/were intended, and also be able to provide indications of potential iatrogenic outcomes. Outcome measures should be psychometrically strong in terms of reliability and validity of their concepts. An intervention programme must have (iii) a research design that clearly makes possible causal conclusions. An evaluation design should permit at least a comparison (iv) where no intervention has been carried out. In the context of school evaluation, this criteria

¹ This section is based on the text *Standards of Evidence: Criteria for Efficacy, Effectiveness and Dissemination*, issued by the Society for Prevention Research, published on the Internet at <http://www.preventionresearch.org/> (downloaded 2009-12-13).

is virtually impossible to fulfil in terms of interventions to combat bullying or degrading treatment. In longitudinal studies comparisons can be made with the same intervention group. Analysis of the outcomes of an intervention must allow (v) the effects of a programme and/or its components to be identified in a way that maximises confidence and avoids or minimises alternative explanations. The results of an evaluation should be capable (vi) of being generalised to corresponding target groups. The latter imposes special requirements on how the sample was selected and defined. In this respect, it is desirable that possible effects on subgroups are studied, particularly in situations where a smaller or less significant intervention outcome in the whole group could conceal an individually greater outcome in a specific risk group.

2.2.2 Requirements when assessing outcomes of school interventions

Outcome measures must allow (i) statistical precision and enable the interpretation of causal relationships. Evaluation should test for (ii) significant variation in baseline measurements. As randomisation does not occur, this can have an impact on the measurement of significant intervention outcomes. If the frequency of bullying is obviously high or low in a pre-test, the possibility of being able to determine significant intervention outcomes is affected accordingly. Such a situation would be further complicated if multiple outcomes occur, and where comparisons must take account of these. The search for statistically significant outcomes means the results must cover (iii) all outcome variables planned in the evaluation design irrespective of whether the outcome is positive or negative in relation to the effectiveness of the intervention. The potential for change should only be attributed to a programme provided (iv) all measured outcomes point in the same direction and at least one outcome is statistically significant. The potential for change also means that (v) no negative or iatrogenic outcomes should occur. In order to show (vi) practical benefits, it is necessary to be able to show the direct practical applications of a programme. The cost should be reported and the permanence of the outcome should be estimated beyond the intervention period. At least 6 months are recommended. In the school context the permanence of an outcome can be problematic as in most cases it is impossible to describe when a programme has stopped being used. An evaluation study should be (vii) reproducible. Where two studies into effectiveness are available, the outcome measures (viii) should point in the same direction.

2.2.3 Effectiveness criteria for school-based interventions

Test of effectiveness means that one studies the extent to which an intervention is effective under "actual" and "natural" conditions. Good praxis requires that such tests should not be carried out by the developers of the programmes. The applicable requirements when determining the potential for change applies also when assessing the effectiveness of programmes. To demonstrate effectiveness, the evaluation must as a minimum fulfil all the conditions above.

A description of a programme (i) and its expected outcomes should cover a) manuals, relevant training, technical support etc; b) the delivery conditions for interventions, which means delivery under the same conditions, for example from the same players where one expects a "normal" or real intervention (e.g. by teachers not by researchers); c) theoretical principles of the programme, where

a theory of the causal mechanisms should be documented, and a clear description of "for whom" under "what circumstances" the intervention is expected to be effective; d) relevant surveys and measures in relation to implementation; and also e) a description of the levels of exposure that should be measurable or capable of assessment both by an intervention group, and in the best case by a control or comparison group. The requirement for clarity in the causal conclusions (ii) means that the same standard that applies to a test of a programme's capacity to bring about change should also apply when assessing its effectiveness. The requirement that results should be generalisable (iii) means that the sample should be representative of potential target groups. For example, it is not always certain that interventions that function for girls will have the same results for boys. This suggests that subgroup analysis should be carried out (gender, risk level, age, degree of exposure to programme, etc.) if one wants to make the claim that the results are generalisable. Similar requirements can be imposed on dosage analyses (iv) where different pupils, classes or units can differ in terms of their exposure to the active components of an intervention. Here the requirement for reproducibility applies (v) where there are risks that the same theoretical intervention can have a different outcome if it is provided by different staff, or new staff. When assessing a programme's practical value, precision in measuring outcomes is (vi) particularly important.

2.2.4 Criteria for comprehensive dissemination of information about school interventions

If the programme is to benefit from widespread dissemination of information, it should fulfil the criteria of potential for change and effectiveness. In addition, to increase the chances of effective application through players in the field, such as teachers, social workers, anti-bullying teams, pupil welfare, etc, account must also be taken of additional criteria. A potentially effective programme must (i) be adapted in a way that makes it appropriate for a broader target group. There must be (ii) clear cost calculations and resource requirements. Finally instruments (iii) for mapping and evaluating should be available in connection with programme implementation.

Although some elements of the school's mandate on education and the transfer of information can resemble normal health promotion activities, we argue that the conditions are essentially different when the activity involves the school's socialisation mandate. Ethical, moral and legal requirements apply which impose high demands on schools, and this applies not least to pupils' daily behaviour in the school. This means all programmes, methods or new didactic ideas concerning interpersonal relations in a school are introduced in a situation where they already exist. There are no problems in demarcating bullying. Bullying should always be combated. A new anti-bullying programme can never replace the school's formal responsibility. In the best case, different bullying prevention programmes can contribute to improving the normal activities of the school in this respect. For this reason, it is important to report what bullying actually is. We have done this in a number of places in the report *Utvärdering av metoder mot mobbning* (Evaluation of anti-bullying methods) (see e.g. the introduction). Below we report on how questions about bullying can affect programme evaluation.

2.3 The term "bullying"

The term, bullying, is important in terms of how we understand the school's socialisation mandate. Being able to clearly distinguish between fun, pranks and behaviour directed to a school pupil with the aim of mentally or physically harming him/her is a fundamental part of the teacher's responsibility. The same applies to actual physical blows that can occur in school corridors, the classroom and in the sports area. One-off acts are easier to identify and deal with than systematic acts. It is only when a negative pattern begins to occur that we should refer to it as bullying. Here there could also be great scope for estimating and assessing different acts and patterns of behaviour. All this is part of the mission of the school, the pupils and teachers. At the same time this daily situation represents the greatest challenge for systematic intervention against such behaviour; in this intersection nexus, programme evaluation faces special challenges.

It is impossible to imagine a school that does not systematically react to bullying incidents. At the same time, all research into bullying at different schools shows that parents, guardians and schoolmates' capacity to detect and recognise bullying behaviour may be limited or deficient. Given this, it is impossible to imagine a school that does not have a preparedness to try to detect such behaviour.

This means that when a school decides to introduce a programme or a remedial package to combat bullying, the starting point must be that such routines already exist. It may be the case that existing measures have been found to be insufficient.

Another aspect affecting the evaluation context is that bullying is negative behaviour. The aim of an intervention is always to try to bring to an end such behaviour, providing that it is detected, and to strengthen the victimised individual and take measures against the contributory factors and conditions giving rise to such acts.

2.4 Evaluation theory and bullying at school

2.4.1 How effective are bullying prevention evaluations?

Ryan and Smith (2009)² tackle a straight question about quality, or if one wishes, about the effectiveness of evaluation approaches undertaken to evaluate bullying prevention programmes. The authors describe the Olweus Bullying Prevention Program as the first complete whole school bullying prevention approach. They define a "whole school approach" in terms of the following inclusion criteria: i) information about bullying to school staff, pupils and parents; ii) clear and consistent guidelines covering the whole school; iii) classroom praxis covering bullying prevention, creation of attitudes and promoting social conflict resolution strategies; and also iv) direct intervention strategies for pupils involved in bullying.

Despite comprehensive application of such programmes, it has been difficult to demonstrate their effectiveness. In the next section, we will examine a number of meta analyses of bullying prevention programmes. Here it is important that the starting point for Ryan and Smith was the lack of reliable studies of effectiveness.

² This section is based on Ryan, W. & Smith, J.D. (2009) "Anti-bullying Programs in Schools: How Effective are Evaluation Practices?", *Prevention Science*, 10:248–259.

The conclusions they drew are of great importance for our work. They argue that typical evaluations of effectiveness lack scientific rigour, or more specifically that the most common evaluation approaches do not follow good evaluation praxis such as that described by the Society for Prevention Research (see above).³ Ryan's and Smith's criticism focuses mainly on the lack of control groups, and methods for determining treatment groups and the conditions for measures.

A review of 550 published articles resulted in a collection consisting of 31 studies that were considered to correspond to predefined quality criteria. The number of participating respondents varied from 50 to more than one thousand for a typical sample size of between 200 to 499 participants (11 of 31 studies).

The authors highlight a number of requirements that should be imposed, or that are expected from competently implemented bullying interventions. They speak about the promotion of programme integrity, in contrast to what they call verification of programme integrity. This should be understood as one dimension of a programme where methods for estimating the actual change potential is a part of the programme. It involves being able to determine whether a programme has been applied in accordance with its implicit theories on potential for change. For instance, this covers the assessment of adherence to a programme, dosage, quality of implementation, and also assessment of dissemination patterns among subgroups within the target groups.

2.4.2 Outcome measures

Ryan and Smith (op. cit.) identified three categories of outcome measures:

- a) Behavioural measures of bullying (victims and perpetrators).
- b) Measures of other forms of behaviour such as aggression, coping and prosocial behaviour.
- c) Non-behavioural outcome measures such as attitudes, beliefs and views.

Half of the studies used two categories of outcome measures where the most common for bullying was based on the Olweus questionnaire, used in 36 percent of the studies. All the studies with one exception used pupils' self-reporting.

Ryan and Smith also examined to what extent the studies collected outcome information from different categories "parties involved", identified as 1) the individuals themselves, 2) school friends, 3) school staff and 4) parents. Only one study collected information from all categories of informants, and another study from three categories of informants. An important conclusion from this review is the possibility of increasing the quality of outcome data through access to several informant categories other than school pupils themselves.

Ryan and Smith summarise their review of the requirements for quality in the evaluation of school-based bullying prevention programmes in the following way:

1. Use controlled study conditions with random samples of programme and control groups where possible. In cases where randomisation is excluded, use a quasi-experimental design. They refer to Olweus "extended selection cohorts" quasi-experimental design⁴ as an example.

3 See Vreeman, R. C., & Carroll, A. E. (2007). "A systematic review of school-based interventions to prevent bullying". *Archives of Pediatrics & Adolescent Medicine*, 161, 78–88 and Smith, J. D., Schneider, B. H., Smith, P. K., & Ananiadou, K. (2004). "The effectiveness of whole-school anti-bullying programs: A synthesis of evaluation research". *School Psychology Review*, 33, 548–561.

4 Olweus, D. (2005). "A useful evaluation design and effects of the Olweus Bullying Prevention Program." *Psychology, Crime & Law*, 11, 389–402.

2. Collect all the baseline data prior to programme implementation and outcome data for at least six months after implementation. Data on potential for change and effectiveness should be obtained for a least 2 years.
3. Use multiple methods and multiple informants to assess programme impact
4. Indicate the reliability and validity of data for the data collection methods used.
5. Collect qualitative data to contextualise programme implementation and outcome data.
6. Monitor programme integrity and programme dosage systematically in relation to outcome analyses.
7. Where sample size permits, use statistical models to process data at a number of levels, at the classroom level for most of the schools.

Finally, Ryan and Smith point out the special conditions and challenges associated with interventions in a school context. We take as our starting points these methodological guidelines. In our work of finding an appropriate evaluation model, we are particularly aware of the problem of randomisation and programme integrity.

2.5 The problem of resource use in programme implementation

A specific problem, not dealt with by Ryan and Smith and which is not covered by the different meta analyses below, is what we refer to as resource use compensation in control and comparison units. The introduction of a programme entails an intervention into a school's daily reality. It would be virtually impossible to introduce a programme, where every part could be used in the school's everyday activity. Take, for example, a programme component (which will be examined below) such as "increased supervision of school playgrounds". If we imagine a programme with such a component, it is difficult to imagine a school which would not have supervision over the school playground. If such a school existed, it would not be fulfilling its normal supervisory responsibilities. Such a phase must thus be understood as a change, an improvement, an addition or development of an existing monitoring system. What then are the control or comparison conditions in such a context? If introducing a programme involves an expansion in terms of additional resources, in such cases control classes or schools should have access to corresponding resources which they could use in their "normal" activities.

Out of all the programme implementations we are aware of, we are not aware of any case where equalising resources through compensation is introduced as a part of an evaluation strategy. In addition, none of the meta analyses described below take up this problem.

2.6 Different meta evaluations

This section is based on four meta analyses of bullying prevention programmes. The review makes no claim to be a "meta-meta" analysis. The starting point is that it is mainly through meta analyses that researchers get access to scientific descriptions of the situation in a specific field. Smith (et al. 2004), Vreeman & Carroll (2007), Merrell (et al. 2008) and Ttofi (et al. 2008) have carried out four meta analyses, independently of each other into programme effectiveness

in terms of bullying prevention. The analyses cover approximately 100 different individual studies. The sources for the meta analyses are the following:

1. Smith, J. D., Schneider, B. H., Smith, P. K. & Ananiadou, K. (2004) The Effectiveness of Whole-School Anti-bullying Programs: A Synthesis of Evaluation Research, *School Psychology Review*, 33 (4), 547–560.
2. Vreeman, R. C. & Carroll, A. E. (2007) "A Systematic Review of School-Based Interventions to Prevent Bullying", *Archives of Pediatric and Adolescent Medicine*, 161, 78–88.
3. Merrell, K. W., Gueldner, B- A., Ross, S. W. & Isava, D. W. (2008) How Effective Are School Bullying Intervention Programs? A Meta-Analysis of Intervention Research, *School Psychology Quarterly*, 23 (1), 26–42.
4. Ttofi, M. M., Farrington, D. P. & Baldry, A. A C. (2008) Effectiveness of Programs to Reduce School Bullying: A Systematic Review, Report prepared for The Swedish National Council for Crime Prevention, Swedish Council for Crime Prevention, Information and Publications, Stockholm.

The inclusion criteria are described below, together with indications of the most appropriate strategies for assessing outcomes, and their limitations as regards programme implementation in a school context. An important observation in this context is that in recent years there has been growing criticism of an excessively simple interpretation of suitability (and feasibility) of applying randomised controlled experiments as the gold standard in evaluating programmes in a school context.

2.6.1 Search strategies and inclusion criteria

An important reason for examining inclusion criteria in a meta analysis is that it provides a picture of how the research community views fundamental aspects of programme evaluation and particularly within the specific field of the meta analyses, in this case bullying prevention programmes.

Both the authors in the Vreeman and Carroll study examined the articles independently of each other. To be included, the study must describe an experimental strategy with control and intervention groups, and with pre- and post measures of outcomes. The intervention should be school-based and aim at reducing bullying or preventing bullying. In the beginning 2 090 articles were identified, which were quickly reduced to 321, and their summaries were then examined. This resulted in 56 articles, which were then examined, and later provided final material for 26 interventions.

In Smiths (et al.) the criteria was based on a "whole school intervention" with the requirements for quantitative outcome measures of victimisation and/or bullying, and for being carried out in more than one classroom. These criteria resulted in a group of 322 possible articles. With further elimination, 14 interventions appropriate for further analysis were obtained.

In Merrell (et al.) searching was confined to a 25-year period (1980–2005). Merrell noted Smith's study but considered that its limitation to "whole school interventions" risked overlooking certain types of targeted interventions. Merrell's search criteria were the following: a school-based intervention, directed to bullying or possible asocial forms of behaviour that could be interpreted as bullying, and that were also written in English. This strategy resulted in a preliminary compilation of 40 studies, which were then subjected to further examination. A further five inclusion criteria were subsequently added. The study must have an

experimental or quasi-experimental group design, the target behaviour must be bullying, the interventions must be directed to bullying, outcome data must be reported through statistical measures appropriate for estimating size of outcome. The fifth criteria entails an extension of the material by also including Ph.D. theses and anthologies. This strategy resulted in 16 studies that covered a total pupil population of 15 386 pupils from Preschool to 12th year in the meta-analysis – that is from the preschool class up to upper secondary school students.

Ttofi (et al.) used seven inclusion criteria. The study should be directed to bullying (studies on violence and aggression were excluded), a predefined definition of bullying should be used, frequency of bullying estimated through self-reporting, the studies must contain some form of control or comparison group with pre- and post measurement, they should cover Western research published since 1983, and be based on a sample of more than 200 individuals. This strategy resulted in 59 studies covering 30 individual anti-bullying programmes.

Vreeman and Carroll (2007) identified two main types of school-based interventions: curriculum interventions (10) and "whole school interventions" (10). A smaller group was categorised as social skills, whilst one study was described as a mentor strategy and support for social workers. Direct outcome indices were bullying behaviour, victimisation, aggressive behaviour and the school's response to violence. Indirect outcome measures used were school performance, perceived safety in the school, self-esteem and knowledge about and attitudes towards bullying. The conclusion was that many school-based interventions reduce bullying with better results from multidisciplinary interventions. Curriculum strategies have least impact on bullying, and indirect outcomes are not always consistent with the planned direction.

In a discussion on programme evaluation strategies, Vreeman and Carroll refer to an "ideal methodological strength" against which the different studies could be assessed. They point out that deviations from the randomised ideal – where only school districts, schools or in best cases, school classes, are allocated programmes in accordance with some form of random procedure – ignore the most essential features of the experiments, namely randomisation at the individual level. This in its turn raises the question of what should be the unit for analysing outcomes. As a rule the individual is not the unit of analysis, and the analyses were most often carried out at an aggregate level (e.g. school class, annual cohort/level or whole school).

All the meta analyses take up the problem of outcome measures, where self-reporting is the most common source of data. Vreeman and Carroll point out that self-reporting indices often do not correspond with reports from school friends, teachers, counsellors or school management. Apart from problems with self-reporting as the only source of information, there is a recurring problem with time units where everything from "some time" to "daily" can be the basis for categorising bullying incidents.

Finally, Vreeman and Carroll take up the problem of effective components that may be hidden or that proved difficult to evaluate individually. Despite these reservations, Vreeman and Carroll draw the conclusion that "fairly consistent evidence suggests that children's bullying behaviour can be significantly reduced by well-planned interventions", and in addition that "the chance of success is greater if the intervention incorporates a whole-school approach involving multiple disciplines and the whole school community" (op. cit.). They

emphasise the importance of the involvement and acceptance of school staff for a programme to be effective.

Vreeman and Carroll conclude by pointing out that not all programmes show positive outcomes, and that for most of them the reductions in bullying measured are modest.

Smith et al. (2004) focus in their meta analysis on "whole school approaches". They point out that "whole school approaches" are based on programmes with multiple components. In this respect, they draw the conclusion that "the majority of programmes evaluated to date have yielded non-significant outcomes on measures of self-reported victimization and bullying, and only a small number have yielded positive outcomes" (op. cit.). They found that a programme with systematic monitoring and follow-up tended to be more effective.

Smith (et al.) make an important observation concerning the differentiated effects of programme components at different levels of intervention. They found a number of weaknesses in the studies they examined. The lack of control units and self-selection in particular were mentioned. In addition, they considered that a number of studies described systematic planning and implementation with the possibility for schools to choose from these components in different programmes. This in its turn reveals the whole problem complex involved in determining adherence to a programme. They are also critical of the measurement units for estimating frequency of bullying.

Smith (et al.) take up the phenomenon of "increased sensitivity", which aims at increasing the propensity of reporting as a consequence of implementing a bullying programme. For this reason they believe, as do the authors of the other meta analyses, that the time period between the pre- and post surveys is of great importance. Smith (et al.) did not find the same positive outcome with the Olweus Programme as when it was applied in Norway (reporting by Olweus himself). Several possible explanations were put forward.

They take up the problem of adherence to the programme, but believe that it is by no means certain it must be taken for granted. It could also be more effective to adapt a programme to local conditions. The consequence of this is that comparisons between evaluations become more difficult.

They also emphasise the importance that outcome data be collected from different sources and not entirely based on reports from pupils.

Merrell, Gueldner, Ross and Isavas (2008) consider that it is not possible to carry out meta analyses into a programme's effectiveness against bullying before the 2000s, as prior to this there was a lack of research studies. Over a 25-year period (1980–2004) they found 16 programme evaluations that had these inclusion criteria. They describe five different types of measurement outcomes of relevance for the prevention of bullying: pupils' self-reporting (of bullying), teachers' self-reporting (of bullying), teachers' reports on pupil behaviour (disorderly etc) nominations (of bullying) from classmates and formal documentation (of cases, disciplinary, remedial measures etc.).

Merrell's (et al.) analysis examines the estimates of effectiveness by breaking down global outcomes in the different studies into different categories of outcomes (above). This means that assessing outcomes is based on five different measures in the 16 different programme evaluation studies. A total of 80 assessments of the magnitude of outcomes could be calculated. Of these, 25 were assessed as being significant, while 6 were regarded as iatrogenic (outcome

in a negative direction compared to the programme's expected outcome). The average size of outcomes were calculated using Cohen's (1988) classification of programme outcomes, where magnitudes ranging from 0.20 to 0.49 were classified as "small", 0.50 to 0.79 as "average" and 0.80 and above as "large". Their conclusions were that they found some support for programmes aiming to increase pupils' social competence, self-image and acceptance of schoolmates, which contributes to teachers' knowledge of effective praxis, skills in intervention strategies and the ability to remedy bullying incidents, but less support for programmes aiming at reducing bullying behaviour. They also point out that the lack of experimental studies increases the risk of what they call "historical effects", namely outcomes that are more closely related to different schools' specific history and experiences as opposed to specific programme components. Merrell's (et al.) most important conclusion is the following: "on more direct measures or reports of bullying and victimization, bullying interventions had little positive effects, and as we have noted, in some cases, actually were associated with negative effects" (op. cit.).

Finally Merrell, Gueldner, Ross and Isava (2008) point out that anti-bullying programmes use a wide variety of implementation strategies and theoretical approaches. For this reason, evaluation of a programme should try to link possible positive (also negative) outcomes to the theoretical assumptions and building blocks the programmes are based on. It is a complete misconception to regard bullying prevention programmes as a single homogenous entity.

In an overall assessment of outcomes from different evaluations, Ttofi, Farrington & Baldry (2008) determine that the proportion of bullies decreased by on average 23 percent whilst the proportion of victims decreased by on average 17 percent in schools with anti-bullying programmes. They suggest that these results should be compared with schools where there was no systematic anti-bullying work using a programme. It is our view that this way of thinking, which is based on the idea that a control school does not need to have systematic anti-bullying work, provides a wholly erroneous view of reality, at least in a Swedish school context. At the same time Ttofi (et al.) admit that the programmes in certain cases have not succeeded in reducing bullying. The results of the study have been summarised by Alvant (2009) in the following sentence: "The anti-bullying programmes evaluated decreased bullying at a school by approximately 20 percent, compared with schools not working with anti-bullying programmes" (p. 5). The sentence occurs in a publication in Swedish published by the Swedish National Council for Crime Prevention with the aim of informing the general public what research can tell us about anti-bullying programmes in schools. Again we do not share the view that there are schools that do not formally carry out systematic work against bullying.

2.6.2 Active components in different programmes

To get a more detailed picture of how programmes could function, Ttofi (et al.) carried out a more detailed analysis where the 30 programmes studied were described in terms of their active components. These are shown in Table 2.1 below.

According to Ttofi (et al.) the following programme components have the strongest effect on bullies (decreased the proportion of bullies): parent training, increased supervision of school playgrounds and disciplinary measures. In addition school conferences, information to parents, classroom rules, leadership

Table 2:1 Frequency of program components in 30 anti-bullying programs
(based on Ttofi et.al, 2008)

Schoolwide anti-bullying policy	22
Classroom rules	23
School conferences/information to pupils in large groups	17
Training material about bullying (in classroom)	26
Leadership in the classroom	23
Workgroups with experts (e.g. teachers, counsellors, advisers)	16
Work with bullies	17
Work with victims	1
Work with pupils as peer supports (pupil mediation, mentorship etc)	9
Information to teachers	29
Information to parents	20
Increase supervision of school playgrounds	10
Disciplinary measures	10
Non-disciplinary measures (e.g. "Taunted", "No Blame")	6
Elements of other "reparative" (restorative) fairness	1
School courts against bullying	0
Teacher training	21
Parent training/meetings	11
Training videos	15
Virtual software programs	3

in the classroom and training videos, all have an effect on perpetrators. The programme components that have an effect on bullying (reduce the proportion of victims) are: training videos, disciplinary measures, work with pupils as peer supports and parent training. Also working groups with special experts and greater insight into school playgrounds appeared to be able to reduce the proportion of victimisation. The factors linked to the design and implementation of the programme, such as time set aside for introduction, support and involvement in the programme of all parties, also appear to contribute to greater effectiveness. It should be pointed out that these conclusions are tentative.

An important dimension that Ttofi, Farrington and Baldry (2008) mention is cost efficiency in relation to programme implementation. How much could a given theoretical effect cost? The cost for such outcomes can thus be measured in possible savings in the form of reduced costs resulting from a reduction in bullying behaviour.

2.7 Strategic implications

All evaluation approaches are limited by special circumstances. This applies particularly to evaluations of the school system. In many situations, schools are used as the sampling frame where the school itself represents a cluster of pupils because it is the simplest way of carrying out studies of children and youth. Concerning studies into the internal workings of schools, the school level itself is perhaps the most common basis for comparison. Of course, different types of micro level studies can take place at the level of the classroom and the individual within a specific or a few schools.

Bullying prevention measures can also take place at the structural level, e.g. within a municipality. The conclusion follows from this that the evaluations of bullying prevention measures should take account of possible outcomes at a number of different levels.

2.7.1 Links to evaluation strategy

The assignment applies to programme evaluation, which in itself reveals little of the level of implementation. The fact that a programme can be implemented at school level is not a prerequisite for it to achieve its desired effects. Of course, the assignment can be interpreted as meaning that the evaluation should take place at the school level, i.e. that the effects of the programme should be studied on the basis of observable changes within the whole school.

On the other hand, if one focuses on a programme's capacity to detect and remedy actual bullying, it is reasonable to expect evaluation at the individual level. Indices at the school level can show significant programme effects in a statistical sense even though bullying may only have been marginally reduced. Such a reduction is not to be dismissed, but at the same time it may mean that bullying at the individual level has not actually changed. Such speculations are of great importance in terms of what could be referred to as "the material strategy", not to be confused with a sample strategy. There is a reasonable lower threshold for the size of the sample in a large-scale evaluation such as this. The lower threshold is also affected by the nature and scope of the assignment. These restrictions are also affected by the special, if not unique, fact that a number of programmes were to be evaluated simultaneously.

The starting point can be described as follows: amongst approximately 1 million children in 4 700 compulsory schools, where approximately 21 anti-bullying programmes were identified (see Matti 2008), 8 selected programmes would be evaluated. The expectation was that recognised programme evaluation approaches would be applied.

Disregarding the threshold levels that different programmes have in their capacity to detect, prevent and remedy bullying does not enable us to circumvent the problem of level. A balance must be created between the number of study units at the individual level, the number of schools and the number of schools per programme. The average size of a compulsory school in Sweden is about 190 pupils. A total of 10 schools would thus cover approximately 2 000 pupils, and 40 schools approximately 8 000 pupils.

Since the clear ambition in the project team was that the evaluation should also be based on qualitative data from individual schools, this constituted a limitation in planning the data material. If participating schools also required one or two field visits, which was also part of the plan, the number of schools must lie within reasonable limits.

All that is written above has not taken any account of the actual allocation of funds or resources, which are obviously important factors for all research. Best practice in evaluation research emphasises the importance of a strategy where comparison or control schools are used.

2.7.2 About randomisation and resource use

What is normally referred to as the "gold standard" in programme evaluation is based on the classic experiment. A typical example of the argument for the superiority of randomisation is given in the British Medical Journal (1998;316:201) with the title: "Understanding of controlled experiments: why randomised controlled studies are so important" (Sibbald & Roland). The argument is based on the logic concerning causal outcomes. It is only in "double-blind" randomised studies that reliable conclusions on causes, impact and rela-

tionships can be drawn. This means that not only persons in the trials but also researchers do not know which of the groups being studied are treatment and placebo groups. Sibbald and Roland (op. cit.) thus identify the most important qualities of the strategy:

- Strict allocation to intervention and control groups.
- The participants were completely unaware of which group they belonged to.
- All the groups studied were treated identically apart from the exception for the intervention component.
- Analysis/checking of participants takes place within the framework of the conditions they were allocated in the study.
- The outcome analysis focuses on assessing predicted expected outcomes from the intervention studied.

Few texts about programme evaluation start from this gold standard for making a rigorous assessment of quality in planned evaluations. The problem is that programme evaluations in the school context, under certain conditions, make a random approach impossible. At the same time effective programme implementation requires substantial input for a planned intervention to "function". This attempt is reflected in what could be referred to as the "What Works Movement", where the goal is only to support school interventions that "work", namely evidence-based programmes (EBP). Given these crucial limitations, the challenge becomes that of achieving a gold standard programme evaluation.

2.7.3 Advantages/disadvantages of attempted randomisation

Morrison (2001) has reported a number of limitations when applying randomised trials in a school context. He puts forward eight different problem perspectives, all of which have implications for the evaluation design of this project. The problems are the following:

- Randomised trials are based on a limited view of causality and prediction.
- In such trials, there is a tendency to disregard contingent data and other types of data and data sources.
- In the search for clear causal relationships there is an obvious tendency to ignore theories about chaos and complexity.
- The requirement for experimental conditions leads to unrealistic and oversimplified expectations and the simplification and fragmentation of complex wholes.
- The importance of multiple perspectives on expectations of "what works" is subordinated.
- Randomised trials run the risk of disregarding dynamics in non-linear causal relationships.
- Insight into the actual processes taking place within an experimental trial do not appear.
- The significance of the context is disregarded (op. cit.).

The clear experience we have from 39 field visits in a first round and 13 follow-up visits is one of many limitations in our material that Morrison highlights. The school is a complex, dynamic, changing social and societal phenomenon.⁵

⁵ Morrison (2010), in a private communication, says about the possible effects from chaos and complexity theory, while similar results could be expected in "the same classes taught by the same teacher in the same classroom with the same curriculum, if something works once, there is no guarantee that it will work again".

Setting a whole school to 0, or a specific school pupil, is virtually impossible. The social processes distinguishing a school are at the same time a reflection of similar processes outside the school. It is difficult to imagine a pupil with zero knowledge in regular school subjects. When school pupils, for instance, are being taught English, it is evident that there is a wide plethora of different influences affecting their ability and skills in the English language in the classroom.

In a situation where pupils' ability and skills in a certain subject differ, it is far from certain that didactic outcomes can be traced back to teaching in the school. In addition, whilst there is a very small theoretical possibility of imagining a pupil lacking knowledge in a subject, in the sense of being "zero", it is completely impossible to imagine a school pupil who is unaffected by his values and social upbringing.

With the same argument and experiences from our collection of field data, at an early stage we could state that there was no school without any kind of bullying prevention programme. Having or not having a programme may be a technical formality, but in reality we found that all schools in one way or another had important contacts with different programmes. In those cases where these contacts were not of a formal nature, the school representatives admitted that they had been influenced by programmes A, B or C.

2.7.4 "Non-treatment" in a school context

Against the background above, it is legitimate to discuss the impossibility of a so-called "non-treatment condition" when planning programme evaluation in a school context. This fact is complicated by the approach taken in the assignment. If the evaluation had concerned the use of the Internet, or weight reduction, it would be quite possible to imagine a zero situation, namely a school which had no weight reduction programme or connection to the Internet. But when it comes to work on fundamental values, the prevention of degrading treatment and measures to combat bullying, all Swedish schools are legally required to act and be able to prove actual, dynamic and regularly revised equal treatment plans. This simple observation means that all attempts to evaluate possible outcomes from different anti-bullying programmes takes place in a situation where such work is already in process. This observation applies particularly to those schools that from the beginning were intended to be control schools in a quasi-experimental context. At an early stage the strategy was chosen to include a number of control schools, namely schools without a "programme" (at least in a formal sense) – with due regard taken to the occurrence of equal treatment plans. But even these potential control schools showed themselves in one way or another, more or less formally, to be at least equally contaminated by earlier contacts with different bullying prevention programmes, and particularly by the programmes included in our evaluation.

The idea of control schools had to rapidly make way for an idea about "comparison schools". This concept was not without difficulties as our comparison schools could in some sense be regarded as "quasi" programme schools. It should be possible to have a certain threshold for a criterion concerning use of resources. The schools that were nominally chosen as programme schools in most cases had to meet certain costs themselves for introducing the programme. If use of resources is interpreted in a broad sense, resources could go to comparison schools, and also be used to compensate for teacher and classroom hours.

2.7.5 Extra resources as a placebo

The choice of schools was further complicated by another dimension in the randomised controlled experiment. Although we could imagine a zero school introducing a new programme for combating bullying, it would involve additional resources for the participating school. In international research literature concerning individual attempts to evaluate bullying prevention programmes and meta analyses, we have not found any examples where control schools have been given what could be called a placebo resource. This means that in most cases, it is also not possible to carry out a standard pre-test/post-test evaluation since control or comparison schools would be at a disadvantage in terms of resources.

The project team discussed this anomaly at an early stage and came to the solution that providing additional resources would be both impractical and costly. If X number of control schools had been chosen and given resources corresponding to those of the programme schools, would this not solve the problem of earlier programme contamination or with legally required equal treatment plans? This also means that with a randomised distribution of programmes per school, programme schools cannot be matched in the sense that they would be allocated "sugar pills", i.e. they would be "non-treatment" schools.

2.7.6 Choice of self-selection as a strategy

Which programmes should be evaluated was determined at an early stage (by the Commissioner of the project). Possible schools were decided on after they had indicated their interest to the National Agency for School Improvement. The choice of programme had some importance in the selection of schools. Some programmes had a longer history of application in a Swedish context, other programmes had an uneven geographical distribution and still others had a larger organisational apparatus. Such factors have consequences when choosing participating schools. The schools' awareness about, earlier contact with and their practical use of different programmes, were all factors that could not be controlled through randomisation.

In a theoretically ideal scenario, after randomisation of participating schools the researchers should be kept "uninformed" as to which of these had been given programme status and which had control status. In such a situation, the chances of relating cause-and-effect to an intervention outcome would be greatest.

2.7.7 Self-fulfilling outcomes

The main arguments for the introduction of researchers and participants' "uncertainty" about the effects of a programme deal with the risk of placebo effects, such as the Hawthorne and John Henry effects.⁶ Irrespective of complex (non-linear) or chaotic (unpredictable) relations between interventions and outcomes, possible John Henry and Hawthorne effects could mean that schools participating in an evaluation project have a higher probability of showing positive outcomes. This would take place as some sort of self-fulfilling effect, or an unconscious desire to demonstrate "cleverness". In other words the risk of measuring outcomes would be loaded in favour of the evaluated programmes.

⁶ Kohli et al. (2009) in a field experiment on hand hygiene in a hospital, a Hawthorne effect could be shown, whilst Kompier (2006) has been able to show how the original experiments were based on a myth. Researcher effects have been shown in school contexts (Adair 1984). Barret and White (1991) have demonstrated the so-called "John Henry" effects in a control group where knowledge of the comparison resulted in an outcome stronger than the intervention in the target group in a study about self-esteem.

Since the project involves a simultaneous evaluation of eight different programmes, possible "cleverness" effects would equal out over the different programmes. The same argument also applies to the component level. The risk for the commissioner would be an incorrect or false belief in a programme's effectiveness. At the same time a positive effect of this kind would constitute some evidence of the absence of iatrogenic effects.⁷ The same argument would also apply to John Henry effects that could occur in the comparison schools trying to prove their "cleverness" because they understand that they would be compared with programme schools. The argument above was undermined to some extent when field visits showed that comparison schools had either ongoing or earlier contacts with most of the programmes.

2.7.8 SBU's systematic examination, June 2010

In June 2010, the Swedish Council on Health Technology Assessment (SBU) published a comprehensive review of the literature on "Programmes preventing psychological ill-health of children". The focus of the review means that studies which only examined the effects of different programmes on "reduction in violent acts and bullying were eliminated" (p. 18). Several programmes in SBU's examination thus had a broader focus than just bullying and violence in schools. Some of these were also evaluated in the previous report; they were ST, Step by Step and School Comet. These three programmes belonged to a group of interventions used in Sweden and that according to SBU's review, "are evaluated as preventative measures in at least one controlled study" (op. cit., p. 28). However, for these three programmes there was "insufficient evidence of preventative outcomes" (op. cit.), i.e. in terms of preventing disruptive problems.

Of greater importance for the review in this Chapter, are the comments in the report about the "Need for development of methods" (p. 281). In the text which starts from randomisation as a gold standard, the following i.a. is stated: Achieving good scientific quality "requires that experimental studies of outcomes are supplemented with multi-variable statistical methods and theoretical analysis" (p. 45). Several of the programmes examined are school-based. Although the focus of the evaluation was on children's disruptive behaviour, it is worth noting that the text does not cover the special problems associated with school-based interventions that we have identified above. On the other hand, the text shows in a very commendable way the ethical dimensions, limitations and risks of intervening on behalf of the child's health through programmes implemented under the auspices of the school (see further section on ethics).

⁷ The term "iatrogenic effects" occurs very seldom in Swedish research texts (see e.g. Westermark's thesis in sociology (2009) for a highly rare example). An iatrogenic effect is an unpredicted or unintended negative outcome from an intervention.

3 Evaluation strategy, methodological starting points and approaches to the study

3.1 Introduction

This Chapter describes the evaluation strategy, methodological considerations and starting points and the approach applied in this evaluation. Initially, the complexity concerning evaluations in a school context is discussed, as well as the standpoints taken in the assignment. In the light of this description, the methodological starting points of the evaluation assignment are discussed at a more overall and abstract level. Thereafter follows a description of the more concrete approach.

3.2 Evaluation strategy

Each evaluation approach has to confront a number of strategic choices. Within the framework of the current project (i) a number of anti-bullying programmes were chosen, (ii) an appropriate evaluation approach adapted, (iii) possible participating schools were identified and contacted, (iv) data collection methods developed or adapted, and (v) a strategy was implemented.

This normal activity should thus be adapted for application within a school context. In the previous chapter several problems and obstacles to this process were identified. Foremost amongst the challenges is finding strategies that best correspond to the best praxis set out in the Chapter. The gold standard is the randomised double-blind model. Hiding or concealing which schools in the sample get or do not get experimental status is either impossible or ethically dubious.

A vital factor within the framework of this evaluation is the introduction by the government of the Act (2006:67) on "prohibition of discrimination and other degrading treatment of children and pupils". Under this Act (Section 5) the organiser should "ensure that goal oriented work is carried out to support the purposes stated". This work should cover (Section 6) "an equal treatment plan for each individual activity". The plan "should aim" (amongst other things) at "preventing harassment and other degrading treatment". The obligation is absolute. If *"the headteacher ... receives information that a child or pupil in the organisation considers himself/herself a victim of harassment or other degrading treatment, the principal organiser is required to investigate the circumstances and where appropriate take the measures which may be reasonably required to prevent the continuation of harassment or other degrading treatment"*. The import of this is that all schools in Sweden must according to the law have functioning anti-bullying programmes. From an evaluation perspective, this means that a "real control" condition is completely excluded. A school without an anti-bullying programme is hardly conceivable in a Swedish context. In the best case, a school can adopt a special programme as "its" programme and thus fulfil its legal obligations.

A consequence of this is that all possible anti-bullying programmes in contrast to the obligatory equal treatment plans, must be regarded as an additional

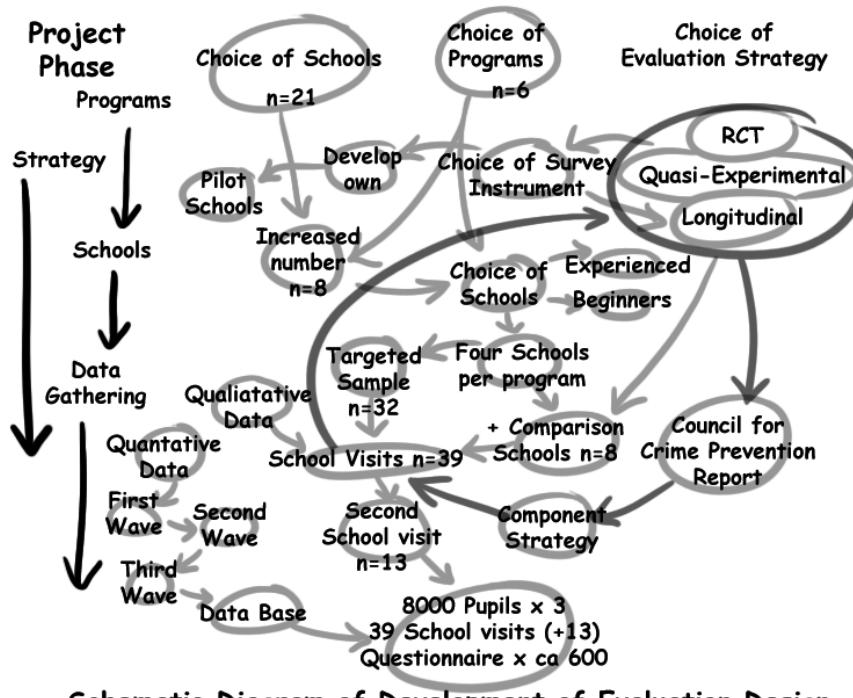
factor in an intervention context. This has direct implications for an evaluation strategy, and not least for the possibility of being able to choose "programme schools", namely schools actively working with the programmes we aim to evaluate.

The practical process of carrying out an evaluation measure has been mentioned above. These parts are included in the process:

1. Choice of appropriate programmes to evaluate
2. Develop a tailored evaluation strategy
3. Identify and choose appropriate schools
4. Carry out relevant data collection
5. Analyse and report evaluation outcomes

These phases are shown in the figure below. The Figure aims at describing all the evaluation work that has been carried out.

Figure 3.1 Sketch of the evaluation design process. Illustration: Lova Carlsson.



3.2.1 Choice of programmes

The programmes that could be considered have been mentioned earlier (see the introductory Chapter and section 3.2.3 below). An examination of frequently used anti-bullying programmes in Swedish compulsory schools preceded this evaluation (Matti, 2008). Matti was able to identify 21 different programmes some of which had some scientific substance. None of the programmes had been subjected to a large-scale evaluation in Sweden. Some of the programmes had undergone some examination adapted to Swedish conditions. In those cases where programmes had been evaluated in accordance with best evaluation praxis, the evaluations were mainly carried out abroad, usually in the USA. There are good scientific reasons for being cautious in the intercultural transfer

of intervention praxis from one culture/country to another. A major part of the reason for the current evaluation lies in the lack of scientifically based experiences from applying most of the programmes that Matti was able to identify.

The first step in drawing up an evaluation design involved substantial difficulties. The distribution of the programmes in the school system proved to be uneven and unpredictable. All the programmes had a geographically biased distribution. However, we did not seek any explanations for this. From an evaluation perspective, it was sufficient to be able to merely identify this fact.

Schools that had used a programme may well have introduced the programme just for certain annual cohorts. In other cases, some schools in a municipality may have used a programme over a longer period, which meant that the programme might have become a normal routine element in the school, which was perhaps not the case concerning possible beginning schools.

3.2.2 Randomisation of programmes

The project team considered an option using a random sample of schools that would be invited to participate in an evaluation project where a number of programmes would on a "random" basis be allocated to participating schools. Above, we reported a number of the disadvantages and difficulties of applying this type of strategy to schools, as each school, irrespective of an invitation to participate in an evaluation project, was (and is) legally obliged to show it is using a corresponding programme within the framework of its normal equal treatment work. In addition, we have alluded to the problem of participating control schools that should be offered resources and active participation corresponding to a real placebo condition. We excluded this option as not feasible on practical and scientific grounds.

Another strategy was to create a design that deliberately took as its starting point the expectation of a John Henry effect where participating schools would be made aware that the aim of the evaluation was to look for positive effects from interventions.

This opportunity should allow a quasi-experimental design where schools applying one of the selected programmes could be compared with schools that carried out no more than normal equal treatment work. An offer to participate as a comparison school would create a corresponding John Henry effect as the participating comparison schools would be able to show they had been "clever".

3.2.3 Targeted sample

Some pragmatic decisions gave rise to the final selection of programmes. There must be some geographical distribution and a number of schools using the programme. Matti's (2008) examination was used to create a view of the extent to which possible programmes were based on good theoretical intervention grounds. A further aspect concerns the possible distribution of the programmes in an international context. The first selection of programmes consisted of the following:

1. The Farsta Method
2. Friends
3. Olweus
4. SET
5. School Comet
6. Step by Step

This list consisted of programmes used to varying degrees in compulsory schools in Sweden. Contact was made with programme representatives to collect information about schools in which these programmes were being used or where there were plans to introduce the programmes.

As mentioned in the introductory chapter, the assignment was changed and expanded with the result that additional programmes were included in the evaluation. These were:

7. Lions Quest
8. School Mediation

A consequence of the expansion in the assignment was the addition of further comparison schools.

3.2.4 Choice of evaluation strategy

After some consideration and analysis of the practical challenges that strict implementation of a randomised double-blind controlled study involved, a strategy was chosen that was based on a quasi-experimental longitudinal evaluation design.

The strategy rested on a distinction between schools to be regarded as beginners in using a programme and schools with longer experience. A longitudinal dimension was important since the intervention programme against bullying, especially in a preventative sense, needs time to achieve an impact.

The longitudinal aspect creates a further problem of evaluation in a school context. Schools, as "demographic" phenomena, are guaranteed continuous changes in generations. Each year a new cohort comes as an old cohort goes. This means that the baseline population changes in follow-up surveys covering more than one school year. This entirely predictable change impacts more than the demography of the groups studied. The social context provided by the school, and the social interaction taking place there, and thus also the breeding ground for different forms of degrading behaviour, is largely influenced by school pupils in a specific school. This was also one of the main arguments for basing the design of the evaluation on individual data. As a result, the original evaluation design could be described as a quasi-experimental longitudinal approach using individual data.

With two experienced and two beginner schools for each programme, at least 24 schools would be covered in the evaluation. A minimum number of comparison schools should be at least one per programme, corresponding to 6 comparison schools. The material would then be based on data from 30 schools. Which schools should be included was decided on the basis of a number of parameters such as school size, principal organiser, interest in voluntary participation in the project, etc. Of course, the school should be active in their use or planned use of the programme. The latter gave rise to some difficulty since a school's contact with a programme could have taken place in different ways. This also applied to the schools that were planning to implement one of the programmes.

The comparison schools should match these rough requirements and respond positively to participating as comparison schools. The incentive to do this was the opportunity of having an independent evaluation of their "normal" equal treatment work.

3.2.5 Choice of data collection strategy

"Measuring" bullying is an empirical matter raising questions of a fundamental research nature. A number of mapping instruments were available. A few of these had been adapted to Swedish conditions. When first examining possible instruments, we included methods that had been used in countries other than Sweden. If an instrument were considered appropriate for use, it would require additional adjustment.

Most surveying instruments use either indirect or direct questionnaire procedures. We excluded observation strategies. To start off with, we considered friend and teacher nomination strategies, but found that most of the research material used questionnaires.

One problem of ontological significance in this context concerned direct methods. The weakest type of question is where the respondent is asked about a specific form of behaviour. An example of such a question is: "Have you been bullied?". The respondent determines his own view of what the question refers to.

The most common type of question is based on predefined behaviour for the respondent: "This is bullying. Bullying is when ... " Respondents are then asked if they had been subjected to this behaviour, or "has something similar happened to you?". The respondent can thereafter be asked about a number of variations in target behaviour.

An indirect procedure means that respondents were asked if certain behaviour had occurred or things had happened to them. This strategy is based on the respondent's attitudes about how or why they view a certain act in a certain way. In a school context there is an abundance of daily behaviour that can be regarded as a "normal" part of the daily social interaction at a school. Pushing and chasing, teasing and mocking, not to mention modern phenomena such as messaging via SMS and other forms of electronic communication. The consequence of all these acts may be tears, hurt feelings or pure satisfaction. Two key dimensions determine how an act is perceived. Not only can acts be repeated, but they can also take place with different degrees of seriousness and types of intent. At the same time as many of the unintended acts that occur during a school day are not desirable, it is important to draw a line between acts that are perceived by the recipient as being meant in fun and those where the purpose is to harm.

After careful consideration and examination of existing instruments, the research team chose to develop its own mapping instrument for the project.

3.2.6 Data collection strategy

Early in project planning a vital decision was made regarding the design of the research. A cornerstone in the strategy would be the collection of qualitative data from all the participating schools. The reason for this was the team's strong view of the shortcomings in most of the school-based evaluation approaches concerning the contextual conditions of participating schools. This in its turn involves a practical limitation in the number of schools taking part in the project. The goal of collecting qualitative data from the field means that the number of schools that could reasonably be visited, not least if they are geographically distributed throughout the country, must be limited. As mentioned earlier, the number of programmes was increased to 8 during the project, which resulted in a total of 40 schools, 32 programme schools and 8 comparison

schools. The final number of schools, however, amounted to 31 programme schools and 8 comparison schools.

3.2.6.1 The qualitative data material

Each school is socio-psychologically and culturally unique. Obviously there are many superficial similarities between different schools, but the social, cultural, individual psychological and interpersonal conditions that can prevent or lead to bullying behaviour may vary widely. The consequence is that the outcome from an intervention programme that is operated under the same conditions can lead to a variety of different outcomes. This was considered to be a self-evident prerequisite for a comprehensive evaluation where outcomes could be related to each individual school in a specific school context.

The school visit should also function as a step in the collection of quantitative data, especially since the use of a questionnaire would entail some logistical challenges for the participating schools.

3.2.6.2 The quantitative data material

The development of a measuring instrument led to contacts being established with a number of pilot schools. An additional dimension to the data collection strategy concerns the choice of Internet-based data collection. The details concerning the development of instruments and approaches for the collection of data will be elaborated on below.

3.2.7 Collection of empirical material at the schools

Visits to the schools were carried out by members of the project team with some assistance from postgraduate students. Early on the school visits revealed a number of shortcomings that influenced the final design of the evaluation strategy.

Firstly, the distinction between experienced and beginner schools could not be applied to the programme schools. Possibly a class, or an annual cohort, often through the efforts of an individual teacher, had earlier had contact with the programme that the school was planning to start working with. The same type of doubt existed about the "experienced" schools. The result was that we had to give up this distinction between the schools. The nominal distribution remained, however, on good grounds, in the sense that this information was made available to us through specific information from the programme authors.

Secondly, and of greater importance for the original design, it was apparent at an early stage that not one single school could be regarded as a "pure" programme school. This applied not least to the comparison schools. Since the introduction in 2006 of a legal requirement to carry out equal treatment plans, all schools had some contact/use of several of the programmes in the evaluation strategy, and possibly others. As regards the "programme schools" this happened irrespective of whether the individual school or the municipality had set aside funds for the purpose of introducing a specific programme. At the same time, it turned out that a number of other programmes had been introduced at the schools earlier earlier and the school staff regarded these other programmes as still being used. In several cases information about schools' programme activities that we received from the programme representatives and that had been chosen as representatives of specific programmes did not correspond, as the staff considered that they were working actively with completely different programmes.

The fact that this programme mixture could also be regarded as a supplementary layer imposed on the school's formal and obligatory equal treatment plan created problems for the strategy selected. We had ended up in what could be described as an uncontrolled "care activity" where everyone was given "pills" – often several, and often several mixtures of pills – in the hope of being able to achieve the greatest effect.

3.2.8 The Brå Report

In the middle of the ongoing work, the project team were able to participate in a seminar arranged by the Swedish National Council for Crime Prevention (Brå) which had published an international meta analysis of outcome studies into anti-bullying programmes. The researchers who worked with the meta analyses themselves became aware of the problem of adherence to a specific programme in the participating schools.

In order to find a feasible approach, the researchers chose to break down the programmes into active component parts, or components that were considered to be active. Even though the formation of such components took place on relatively superficial grounds (often through discussion with programme representatives), this did provide a deeper view of possible common factors, or component clusters, which were considered to be effective for positive outcomes.

With the information from the first school visits and from the Brå report on analysis of strategies, the research team chose to apply a strategy focusing primarily on active components.

This decision resulted in an independent examination of the components in the programmes chosen. In order to validate the evaluation group's components, representatives of all the programmes had the formal possibility of arguing for, proposing changes in or dismissing the analysis of the different programme components.

3.2.8.1 Determining components

Changes in the evaluation strategy led to some delay in the analysis of the qualitative data. The schools' use of programmes was broken down into the use of different measures (components) at different schools. Schools' descriptions were thus used as a basis for determining the use of components at school level.

The outcome at the individual and aggregate level could thus be related to different schools' use of components in their anti-bullying, detection and remedial work.

3.3 Managing complex school environments – a methodological starting point

The main questions in traditional programme evaluations are usually formulated "*Does the programme function?*", "*What functions?*" or "*What outcome does the programme have?*". In the Council's meta evaluation of anti-bullying programmes (Ttofi et al. 2008), the overriding aim was to "*assess the effectiveness of school-based anti-bullying programmes in reducing bullying at school*". The starting point for evaluation studies of this type is a kind of attitude about a "pupil" programme context, free from disturbing elements in the form of other programmes or measures, where the programme can be specifically studied. As should have been evident, visits to the schools, however, showed that this "pure"

reality did not exist. In addition, it should have been evident that the contextual conditions of the schools studied varied. Given this background, an alternative way, closer to reality, was developed to handle this problem. This approach also clearly takes its starting point in components, and the idea that the contextual conditions of the schools is different.

The fundamental question from this perspective is somewhat different compared to a traditional perspective, and can be formulated as follows: "*What functions, for whom in what respects, and under what conditions?*" (see e.g. Pawson & Tilley 1997; KiVa Koulu 2010). The question addresses not only which (what measures or measure combinations) function, or whether the studied phenomena (bullying) changed over time, but also how and under what conditions (contextual conditions) a programme has an impact on the phenomena.

3.3.1 Programmes and components

A programme and its components in this context can be regarded as equivalent to theories or theoretical assumptions about how the measures function, and what is assumed to lead to a change in specific behaviour. The programme also contains an overall explanation of what mechanisms produce observable patterns or regularities.

From the programme analysis (National Agency for Education 2009), it is evident that the programmes focus on different mechanisms. In some programmes, bullying is regarded as a phenomenon produced as a result of an individual's characteristics, in others as a result of interaction between groups or individuals, and within others as the effect of a school in a system etc. In other words this involves different theories about the phenomena and what can be assumed to counteract non-desirable behaviour. If the programmes are broken down into their components, they can be regarded as descriptions of the mechanisms that are assumed to affect and change behaviour in a certain direction.

... mechanism refers to the ways in which any one of the components or any set of them, or any step or series of steps brings about change. Mechanisms thus explicate the logic of an intervention; they trace the destiny of a programme theory, they pinpoint the ways in which the resources on offer may permeate into the reasoning of the subjects (Pawson & Tilley: 2004:7).

For example, the measure (component) school rules refers to regulating what pupils may and may not do in different school situations, and what is considered to be appropriate, right and desirable, or inappropriate, wrong and prohibited (Boostrom 1991; Buckley & Cooper 1978; Thornberg 2008). These rules may either have been drawn up by teachers and other school staff, or by teachers, other school staff and pupils together. In some cases they may be written, in others they may be of a more informal nature, e.g. as part of "school ethos". But for school rules to be complied with, they must have legitimacy. However, it is not the rules or routines per se which create effective working forms in the classroom or school, but rather the ability of teachers to establish and maintain clear rules and approaches (Freiberg et al. 1995). Rules are important, but do not necessarily need to be sufficient to reduce behaviour that may be found in the school such as degrading treatment and bullying (Potts 2006). Rules can be counter-productive if, as Schimmel (1997) describes, they are viewed as (1) negative, restrictive, and inexplicable; (2) authoritarian; (3) developed without pupils' involvement; (4) documented and distributed in a formal form which pu-

pils possibly do not understand; and (5) have deficiencies in that pupils are not able to question the fairness of, the necessity nor the consequences of specific rules. If the pupils do not understand the point of the rules, they tend to regard them as unnecessary (Thornberg 2008). Given this background, school rules do not always need to have the same intended effects. Under certain circumstances, they function and have an effect in terms of reducing bullying and degrading treatment, whilst under others the effects are more limited. The causal potential of a component is, in other words, merely an expression of conditions that are favourable, in the sense that they are not negated by other forces, such as a lack of legitimacy or lack of participation, to use the example of school rules.

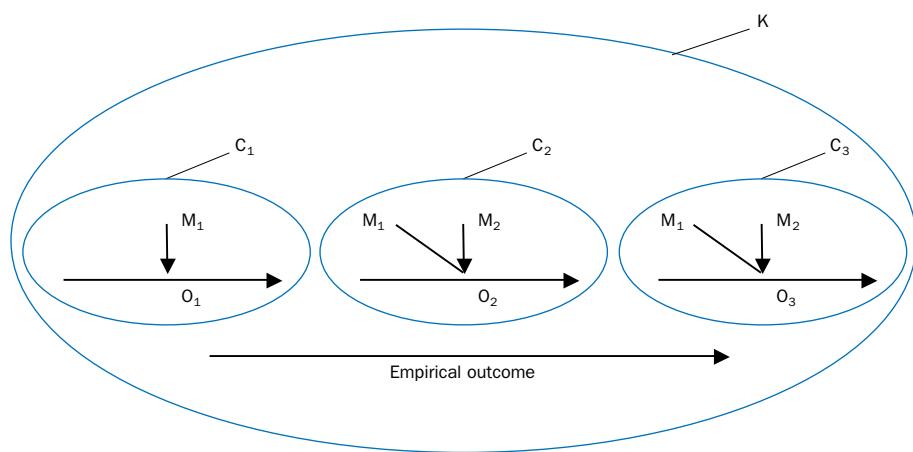
For this reason, it is also extremely important to study the circumstances (contextual conditions) under which they function or do not function in order to be able to answer the fundamental questions of what works, for whom, in what respects and under what circumstances.

3.3.2 Measures and contextual conditions

All programmes or measures (components) essentially aim at reducing the frequency (preventing, detecting and remedying) of unacceptable acts, and instead reinforcing the incentive towards other more acceptable acts and forms of behaviour.

One way of illustrating and detailing the reasoning in relation to measures (components) is to take the starting point shown in the figure below. The figure shows the smaller oval contexts at different points in time (C_1 , C_2 and C_3), the horizontal line in the ovals describes observable patterns or regularities (O_1 , O_2 and O_3) (bullying frequency), and the vertical lines, the mechanism or mechanisms (M_1 and M_2) (components) at respective points in time.⁸ The horizontal line linking the different points in time describes empirical outcomes (changes in observable patterns over time).

Figure 3.2 Components, change and context



In this context, individual measures, combinations of measures, groups of schools with similar ways of working and also each individual school can be

⁸ Context (C), mechanism (M) and observable patterns (O) are the three fundamental constituents of a general causal explanation.

viewed from this perspective since (i) individual schools and groups of schools may have similar contextual conditions, (ii) different mechanisms may be active in different schools, and (iii) observable patterns differ among different schools.

In practice the components studied also make up a limited part/activity in a greater context (the ovals surrounding contents, C). Amongst other things, it was evident that all the changes that had taken place in schools in recent decades concerning pedagogical content and form, legislation and rules, organisational forms, and last but not least changes in the frequency of bullying over time, where i.a. the scientific, political and legal systems had influenced understanding of the phenomena and the context within which it was studied. This in its turn has affected the way we approached the scientific aspect of the assignment.

The measures (components) and the schools studied are part of an open system affected by factors outside scientific control. It follows from this that is difficult to separate measures from other activities and interventions that individual pupils or groups of pupils are or have been subjected to at the schools. Unpredictable events, political changes, the presence of other programme-like interventions, staff learning and reflective abilities, media monitoring, organisational realities etc mean that the measures may change and be re-formed, and that the way in which measures are used varies from case to case. This reality also makes it difficult to think in terms of experimental design as the opportunities to allow for all factors that can be thought to have an impact on the phenomena studied are extremely limited.

The very fact that schools – in accordance with legislation (2006:67) on the prohibition against discrimination and other degrading forms of treatment of children and pupils – are obliged to have equal treatment plans that aim at preventing harassment and other degrading treatment in school, and creating a safe school environment, makes it difficult to isolate specific programme outcomes. In other words, the school environment is contaminated by other measures (mechanisms), which in many respects are similar to specific programmes or programme components.

The fact that the schools studied are part of an open system also has consequences for the design of the evaluation and the results presented. Under these conditions, the evaluation will not only report results independent of context, but also a collection of results based on contextual conditions, measures and empirical outcomes, namely context-mechanism-outcome configurations (cf Pawson & Tilley 1997). These configurations can be said to capture the link between context, measure and empirical outcomes.

To implement this, the study has been guided by a number of theoretical questions. The questions can be organised as follows:

- *Mechanisms*: What properties of specific components lead to a specific pattern of outcomes in a given context? Expressed otherwise: What properties or specific components are assumed to be important in changing behaviour or reducing the frequency of specific behavioural patterns?
- *Context*: What contextual conditions must exist for measures (components) or combinations of measures (component clusters) to produce a specific outcome?
- *Outcome patterns*: What effects are produced by the active causal mechanisms (components) in a given context?

- *Context-mechanism-outcome configurations:* How and in what way do components affect or change specific behaviour under specific contextual conditions?

Given this background, it was necessary to develop and systematise knowledge about these questions, i.e. from the analyses be able to answer questions about what works, for whom, in what respects and under what conditions. The empirical work of the evaluation also deals not only with studying how some behavioural patterns are changed or what statistical relationships exist, but also about developing and testing assumptions about (i) mechanisms that under (ii) specific contextual conditions generate (iii) specific empirical outcomes. Based on knowledge from these sources evidence is produced (Pawson 2006).

The table below illustrates how this more theoretical abstract reasoning and methodological starting points were incorporated into the analysis and report of results. The table aims at providing the reader with a pointer to how the outcome of the evaluation can be understood, and provide knowledge about *what functions, for whom, in what respects, and under what circumstances*.

Figure 3.3 Mechanisms, contextual conditions and empirical outcomes

	Mechanisms	Contextual conditions	Empirical outcomes
Abstract			
Individual measures and measure combinations	More ideal or controlled conditions	Outcomes under quasi-experimental conditions	
Individual measures and measure combinations directed to groups of schools	Contextual conditions at groups of schools with similar working methods	Outcomes from groups of schools with similar working methods	
Individual measures and measure combinations directed to groups of schools	Contextual conditions at individual schools	How individual measures are manifested and applied under different conditions	
Concrete			

The following provides an account of the methods and approaches used in selection, data collection and analysis of the empirical material.

3.4 Participating schools

3.4.1 Choice of schools in relation to status in use of programmes

3.4.1.1 Estimating use of programmes

The selection criteria for the programmes were that they should be used in Swedish schools and/or there should be indications that they had significant intervention outcomes. There was also an ambition to include different kinds of programmes.

In connection with the conference organised by the National Agency for School Improvement (MSU) *Everyone's equal value/equal treatment* in 2007 as a result of the new Child and Student Safety Act, participants were asked in a questionnaire about their anti-bullying work. Participants at the information meeting for the course, *Mobbning – skolpraktik och forskningsperspektiv* (Bullying – practice in schools and research perspectives) received the questionnaire and could assemble their interest in participating. Representatives of the programmes were also asked to give examples of schools working with their programme. From this it was possible to assemble a picture of which anti-bullying

programmes were common, and which schools were using them. Discussions with key persons within MSU provided further information about this.

3.4.1.2 Contact with schools

MSU contacted schools asking if they wished to participate in the evaluation. The headteacher or person(s) responsible were informed about what participation entailed, by telephone and in writing. They were requested to establish possible interest among other members of staff, and subsequently a verbal agreement was made on participation. Schools were contacted as users of a particular programme, or as "non-programme users". Initially, only schools about to introduce a programme were contacted. It turned out to be difficult to find four schools for each programme that were on the point of introducing a programme. It was thus decided that two schools that had experience in working with the programme, established users, and two schools that were new to the programme should be chosen. Only three schools that said they were working with School Comet came.

The ambition was to have schools from the whole country, with mixed school years from preschool to school year 9, and with only lower and higher ages. All pupils in school years 4–9 in the selected schools would participate. The ambition was that there should be no fewer than 100 participating pupils from any of the schools involved.

3.4.2 Review of selection strategy

Since the chosen evaluation strategy had to be reviewed in light of the background data collected about programmes and possible programme schools, the final sample of schools was adapted to existing conditions. The background information compiled also compelled us to review how the control or comparison schools should be used. The final sample of schools was adapted to the conditions existing as a result of the collection of qualitative data. The conditions became the following:

1. The selected programmes showed unequal use in compulsory schools in Sweden.
2. The schools that could be regarded as programme schools, where formally invited programme suppliers had initiated or planned to initiate implementation, lacked a defined starting date. A so-called "new" programme could involve reusing a programme introduced earlier. Few schools could be regarded as "pure" or unaffected by earlier contact with other programmes, and often several other programmes.
3. The formal rules (directives) that Swedish compulsory schools are required to follow mean that each "new" programme, irrespective of earlier use of programmes, must be regarded as an addition to regular school activities.

The term "programme" created some puzzlement. Since one school's equal treatment plan could be regarded as a type of programme, this could be taken to mean that all Swedish schools had and have an anti-bullying programme. The programmes included in the evaluation assignment are more to be regarded as "programmes on top of programmes". Irrespective of how closely a programme was adhered to, not one school would be starting from a complete beginning. Since the schools' own work with equal treatment plans could cover several components in a programme, the introduction of these processes could not be

regarded as new. Among schools which stated that they would start a new programme were schools where programme work could be regarded as "a fresh try" with a programme the school had used earlier.

3.4.2.1 Frames for a targeted selection

Due to these circumstances, a strategy was chosen where the starting point for choice of school was the programme authors/representatives themselves. There was an awareness that this strategy would increase the chances that the schools selected would demonstrate a "cleverness" effect. It obviously lies in the interests of the programme authors to choose or point out schools where the programmes had the best chance of functioning successfully.

In the same way, it can be assumed that most schools in the best John Henry tradition wanted to demonstrate that their use of programme X was worth it (see section 2.7.7 above on "self-fulfilling outcomes"). The latter risk is less than the former since information from field visits in some cases showed that a single school and/or teacher team was less than enthusiastic about a decision from above to introduce a programme.

In an overall assessment, it was assumed that the risk of John Henry effects could be controlled, partly through the collection of qualitative data about the school context when introducing the programme, and partly through the possibility of testing for such "cleverness" effects for the chosen programme with a number of comparison schools.

3.4.2.2 Frames for the population

After 8 programmes had been chosen, in two steps, programme representatives were contacted for information about possible schools. A preliminary strategy was to find schools that had already introduced programmes, and schools that could be regarded as beginners starting to use the programmes. In the first case, the aim was that the programme should have had some time to produce effects.

An important dimension in the evaluation strategy was the possibility of collecting outcome data at the individual level. This would be highly unusual in this type of evaluation, where anonymity is usually guaranteed since the behaviour studied raises special ethical issues. Since the project team decided to apply for an ethical review to carry out an evaluation on this basis, this had important consequences on choice of schools.

When the application was granted, it meant that pre- and post measurement, or in the best case measurement over several intervals, would take place on an individual basis. This has important consequences. In the normal case, with aggregate outcome measures, a situation is created where data at the school level becomes crucial in assessing possible programme effects, which itself means that the number of participating schools must be larger.

The granting of a permit for data at the individual level meant that unique follow-up data could be collected. Possible programme and component outcomes could be studied at the level of individual pupils.

3.4.2.3 Number of schools per programme

The original strategy, based on the possibility of creating comparative data at the individual level, was amended to try to differentiate between schools with experience in using a given programme, and schools without any experience. We decided to contact two schools in each category. With 8 programmes, the

national number of participating programme schools came to a total of 32, two experienced schools and two beginners' schools. The strength of data at the individual level meant that we could expect specific programme outcomes over the three measuring periods. With access to individual data, it was now possible to focus on victimised individuals and their stages into or out of victimisation. As regards the specific goals of preventing, detecting and remedying bullying, it is reasonable to expect measurable effects at the individual level within a short time period. As a result, the argument concerning the anchoring of the programme does not hold, in the sense that it can take time for a programme to show preventative effects, which would need a longer period.

With these frames, four schools per programme, as the starting point the programme representatives were asked about appropriate schools that could be in the evaluation. As pointed out above, there was an awareness of the bias implied by this strategy – i.e. to the programme's advantage since it could be expected to be in the interests of the programme representatives to propose schools where their programmes were effective and well supported. This would also apply to headteachers who showed an interest in being involved.

3.4.2.4 Size/level at the schools

The average size of a compulsory school in Sweden is around 190 pupils. With 32 schools, four for each programme, we could assume we had at least 6 000 pupils in the intervention schools. Again, given that we would generate individual data, it was considered that the number was more than sufficient.

At the same time as an effort was made to avoid schools that were too small, access to individual data means that bullying incidents in a smaller school could also provide data for evaluating a programme.⁹ A frame was defined of at least one school class per school year, which would lead to approximately 200 pupils in such a school, and about 125 pupils in a 5–9 school with 25 pupils per school year.

An attempt was made to achieve a geographical distribution of the schools. These choices were partially heuristic since most programmes were unequally distributed geographically. In addition, programme representatives in some cases had written contracts with whole municipalities. In these cases, account was taken of cluster bias. The selection of schools could thus be described as a heuristic self-selection process, where the project team chose from interested schools on the basis of predetermined criteria.

3.4.3 Control/comparison schools

It should be evident from above that at an early stage, it was necessary to move from the traditional view of evaluation theory, namely the gold standard, and consciously choose not to include control schools in the evaluation design. Non-programme schools were thus called *comparison schools*. It appeared also that the concept of "comparison" was misleading since no comparison schools were chosen that could be regarded as unaffected by any, or in some cases a number of the programmes formally covered in the evaluation (see section 2.7.3 above).

⁹ See Gill & Stenlund (2005) for a report of a bullying incident in one of the very smallest schools with 28 pupils from preschool to school year 6.

3.4.3.1 Choice of comparison schools

The comparison schools were chosen from a number of schools that had expressed their interest in participating to the National Agency for Education. The aim was to have a number of smaller schools that *were not* working with any programme, and that did not have any plans to introduce a specific programme during the evaluation period. Schools' interest was mainly based on the possibility of having their own work on combating bullying and degrading treatment scientifically examined. An interest could reasonably be considered to be an indication that the school in question had its own view of anti-bullying work that was fairly effective.

3.4.4 Selection of school choice strategy

No financial compensation or special support, apart from receiving feedback on the results on completion of the project, would be extended to the participating schools. These schools regarded participation as a welcome examination of what they were doing with their specific programmes. This applies to both the programme representatives and the participating schools. Since the whole project aroused national interest at an early stage, there was some pressure both from schools working with special programmes and programme representatives to take part in the project. It was important to try to match this interest amongst the potential comparison schools. Thus notifying an interest in participating became an important starting point for choosing the comparison schools. One of the project coordinators at the National Agency for Education had the task of choosing appropriate comparison schools based on the criteria above, as the Agency possesses detailed knowledge of all compulsory schools in Sweden.

3.4.5 Basic facts about participating schools

The complex processes that the introduction of an anti-bullying programme involves creates special requirements for the type of data that a systematic evaluation should be based on. At an early stage, the research team had planned comprehensive collection of qualitative data at the participating schools. This led to some reduction in the number of schools. As described above, access to follow-up information on victimisation and self-reported bullying behaviour at the individual level made it possible to limit the number of schools. In making this decision, account had also been taken of the logistical conditions governing the collection of qualitative data from each school. Another factor was that all schools should receive a field visit. The research team considered a sample of visits, but in its overall strategy chose to make total mapping as potentially the most rewarding collection strategy for qualitative data.

Basic facts about the schools were collected from a range of sources. The main aim of the extensive description of the schools was to try to relate work on preventing, detecting and remedying bullying to a complex school context. There was strong interest in potentially distinguishing the characteristics of schools that could possibly be considered to have an impact on their programme work and its outcomes. Based on the earlier anecdotal information about multiple use of programmes, it was considered vital for the strategy to be able to map so-called "programme contamination".

All schools received a one-day visit comprising interviews with school management, teachers, pupils (several groups), the anti-bullying team (or equiva-

lent) et al. The school descriptions amounted to at least 20 A4 pages per school, qualitative data material of around 800 pages. The aim of the school descriptions was to map programme anchoring in different schools, form an idea of how bullying and other degrading treatment was carried out and describe the school's experiences both with the programme currently used, and other parallel and/or earlier programmes used. Relevant contextual factors considered covered school culture in terms of capacity for improvement, schools' equal treatment plans, different regulations schools build their equal treatment work on, consequences of equal treatment plans in relation to programme implementation and also theoretically-based reasoning on the importance of the components in individual schools. An overall aim was to create material for assessing how different programme components were used, handled, followed and viewed by participating staff and pupils.

3.4.6 Summary of basic facts in schools

In order to create an overview of all schools participating in the evaluation, some basic facts will be reported. The table below shows information about geographical distribution (county).

Table 3.1 Basic facts about participating schools 07/08

County	No. schools	Number of pupils involved	Number of pupils at the school
Blekinge	1	411	411
Dalarna	2	909	1 040
Kalmar	1	274	285
Kronoberg	1	222	222
Jönköping	3	872	1 204
Jämtland	1	97	176
Norrbotten	2	417	417
Skåne	7	1 999	2 346
Stockholm	7	1 644	2 395
Värmland	1	98	187
Västernorrland	4	1 044	1 278
Västmanland	1	191	191
Västra Götaland	5	1 255	1 572
Örebro	2	883	917
Östergötland	1	272	272
Study sample		10 588	

Geographical distribution by county is satisfactory. Counties not represented are Halland, Uppsala, Gotland, Gävleborg and Södermanland. The distribution by county reflects the population distribution, with 8 schools from Stockholm, 7 from Skåne and 5 from Västra Götaland.

Regarding distribution of schools by school form, the table below shows that the most common types of schools were 1–9-, 7–9- and 6–9 schools, a distribution that does not differ noticeably from the national distribution.

Distribution of pupils by school years shows a good distribution across school years. The proportion of students at the intermediate level amounts to about 36%.

The average value for the proportion of pupils with the right to mother tongue tuition amounted to 20%, which broadly corresponds with the national average of 18%. The small surplus is also reflected in the figure for teacher-pupil

Table 3.2 Distribution of schools by school form

School form	Number	Per cent
1–5	1	2.6
1–6	9	23.1
1–9	10	25.6
3–9	2	5.1
4–6	1	2.6
4–9	1	2.6
5–9	2	5.1
6–9	6	15.4
7–9	7	17.9
Total	39	100.0

ratios, which in the group was 8.7 compared with 8.4 teachers per hundred pupils nationally.

Table 3.3 Summary of basic facts

Type of basic fact	Min	Max	Total	Mean	Nationwide
Number of questionnaires distributed	68	617	10 588	271	
Number of pupils per school	137	748	12 913	331	
Mother tongue tuition	0 %	100 %		20.3 %	18 %
Teacher-pupil ratios per hundred pupils	5.40	14.30		8.7	8.4
School grades	181.0	235.0		205.6	209.0

The proportion of pupils per programme was approximately the same in terms of how the nominal programmes were distributed among the chosen schools. A variance analysis of this distribution showed no significant deviation due to chance, namely the mean number of responding pupils per school per programme was approximately the same.

Table 3.4 Participating pupils per programme (nominal programme distribution)

Programme	Mean	N	Min	Max
The Farsta Method	330	4	187	506
Friends	360	4	285	480
Comparison	364	8	170	748
Lions Quest	295	4	158	423
Olweus	403	4	297	502
SET	275	4	176	359
School Comet	413	3	186	694
School Mediation	246	4	179	391
Step by Step	278	4	137	426
All	331	39	137	748

Again, it is apparent that the selection procedure worked out well. Each programme, even though pupils' and schools' programme allocation was nominal, can be said to be represented by "hundreds" of pupils. The smallest number of pupils in the school participating in the evaluation was 158, whilst the largest number in a school was 748. If the number of responses are studied in rela-

tion to nominal programme allocation, it is evident that the four schools using School Mediation on average had 246 respondents (lowest average number), whilst the three schools using School Comet had an average number of respondents of 413.

The response frequency of the participating schools in the different surveys is shown in relation to the description of the approach taken to the collection of quantitative data below.

Although the final design of the evaluation project entailed a strict comparison between programmes, the description shows that the conditions in terms of geographical distribution, schools, types of schools and annual cohorts were good for studying the outcomes of active (programme) components.

3.4.7 Summary

The description of participating schools gave rise to a longer discussion around the requirement for best praxis in evaluating programmes in school contexts (see section 2 above). Several factors, also in an international context, make this evaluation approach fairly uncommon. Whilst the meta analytical programme evaluations often examine several programmes simultaneously, it has not been possible in the literature on international research to find a single large-scale example of an evaluation of anti-bullying programmes where several programmes were evaluated at the same time. The original ambition was to monitor current models for programme evaluation. However, at the same time as there was an awareness of the special circumstances existing as regards evaluations in a school context, the first field visits gave a clear picture of specific, difficult conditions. These mainly concerned the school's legal obligation to have active equal treatment plans, and the complex history of programme use existing in each school. As a result, the strategy then became the application for a permit to collect follow-up data at the individual level, and carry out collection of qualitative data at all the participating schools. An assumption that a certain programme can be limited in time to a certain starting date proved to be unrealistic. The consequence was also that the idea of a traditional quasi-experimental approach was discarded.

The so-called "John Henry" effect that occurs in a self-selection strategy could be partly adjusted for by the choice of comparison schools. This dimension was also complicated as the comparison schools, apart from their own equal treatment plans, also had their own "programme histories".

Overall, self-selection proved to be a successful outcome in terms of representativeness. The material for the evaluation thus covered about 10 000 pupils at 39 schools. Based on school type, geographical situation, size, school grades and proportion entitled to mother tongue tuition, the material does not in any substantial sense deviate from national population patterns.

3.5 Data collection methods – qualitative data

The qualitative data in the study consists of two rounds of interviews with the schools in the study, and also interviews with the programme representatives for each of the eight programmes studied. The following tables show this over time.

A total of 835 persons were interviewed at the thirty-nine schools as well as eight programme representatives.

Table 3.5 Qualitative data

Interview round 1 June 2008 –January 2009	Interview round 2 August – December 2009	Interviews programme representative
Group interviews at 39 schools. Number interviewed – 574 School leaders, teachers, pupils, staff with specific responsibility for school's anti-bullying work. 6 interviewers	Group interviews at 13 schools. Number interviewed – 261 School leaders, teachers, pupils, staff with specific responsibility for school's anti-bullying work, "other staff", parents. 5 interviewers	Individual interviews Programme representatives for all eight programmes 2 interviewers

The study has had an explorative nature. The plan at the outset of the study had to be revised during the course of the work, as the empirical results made it necessary to develop new approaches to get answers to the study's primary aims and questions. The process can be described as interactive (Alvesson & Sköldberg, 2008) as understanding grows successively through an interplay between theories about work on combating bullying and degrading treatment, and the results from the empirical studies. The description of the steps taken in planning and implementation for each of the two interview rounds took place chronologically. The theoretical and empirical deliberations considered during the work are reported in the description. The final step also was to give a description of the interviews with the programme representatives.

3.5.1 Interview round 1

During spring and autumn 2008 interviews were carried out with school leaders, school staff and pupils at all schools in the study. The aim of the interviews was to get a picture of how the thirty-nine schools were working on combating bullying and degrading treatment. At the same time the intention through the interviews and school visits was to obtain a general picture of each school in order to get a deeper understanding of the conditions for its work in this area.

Each school had a contact person who helped organise the visit. At some schools, the school leader took on the task of contact person, at other schools it was someone in the pupil welfare team or in the anti-bullying team.¹⁰ Before the first interview round, the contact person had the task of organising four interview groups – one group with school leaders, one with persons with special responsibility for the school's anti-bullying work, a teachers' and a pupil group. The aim was that the teacher group should consist of teachers from different teams, subjects and different age groups. One hope was also that they would put together a pupil group based on principles of diversity, and that the selected pupils would have some task in the school's pupil council or in some other body where they could be expected to have somewhat greater knowledge of the school and its work on combating bullying and degrading treatment compared to a student without such a role. There should be no more than six persons in an interview group.

¹⁰ The names of these groups vary depending on their composition. We use the term "pupil welfare team" as a description for the group at a school with the major responsibility for pupils' welfare. These groups usually consist of school leaders, special pedagogues, nurses and/or counsellors. "The anti-bullying team" is used as a description for a group with special responsibility for the school's anti-bullying work. These groups usually consist of someone from the pupil welfare team, teachers and/or pupil assistants.

In the first interview round a total of 71 school leaders were interviewed. At most schools both the headteacher and deputy headteacher were interviewed. A total of 139 persons took part in the group with special responsibility for the school's anti-bullying work. This interview group contained all or parts of the school's anti-bullying group, the safety group, the equal treatment group, the friends team, the pupil welfare team or similar. A total of 171 teachers were interviewed. At most schools the contact persons succeeded in creating a group of teachers from different school years with different subjects and from different work teams. At some schools it was difficult to relieve teachers of teaching duties. This resulted in groups that were not always so dissimilar. At some schools it also led to variations in the number interviewed as some teachers could only participate in the interview when they had no teaching. Nearly all pupils who were asked by the contact person to participate in the interview were also willing to do this. A total of 193 pupils were interviewed. The majority had different roles in the pupil council. Some also had tasks that were more directly related to anti-bullying work in the school through some form of peer support.¹¹

3.5.1.1 Group interviews

Choice of group interviews had both its advantages and disadvantages. The advantages are of both a practical and scientific nature (see e.g. Cohen, Manion, & Morrison, 2007). By carrying out interviews in groups, it was possible to share a larger number of experiences and more knowledge than if the interviews had been individually based. We could also benefit from the fact that during a group interview, interaction takes place that can give an insight both into how individuals at the school interact and how together they create a picture of the school's anti-bullying work, its similarities and differences.

The interaction created in a group interview may also have disadvantages. For instance, it is difficult to lead a group interview where everyone can express his or her view. A further problem is that participants can easily adopt a common view, and in such a context opposing views may not be articulated. One person with a view that differs from the consensus perhaps does not dare to put forward an alternative deviating view. There may be others who recognise that it is not worth the trouble of protesting, or who do not take the time to reflect. In our pupil interviews these difficulties were most evident when the groups contained pupils of different ages and where older pupils by virtue of their age often talk more or were given greater scope. Our interview team consisted largely of interviewers with long experience in carrying out group interviews, which meant that they were able to develop a sensitivity to what happens in an interview group, and knowledge about a number of methods so that all interviewees could make their voices heard. This may have reduced the difficulties in the group interviews even though they could never be completely eliminated.

3.5.1.2 Interview guides

A special interview guide was designed for each interview group. In addition, the interview guide was drawn up for school leaders and teachers in three different variants, depending on whether a school had worked for a short or long time with the programme they had been categorised as using at the start of the

¹¹ For further information about the ethical dimensions, see attachment 1 "Further information Data collection method – qualitative data".

study, or whether they were working as one of our "comparison schools". In the first interview, all the guides contained three themes:¹²

- the interviewees' *picture of their own school* – its groups, decisions, norms and quality assurance systems
- the interviewees' view of the terms, *bullying and degrading treatment* and their *scope* and *causes* at the school.
- *school's work on combating bullying and degrading treatment.*

Below follows a brief description of the reasons for the three themes in the interview guide.

Picture of one's own school

Introducing a programme can be regarded as an attempt on the part of the school to improve its work in this area. In research into school development and school improvement, knowledge has been developed about how a local school develops work cultures that form relationship and work patterns, and how these patterns in their turn create conditions for improvement.¹³

Improvements entail changes, and changes have different chances of having an impact in a school due to the school's internal structure, its infrastructure and other factors.¹⁴ A school's rules and routines, which makes different acts more or less accepted and thus more or less possible, forms the school's infrastructure. This is expressed in a school's different systems for grouping, power and responsibility, decision-making, evaluation system and norms. Schools with some flexibility in their groupings of pupils and teachers, a clear distribution of power and responsibility based on influence for staff and pupils, where decisions are based on follow-up and evaluations, and where there is a consensus on fundamental values and norms, have favourable conditions for introducing new elements into their work.

To obtain a picture of the schools in the study and an understanding of the context in which programmes combating bullying and degrading treatment have been introduced, we chose at the initial interview to map some aspects of the school's infrastructure. We put questions about how the school organises activities, the distribution of power and responsibility, and interviewees' views on schools' norm systems. This mapping does not claim to be a complete description of the capacity for improvement at the 39 schools, but rather had the aim of building up deeper understanding of the conditions governing schools in their work of combating bullying and degrading treatment through the introduction of programmes.

Bullying and degrading treatment, its scope and causes

Well-founded work against bullying and degrading treatment requires an understanding of the two phenomena and how they differ from each other. Knowledge of the situations concerning bullying and degrading treatment at one's own school is needed, and this knowledge should be based on some form of systematic mapping. By asking interviewees to define bullying and degrading treatment, and giving a picture of its causes, an understanding was created

12 See the interview guide for round 1, attachment 2.

13 See e.g. Blossing, 2000, 2004; U. Blossing, A. Hagen, A. Nyen, & Å. Söderström, 2010; Ekholm, Fransson, & Lander, 1987; Fullan, 2001; M.B. Miles & Seashore Lois, 1990.

14 U. Blossing, A. Hagen, T. Nyen, & Å. Söderström, 2010; M. Ekholm, 1989; M. B. Miles, 1965.

of the assumptions underlying the school's work on anti-bullying. By asking interviewees to estimate the frequency of bullying at the school, a picture was obtained of their knowledge about its occurrence at their own school, and what this knowledge was based on.

School's work on combating bullying and degrading treatment

The main focus in the interviews was on the school's work on combating bullying and degrading treatment. For the 32 "programme schools", the starting point was their work in using the programme they were assigned at the start of the study. Questions were put in the interviews about who initiated the introduction of the programme, how it had been implemented and what importance they considered the programme had in the school's work on combating bullying and degrading treatment. These questions aimed at increasing understanding of the conditions under which programmes were introduced at the schools, and what support they had in the school. The interviewees describe their work on using the programme, and its strengths and weaknesses. They could also describe other elements of their work of combating bullying and degrading treatment that they regarded as important.

To map the work of the comparison schools, interviewees were asked to describe what elements in the school's work they considered important for combating bullying and degrading treatment.

In interviews with pupils, the focus was on their experiences and perceptions of the school's anti-bullying work, and the role that they considered they had in this.¹⁵

3.5.1.3 Carrying out the interviews

One and a half hours was set aside for each interview. Most interviews with school leaders, teachers and staff with special responsibility for the school's anti-bullying work required this amount of time. Pupil interviews were sometimes carried out over a shorter period. At most schools, the visit was well prepared with a timetable for interviews, premises for interviews and participants who were prepared for when and where the interviews would take place. At some schools the visit was less well prepared as information about time and place for the interviews had not been received by all participants. Some schools had to receive a second visit as not all interviews could be carried out because of lack of preparation or unforeseen events during our visits.

All interviews were recorded. The transcriptions were done by a person outside the research team. This was done very thoroughly and as carefully as possible, including those parts of the interview where the participants spoke at cross-purposes. Each interview transcript covers between 10 and 30 pages.

3.5.1.4 Processing and analysis of the interview material

The initial processing and analysis of the interviews resulted in a "case description" for each of the schools studied. These descriptions cover between 20 and 30 pages, and contain background information with basic facts about the municipality and the school, and a description of the school's work on combating bullying and degrading treatment available from the school's web site (e.g.

¹⁵ For a further description of the interviews, see Attachment 1 "Further information Data collection method – Qualitative data".

quality reports, inspections, plans to combat degrading treatment and discrimination). The major part of the case descriptions is a summary of the interviews carried out at the school under two main headings:

- The school's infrastructure – systems for grouping, decision-making, norms, quality assurance and teaching forms.
- Work on combating bullying and degrading treatment – causes, scope, the X programme, other measures and models, future plans.

The case descriptions thereafter provided material for examining experiences from programme work, and an attempt to explain which measures were important for successful anti-bullying work.

3.5.2 From programmes to components

After processing the first interview round, it was found that virtually all schools were working with a number of different programmes and other measures with the aim of creating a positive working environment, and to counteract bullying, degrading treatment and discrimination. None of the 39 schools could be regarded as "pure" in the sense that the school in its work on combating bullying and degrading treatment only used measures that could be related to just one programme. Some schools said at the initial interview that they only worked with one programme, but at these schools the interviewees described how a number of other measures were also important for their anti-bullying work. Their work with the programmes was adapted to the conditions and needs that were considered to exist at the school or on the basis of the knowledge of individual teachers, attitudes and abilities. In order to create an understanding of anti-bullying work at the 39 schools, we were compelled to cease regarding them as programme schools.

Earlier research had drawn the conclusion that different measures (components) in the programmes had varying effects on the schools' anti-bullying work. With the help of already identified components and some elements of the work on combating bullying and degrading treatment that occurred in the first interviews, a list was created of the components "measures" considered to be important for effectively preventing, detecting and remedying bullying.¹⁶ The components were given a slightly different meaning in order to be able to describe the schools' work in greater detail.¹⁷ One example: The component "special lessons" – One school does not have such lessons (0). Special lessons exist as specific measures, e.g. at start of term (1). Special lessons are introduced where necessary, e.g. as a result of incidents. Special lessons are timetabled and carried out for certain classes (2). Special lessons exist and are carried out for all classes (3). The aim of giving a component different meanings is not to describe a qualitative difference where something is better or worse.

In the beginning the list contained 23 components. The research team made an assessment of the components for each of the 39 schools. This was based on the case descriptions resulting from the first interview. One difficulty with this assessment of components was that these interviews were carried out whilst we were still thinking in terms of evaluating programme outcomes. The results of our interviews were in reality the most important reason we were compelled to

16 See further section 2.6.2 above

17 See attachment 4 "Guidelines for determining schools' component values".

find other ways of understanding the differences in experiences pupils had of bullying and degrading treatment at the schools studied. Since the interviews were carried out with the purpose of not only mapping the work done with the programme the school had indicated it was using, but were also aimed at providing a more complete picture of the schools and the variation in measures considered important in their anti-bullying work, the interview results gave us the opportunity, despite this, of making an assessment of the components.¹⁸ Following these revisions to the original list of components, there remained a list of 18 components.¹⁹

3.5.3 Interview round 2

After the results of the second survey to the pupils had been processed, it was found that the change in pupils' experience from being a victim of bullying and/or degrading treatment varied among the schools. Taking the results of the first interview round as a starting point, it was decided to carry out a second interview round. The aim was to try to understand changes and non-changes in the frequency of bullying and degrading treatment that had taken place between the first and second questionnaire. The aim was also to obtain a deeper understanding of the schools' work on combating bullying and degrading treatment with specific focus on the components.

Since there were not resources available to make return visits to all 39 schools, 13 schools were selected for a return visit. The basis for the selection was to find schools at different stages of development. Amongst the 13 schools there were:

- schools that had a low frequency of bullying/degrading treatment in both the first and second questionnaire
- schools that had a high frequency of bullying/degrading treatment in both questionnaires
- schools that showed a reduction in the frequency of bullying/degrading treatment between the first and second questionnaire
- schools that showed an increase in the frequency of bullying/degrading treatment between the two questionnaires

Return visits to the 13 schools were carried out in autumn 2009. At that time the representatives of the groups in the first interview round were interviewed, and also a group of representatives for "other staff" and a group of parents. The aim of interviewing "other staff" and parents was to obtain additional perspectives on the schools' work in this area.

In the second interview round the school's contact persons helped in organising the interviews. They organised groups with school leaders, teachers and staff with special responsibility for the school's anti-bullying work in the same way as in the first round of interviews. The aim at this time was that pupils should belong to different age groups and different work teams, and that this time they should *not* be pupils with roles in the pupil council, or in the school's anti-bullying work, as the aim was to see if the selection in the first round gave a different picture of the school's anti-bullying work compared to those with and

¹⁸ In order to validate the component assessment, an inter-reliability test was carried out. 10 schools were selected at random from the original 39. A member of the research team, familiar with the qualitative material but not involved in the template for assessing components previously, then made a new assessment of the component. The two different assessments of the 10 schools corresponded to 79 percent.

¹⁹ See attachment 4 and attachment 5.

without such roles. The aim was that in the group of "other staff" there should be representatives from restaurant staff, caretakers, cleaning staff, office staff and/or staff without teaching roles. As regards the parent group, the aim was to have a distribution with children of different ages. It was also emphasised that it was possible to hold the interview with parents late in the afternoon.

A total of 22 school leaders, 37 persons with additional responsibility for the school's anti-bullying work, 50 teachers and 79 pupils were interviewed. In the group of "other staff" a total of 45 persons were interviewed. Together they provided a broad cross-section of the schools' non-teaching staff. The interview groups our contact persons had the greatest difficulties in organising were the parent groups. A total of 28 parents were interviewed. At two of the schools it was not possible to get any parent who could or wanted to participate. At two of the schools there was only one parent representing all the parents. It is difficult to draw any conclusions on the reasons for the low level of parent participation. At some schools there were indications that there was too little time to form a group of parents. At other schools our contact persons had received a negative answer from a number of parents, and at many schools it was said to be difficult to involve parents in parent meetings and parent associations.

3.5.3.1 Contents of the interviews

All the guides were built up around the three themes that had been given different weightings and formulations depending on the interview group:²⁰

- a follow-up of *the picture of one's own school* resulting from the first interview, supplements and changes
- the school's *work on combating bullying and degrading treatment*, supplements and changes from the interviews in round one
- school's work on combating bullying and degrading treatment in relation to *the components*.

Below follows a more detailed description of two of these themes.

Picture of one's own school and work on combating bullying and degrading treatment

School leaders, staff with special responsibility for anti-bullying work in the school, teachers and pupils received a presentation of the picture obtained from the first interview round of the school and its work in the area. With this as the starting point, the interviewees described changes that had taken place and which they considered important in relation to their work on combating bullying and degrading treatment. "Other staff" were asked to give their picture of the working climate in the school and their view of the extent of bullying and degrading treatment amongst the school's pupils, and their views of the measures the school was taking in this area.

The school's work in relation to the components

All the interview groups received questions about the components. Which components were taken up and how questions were formulated was adapted to the different interview groups.

²⁰ See the interview guide for round 2, attachment 3.

A comparison between the first and the second interview from the 13 schools led to an increase in knowledge of what could be relevant concerning the schools' prevention, detection and remedial work. It also increased knowledge of the school's work in relation to the components.²¹ The interviews were carried out and the method of processing was essentially no different from that in round 1.

3.5.4 Interviews with programme representatives

In autumn 2009 interviews were carried out with programme representatives of each of the eight programmes covered in the study. The aim of the interviews was to give the programme representatives the opportunity to provide views on "their" programme in relation to the components identified.²² Staff from the National Agency for Education mediated the contact between programme representatives and the interviewers. The interviews were carried out individually in the Agency's premises, each taking about 45 minutes. During the interviews, the researchers made notes and these were summarised in relation to each of the components. The programme representatives received a copy of the summaries and could provide written comments. Some of the comments concerned programme descriptions from the study's first report *På tal om mobbning – och det som görs (Speaking of bullying – and what is being done)* (National Agency for Education, 2009). Some also chose to supplement the interview notes.

3.6 Data collection methods – quantitative data

This section deals with the quantitative data collection methods used, a description of the questionnaire and implementation of the questionnaire studies.

3.6.1 Instruments and implementation of questionnaire studies

In the study, two different questionnaire instruments were used – one for the pupils and one for the staff at the schools. In both cases, respondents answered the questionnaire online via computers.

3.6.1.1 Testing the pupil questionnaire and procedures

To facilitate the collection of data and coding of responses, the research team decided to use a web-based questionnaire. After a draft for the pupil questionnaire had been drawn up on the basis of our operationalisation of the term bullying, the questions were transferred to the web-based instrument. In order to test and evaluate the questions and the web-based procedure, a pilot study was carried out during March/April 2008.

The pilot study covered a total of 446 pupils from 4 schools (one in southern Sweden, two in central Sweden, and one in northern Sweden). Schools were chosen so that the questionnaire and procedure could be tested on pupils from school years 4 to 9. Throughout the testing, researchers were present to study how filling in the questionnaire worked in practice so that they could note any difficulties in filling in answers, or with the meaning and understanding of questions. After the pilot study, minor adjustments were made to the questions.

21 See implementation of interviews, and processing and analysis in attachment 1 "Further information Data collection method –qualitative data".

22 See interview guide, attachment 3.

3.6.1.2 Pupil questionnaires to pupils at the schools

The questionnaire for pupils contains a variety of questions. The areas covered can be summarised as follows:

- *Pupils' relationships with classmates and teachers.* This deals with, amongst other things, relationships with friends and confidence in teachers.
- *Acts that pupils have been subjected to.* The question area covers questions about whether pupils had been victimised by any acts, how often they had been victimised, why/for what purpose they had been victimised, who had victimised them, what the pupils did on the most recent occurrence of victimisation, what they felt when they were victimised, and whether they had informed anyone of the incidents.
- *Acts that pupils have subjected others to.* This question area covers questions about whether pupils had victimised others, how often it happened, why/for what purpose, who or which persons they had victimised, where this took place, what they felt the on last occasion they had victimised anyone for any of the acts taken up, and whether others knew they had carried out such acts.
- *Acts that pupils have witnessed.* This area covers questions on whether pupils may have seen somebody being teased, ostracised, threatened, hit, what the pupils did, and whether the pupil knew where to turn if they or someone else had been victimised.
- *Sense of coherence.* This battery of questions covers questions on meaningfulness, manageability and comprehensibility related to the school environment.

In connection with the second round, a number of questions were added where pupils were asked about school rules and who decided on these rules, whether teachers were good at counteracting negative behaviour in lessons and in the school as a whole. In connection with the third questionnaire, additional questions were also posed on whether pupils and teachers treated each other with respect, and also questions about the climate in the classroom and the school.

3.6.1.3 Implementation of pupil questionnaires

Pupil questionnaires were carried out in three different surveys over the period May/June 2008 to October/December 2009. The first, the initial questionnaire (T1) was carried out from May to June 2008 and covered 22 schools, but because the assignment had been changed and expanded, a new initial questionnaire was carried out at 17 schools. The initial survey of the 17 schools was carried out between October and November 2008.

The second questionnaire (T2) was carried out between April and May of 2009 and covered all 39 schools. The third and final survey (T3) was carried out between October and December 2009.

For all of these interviews, each pupil at the different schools received via letter, by e-mail if e-mail addresses existed, log-in information. All participation on the part of pupils was voluntary, and was approved by their parents/guardians through tacit acceptance. In cases where guardians had not given consent that their children could participate, these pupils were removed from the study and the list of participants.

For each question session, two reminders were sent to the pupils. During the survey period, the research team assisted with ongoing information about response frequency in order to increase this, and check that the questionnaires were filled in as intended. At most schools this was organised by the staff, and computer rooms were booked for special times.

Table 3.6 Response frequency per school in three surveys

School	Material	Responses	Time 1	Time 2	Time 3
School 1	508	371	73%	77%	73%
School 2	213	147	76%	27%	69%
School 3	181	158	92%	86%	87%
School 4	222	189	83%	86%	85%
School 5	192	170	82%	94%	89%
School 6	334	272	75%	73%	81%
School 7	192	125	68%	72%	65%
School 8	282	186	62%	76%	66%
School 9	295	163	79%	70%	55%
School 10	130	58	71%	49%	45%
School 11	344	313	92%	90%	91%
School 12	125	92	80%	61%	74%
School 13	122	113	98%	95%	93%
School 14	119	114	55%	94%	96%
School 15	593	492	74%	84%	83%
School 16	234	30	50%	45%	13%
School 17	92	51	99%	96%	55 %
School 18	562	532	87%	76%	95%
School 19	376	310	80%	78%	82%
School 20	371	122	47%	37%	33%
School 21	239	152	72%	58%	64%
School 22	251	128	89%	80%	51%
School 23	319	260	77%	77%	82%
School 24	324	269	80%	83%	83%
School 25	427	406	87%	92%	95%
School 26	176	97	95%	87%	55%
School 27	183	98	52%	32%	54%
School 28	331	205	65%	77%	62%
School 29	201	43	79%	50%	21%
School 30	124	79	37%	82%	64%
School 31	65	64	64%	96%	98%
School 32	197	42	56%	29%	21%
School 33	439	196	74%	56%	45%
School 34	376	279	77%	87%	74%
School 35	96	96	95%	97%	100%
School 36	398	362	93%	96%	91%
School 37	218	125	76%	78%	57%
School 38	473	357	91%	83%	75%
School 39	199	163	93%	95%	82%
Total	10 523	7 429	76%	74%	70%

The response frequency amounted to 76.1 percent of a total of 10 919 pupils (T1), 74.3 percent of a total of 10 660 pupils (T2), and 70.6 percent of a total of 10 523 pupils (T3). The response frequency varied not only between the different occasions, but also between schools. Table 3.6 shows the response frequency per school for the three surveys.

3.6.1.4 Something about non-response

Approximately 10 000 pupils were invited to take part in these question sessions in the study. However, not all who were asked actually participated, and this is the reason for the variation in responses and among schools. In the different question sessions, non-response consists not only of partial non-response – i.e.

some questions in the questionnaire were not answered – but also total non-response where no answers were submitted.

As regards *partial non-response* there may be several reasons for this. One question may be difficult to understand, possibly sensitive or the individual can quite simply choose not to answer it. When handling partial non-response, the two most common methods are either to *exclude individuals* who did not answer a question from the analyses or *imputation of values* where a value for a variable was lacking. In this report the first method was chosen to manage partial non-response. The reasons for this were based on the fact that pupils who did not answer specific questions (variables) were not noticeably different from those who did answer.

The causes of *total non-response* are several. For instance an individual may have been sick at one or more question sessions, schools may not have organised the arrangements for the questionnaires in a satisfactory way, or refusal on personal grounds. If the factors affecting participation are related to the victimisation (bullying and degrading treatment) that was the focus of the study, systematic errors could be introduced into the outcomes, thereby undermining the statistical reliability of the results. Non-response, however, can only effect estimates of outcomes if victimisation differs substantially from the groups responding.

The sample contains a relatively large group of pupils who had the opportunity of answering the questionnaire on several occasions, more specifically pupils in the sample in both the first and last question session. This sample contains i) pupils who participated in both question sessions, ii) pupils who did not participate in the first, but did in the last and iii) pupils who participated in the first but not in the last. By examining the last two groups mentioned in greater detail, an approximate estimate of bullying frequency can be obtained as a first step in a part of the non-response in the first and last question session (approximately one third of non-response). In a second step, others in the non-response category can be assigned approximate values. Finally, the proportion bullied in the group responding was compared with the outcome for the corresponding group, including total non-response.

Step 1: in group ii), which includes total non-response in the first question session, 9.3 percent in the last question session responded that they had been bullied. In group iii), which is included in total non-response in the last question session, 9.1 percent responded in the first question session that they had been bullied. The approximate value of 9% bullied in around a third of the non-responses, was obtained by making the assumption that only those who responded in the first survey showed the same degree of victimisation in the last survey, and that only those responding in the last survey showed the same degree of victimisation in the first survey. In this step, the proportion of pupils victimised is somewhat higher in non-response compared with the total for the responding group in the first (8.1 percent) and the last question session (7.4 percent). It is worth noting that the total responding group was made up of both pupils who responded in one question session, and those who responded in all of them. The assumption above, however, is based on the degree of victimisation remaining constant over time. Analyses of the individuals participating in all of the the surveys show that the proportion bullied over time is significantly lower (see section *Changes in bullying at the individual level* in the main report).

In step 2, we start from the assumption that 9 percent of all pupils in the total non-response in the first and last question session were bullied. When the estimated number of bullied and non-bullied amongst the non-responses are put together with the distribution of responses in the responding group, the result is the following: In group ii), which now makes up the total non-response in the first question session, 8.3 percent responded in the last question session that they had been bullied. In group iii), which makes up the total non-response in the last question session, 7.9 percent responded in the last question session that they had been bullied. If we use the same assumptions as above, namely that frequencies are stable over time, the result is approximately the same as in the responding group. When the proportion bullied in the responding group is compared with the outcome for the corresponding group, including total non-response, no significant differences exist either in the first questionnaire (OR 1.030, CI 0.927 to 1.145) or in the last (OR 1.068, CI, 0,953 to 1,197). Since all measures in all schools have been assessed as e.g. "strong" or "weak", given the background above, there is reason to assume that the calculation of outcomes concerning the impact of different measures is not distorted due to non-response.

3.6.1.5 Questionnaire to school staff

The aim of the questionnaire to staff was not only to check the component assessments made as a result of the visits to schools, but also to study what experiences the staff had of anti-bullying work and the conditions for running such work.

The questionnaire to staff (school leaders, teachers, mentors and other staff) differed in certain respects depending on the functions of the respondents. All staff answered questions about whether they were a member of a safety team, anti-bullying team or similar, whether the school used any specific programme to combat bullying and degrading treatment, which or what programmes were used at the school, about specific measures or components, about organisational conditions for running anti-bullying work at their own school, and about attitudes to pupils and how they were treated, and their acts. In the last mentioned case, the questions to the teachers, mentors and other staff were more comprehensive and were more directly linked to pupils in the classroom compared with the questions to the school leaders. As regards school leaders, the questions were more related to the general approach at the school.

3.6.1.6 Implementation of the staff questionnaire

The staff questionnaire was distributed to staff by e-mail with a letter containing information about the purpose of the study, that participation was voluntary together with instructions on how the questionnaire should be filled in. As data about and access to all the staff's e-mail addresses was lacking, this material did not exist for all staff in the schools.

The questionnaire was carried out in conjunction with implementation of the last pupil questionnaire (from December 2009 to January 2010). In total, response frequency amounted to 50.4 percent of the school leaders, teachers, mentors and other school staff. Amongst school leaders, the response frequency was 77.6 percent, and amongst teachers, mentors and other school staff the figure was 48.4 percent. Despite the fact that the response frequency in relative terms was low, all schools were represented amongst the respondents.

Before describing the outcomes and different analytical methods, the material used in the evaluation will be presented. The table below shows the unit of study, data collection methods and type of data in relation to the background and the level the empirical material collected covers.

Figure 3.4 Levels in the study and methods

Level	Study units	Data collection methods	Type of data
School	Databases School staff, parents and pupils	Register study Interviews Questionnaire to staff Questionnaires to pupils	Intersectional factors Contextual conditions Experiences from anti-bullying work Experiences of the school climate Measures
Group	The pupil population in participating schools in the different surveys	Questionnaires to pupils	Bullying frequency amongst groups of individuals from different questionnaires
Individuals	Pupils who participated in all the surveys.	Questionnaires to pupils	Bullying frequency amongst individuals who were bullied for shorter or longer periods

3.7 Outcome measures

The government assignment covers three parts. One of these was originally formulated with the aim of examining "if any specific anti-bullying programmes used in compulsory schools and upper secondary schools in Sweden are effective". (National Agency for School Improvement, 2007d). At a later stage, the National Agency for Education received a supplementary assignment whereby bullying was to be expanded, and covering other forms of victimisation such as degrading treatment and discrimination. This section describes the approach taken to estimate the frequency of bullying (the main outcome measure) and also degrading treatment and discrimination.

3.7.1 Bullying and other types of victimisation

In the instructions for the assignment, bullying is defined as "a repeated negative act involving an individual or individuals deliberately and intentionally trying to cause somebody harm or distress."²³ This definition is closely related to a widely used definition in bullying research:

A pupil is bullied when he/she is repeatedly and over time subjected to negative acts from one or more pupils. Negative acts cover those where there is an intention to inflict or try to inflict on others harm or discomfort. These acts can be carried out physically (e.g. hitting, kicking, pushing, choking others), verbally (e.g. calling others nasty names, threatening, mocking, teasing, circulating malicious rumours) or in other ways, such as mimicking or obscene gestures, or intentionally excluding others from a group (*Blueprints for Violence Prevention, Olweus Bullying Prevention Program*).

In both definitions, frequency (repeated negative acts) and the intent (to intentionally cause others harm) is central. Both definitions concern victims as well as

²³ The definition originates from the National Agency for Education's general guidelines and comments on promoting equal treatment and preventing discrimination, harassment and degrading treatment (National Agency for Education, 2009).

bullies/perpetrators. In this evaluation, the focus is on bullied pupils. The main reason behind this choice is based on the generally recognised difficulties associated with self-reporting studies of obtaining reliable information from individuals behaving from a societal perspective unacceptably or immorally, as these tend to respond in a socially undesirable way (see e.g. Cook & Campbell, 1979).

One way of measuring bullying that is frequently used, is to first describe or give a definition of what we understand bullying to be, and then to put the question of whether, and if so, how often someone has been bullied. If the pupils are younger, the definition is presented verbally. Another way, as used in this evaluation is to start from a *combination of response alternatives* that not only give information about frequency – based on concretely formulated questions about whether and how often someone has been *subjected* to pushes, blows etc. – but also about motives – where respondents assess the intent of the acts.

By combining information about frequency and perceived intent, an outcome measure that gives information about different types of victimisation is constructed – where bullying is the most serious type of victimisation.

The questionnaire contains nine questions where pupils are asked to answer whether during the last two months they have been subjected to any of the following:

Main questions

- A Has been mocked, teased or called nasty names
- B Other pupils have tried to get school friends to think badly about you
- C Other pupils have used the Internet, mobile phones, e-mail to circulate malicious messages
- D Have been excluded, ostracised
- E Have been pushed, held
- F Other pupils have touched you in a sexual way
- G Have been threatened with blows
- H Have been hit, kicked
- I A teacher/member of staff has said unpleasant, nasty things to you

When answering the questions, pupils have had to choose between these *alternatives*:

- No, it hasn't happened
- Some time
- Several times a month
- Several times a week
- Nearly every day.

Questions B and C have in addition their own *response alternatives*:

- Have no idea (question B)
- Don't know (question C)

Follow-up questions

Pupils who responded "No, it hasn't happened" to the main question (or "Have no idea" and "Don't know" to questions B and C) have then received the next main question. Those who provided an alternative other than these received a follow-up question. For question A, it is:

- A Why do you think you have been teased, mocked, called nasty names?

For the other questions, there are similar follow-up questions. The alternatives for the follow-up questions differ somewhat. Questions A, B, C, D and I²⁴ have the following:

- It was only in fun
- Because I was in disagreement/arguing with some pupils/... with some pupils or teachers
- This was to harm me, make me sad
- Don't actually know.
- Questions E, G and H in addition contain the alternative:
- It was to make me frightened.

Question F on the other hand does not have the response "Because I was in disagreement/arguing with some pupils".

For pupils who reported that they *had been victimised by negative acts* (main question) and gave the reason for *why they had been victimised* (follow-up question), there were a number of possible response combinations. One example is "been pushed, held several times a month in fun" (question E). Another is "been pushed, held several times a month to hurt me, make me sad or frightened" (question E). The latter response combination was classified as more serious than the first, since it fulfils the criterion for bullying (repeated negative acts carried out with malicious intent). Since one and the same pupil may have given different response combinations to different questions, some may have been bullied in different respects. For example, some pupils, in addition to having "been pushed, held several times a month to harm me, make me sad or frightened" (question E), may also have "been mocked, teased or called nasty names several times a week to harm me, make me sad" (question A) and "been excluded, nearly every day to harm me, make me sad" (question D). To be categorised as bullied, however, it was sufficient to be categorised as such in some respect. Note that questions C, F and I are not included in the *overall outcome measure* of bullying used when calculating the effects (these are reported separately). These questions have been excluded for the reasons mentioned later on in the text

The table below shows all response combinations based on the different categories constructed; the higher the value, the greater the degree of victimisation.

When constructing the category scheme, a reduction in the number of categories was an aim, whilst the idea that the categories should reflect different degrees of seriousness was not applied. At a later stage, an attempt was made to form categories based on unique response combinations where different intentions were not mixed. This does not mean that the category scheme is free of

Table 3.7 Table of categories showing different grades of seriousness of pupils subjected to negative acts

Victimised/ Why victimised?	0. No/ No idea/ Don't know	Some time	Several times a month	Several times a week	Nearly every day
In fun			1. Subjected to pranks		
Disagreement		2. Seldom victimised due to disagreement		3. Often victimised due to disagreements	
Don't know		4. At risk of further victimisation		5. Victimised with unclear intent	
Harmed/ intimidated	6. Degrading treatment			7. Bullied	

²⁴ Question I, which deals with the teacher/school staff, has a different formulation of the second alternative.

all objections. From the perspective of pupils who have been victimised, it can be thought that e.g. self-esteem to a greater extent would be more negatively affected by being frequently subjected to negative acts with unclear intent (cf category 5) compared with being subjected to degrading treatment on single occasions (cf category 6). The text below describes our thinking in greater detail.

1. Subjected to pranks

Pupils who responded that they had been e.g. pushed "in fun" have on the basis of a predetermined alternative clearly stated that they *did not* view the act as seriously intended. This view applies independently of how often the act has taken place; pushed in connection with pranks "once" or "nearly every day" is similar to pranks and thus there is no reason to refer to different degrees of "pranks". Reasoning in this way corresponds also with practice in schools that have "zero tolerance" to school pranks. One reason that "zero tolerance" to school pranks has been introduced is that it can easily escalate into disagreement, disputes, conflicts or something more serious such as harassment or bullying. The category – *subjected to pranks* is equivalent to the alternative "in fun" in the follow-up question of why one believes one has been victimised.

2. & 3. Seldom or often victimised due to disagreement

Pranks can be said to develop into disagreement, disputes or conflicts. Everyone has experiences of what it means to be in disagreement. All have been in disagreement with siblings, schoolmates, friends and even with people in their nearest circles of friends. In this sense, the term "in disagreement" is equivalent to a dispute between two equal parties. Pupils who chose the alternative "in disagreement" have obviously interpreted the act (e.g. pushed) as an expression of disagreement, that they have not been on the same terms or got on with others. Irrespective of the reason, given the reasoning above, it can be imagined that they are "in disagreement" because neither party chooses to recognise they have been "defeated" by the other. One can assume that – despite being in disagreement – they have retained their dignity (they "stood up for themselves" at the risk of falling out with others). For some reason they have quarrelled, possibly because of different views, values or because of something else that was not based on something in fun. For this reason, negative acts were classified in the combination "in disagreement" as more serious than pranks. Being in disagreement with schoolmates is something that affects some pupils more than others. Hardly unavoidable for any pupil, but to regularly get involved in quarrels with others can be a warning signal that something is not quite right. For this reason, it may be appropriate to differentiate between those who *seldom* and *often* are *victimised due to disagreement*.

4. At risk of further victimisation

With the starting point in the alternative linked to the question on "intention", some chose the alternative "don't know" in preference to the alternatives "it was only in fun", "because I was in disagreement/arguing with some pupils" and "it was to harm me, make me sad". They also had the option of choosing between different alternatives that in their assessment explain the acts they have been subjected to, or that alternatively cover a range from "fun" to "malicious" intent. Nevertheless some chose the alternative "don't know". What does this tell us? One interpretation, of course, is that they cannot decide whether the act

was "in fun" or carried out with malicious intent – they were quite simply uncertain. Another interpretation is that earlier they had been involved in school pranks, but now they are unsure whether this is really in fun or not. In other words, before "pranks" or "disagreement" can be transformed into something more serious, one can imagine a development phase where the person affected feels uncertain as to whether the negative act (e.g. pushed) which he/she has been subjected to is "in fun", the expression of a disagreement or carried out with malicious intent. Irrespective of the idea of an escalating process, it can be thought of as a situation characterised by uncertainty over the motives of perpetrators. The uncertainty in this context indicates according to the category scheme above, a difference in the degree of seriousness between "pranks" and "in disagreement".

Irrespective of whether pupils have been victimised some time or several times a month without knowing why, this uncertainty should provide necessary pause for reflection: it may actually be the case that they have been subjected to humiliating and/or disparaging attitudes of others (cf circulating rumours), but this does not need to be the case. They do not wish to believe this, but at the same time they can't help believing it. Uncertainty about the underlying causes for why pupils have been victimised can be interpreted as pupils in this category defining themselves *at risk of further victimisation*. According to the category scheme, pupils in the risk zone are more vulnerable than those who are *subjected to pranks* or who *seldom or often are in disagreement* with other pupils. Pupils who responded "in disagreement" have at least through this alternative given a reason for their victimisation.

5. Victimised with unclear intent

Pupils who gave the response alternative "several times a week" or "nearly every day" in combination with "don't know" have in a sense moved out of the risk zone. Pupils belonging to this category are classified as *victimised with unclear intent*. The crucial difference between the categories of *subjected to degrading treatment* and *bullied* is that pupils in the category *victimised with unclear intent* do not know why others subject them more regularly to negative acts. In other words intention is lacking; the acts are carried out with the aim of harming or intimidating the victim.

6. Subjected to degrading treatment

To be classified as *subjected to degrading treatment*, it is sufficient to be the victim of an ill intentioned act "some time" (the category *bullied*, see below, assumes by definition that negative acts are repeated over time). Categorising *subjected to degrading treatment* as a more serious form of victimisation than the category *victimised with unclear intent* can of course be discussed. The former implies that a harmful act is carried out once (with the intention of harming/intimidating), and the latter that negative acts are carried out several times a week, or nearly every day without the victim knowing why. The last case, as mentioned, lacks malicious intent. The intent to *consciously* intimidate or harm others can be compared to a coefficient that strengthens the degree of seriousness.

7. Bullied

Regarding the category *bullied*, importance has been attached to the researchers' recommendations in the report *Effectiveness of Programmes to Reduce School*

Bullying: "The outcome measure of bullying or victimization should be twice a month or more" (Brå-rapport, 2008:73). The category "bullied" can thus be based on the alternatives "several times a month", "several times a week", "nearly every day" concerning frequency of negative acts (the main question) in combination with the intent of "harming/intimidating" (follow-up question).

3.7.2 Social and physical victimisation

One advantage of using response combinations in the above way is that it makes it possible to take both a narrower and broader perspective of pupils' victimisation. With the *narrow perspective*, concerning negative acts carried out with the intention of harming or intimidating, the focus is on bullying and degrading treatment. The *broad perspective* concerning negative acts where the intention underlying these covers a range from "in fun" to "harm/intimidate others", is used to provide a picture of the extent of bullying in relation to other types of victimisation.

In the questions that were the basis for operationalising bullying and other types of victimisation, a number of different things were asked. Some questions deal with whether a person has been victimised through direct physical acts (e.g. hit, pushed), others concern negative acts of a relationship nature (e.g. excluded, victim of rumour circulation). In addition, the question was put as to whether other pupils have "touched you in a sexual way", and whether "teachers/school staff have said unpleasant, nasty things to you". In the question battery, there is only one question dealing with teachers/school staff; the other questions are about how pupils have behaved. Given this imbalance, it could be thought that the teacher question is too different to be included in an overall measure of bullying. In order to determine which questions should be included in such a measure, the relationships between the questions have been studied in detail.

In order to examine how negative acts carried out with malicious intent (according to victimised pupils) are related to each other, a hierarchical cluster analysis has been used. The data material for factor analysis was made up of binary variables, which were constructed by coding the variables in accordance with the category scheme in Table 3.7. Pupils who were categorised as bullied (7) and subjected to degrading treatment (6) have been given the value 1 whilst pupils with other category values (0–5) were given the value 0. To study how negative acts carried out on the basis of widely different motives relate to each other, exploratory factor analysis has been applied. The data material for factor analysis was made up of variables with seven response categories, coded in accordance with the scheme in Table 3.7. With the help of cluster and factor analysis, *social* and *physical* forms of victimisation in a narrow sense (bullying and degrading treatment) and in a broad sense (negative acts) have been identified. Note that the outcome from these analyses has been instrumental in the design of an *overall measure of bullying*.

A brief description of the conclusions drawn from the cluster and factor analysis is given here. For further information about the approach in the analysis, the reader is referred to the technical appendix.

Both types of analyses indicate that questions C, F and I should be excluded from an overall measure of pupils' victimisation. Question I – "teacher/school staff said unpleasant, nasty things to you" – concerns the staff in contrast to the other questions. Question F – "other pupils have touched you in a sexual way"

– differs from other negative acts involving pupils on the basis of sexual allusions in the formulation of the question. Question C – ”other pupils have used the Internet, mobiles, e-mail to circulate malicious messages” – is a relatively new form of degrading treatment/harassment that stretches outside the confines of the school. Questions C, F and I can be understood as qualitatively different compared to other questions, which is also reflected in the results of the cluster factor analyses.²⁵

In summary, the results of the cluster and factor analyses show that it is reasonable to refer to social and physical forms of victimisation in a narrow sense (bullying and degrading treatment) and in a broad sense (negative acts).

- The *social* form is made up of negative acts consisting of ”mocked”, ”others have tried to get pupils to dislike me by talking rubbish about me” and ”ostracised”
- The *physical* form consists of ”pushed”, ”threatened with blows” and ”hit”.

Social bullying is directed at pupils’ social links. The term ”social” refers to an instrument that can be used to cause harm of a relationship disturbing nature. Physical bullying can, of course, also be said to embody relationship destructive elements, but in contrast to social bullying physical measures are used.

The reports on the outcomes of bullying are based on the six variables above. The overall outcome for bullying thus becomes synonymous with social and/or physical bullying. Note that it is sufficient to be bullied in some respect – for example ”been excluded nearly every day to harm me, make me sad” – to be classified as bullied. The results also show the effects of social and physical bullying. In these cases, the outcomes for the three variables are the basis for the different descriptions.

3.7.3 Discrimination

In the study of whether pupils have been subjected to discrimination or not, the results are based on multiple-choice alternatives in the pupil questionnaire dealing with why pupils believe they have been victimised. The question contains alternatives related to both different types of discrimination and other reasons. The results have put the emphasis on pupils who have been socially/physically bullied. The individual response alternatives linked to the different forms of discrimination are briefly as follows:

- *Discrimination due to gender* is covered by the response alternative ”I am a boy/girl”.
- *Discrimination due to ethnic affiliation* is covered by the response alternative ”different skin colour”, ”come from another country”, ”belong to a particular nation”.
- *Discrimination due to religion or other belief system* covers the response alternative ”because of my religion”.
- *Discrimination due to transgender identity/sexual orientation* is covered by the response alternative ”others think as a boy I am too ”girlish”/as a girl too ”boyish”.

25 Out of all the questions (A-I) concerning whether a person had been subjected to negative acts with malicious intent, the questions C, F and I also had the lowest proportion of bullied pupils in both the first and last survey.

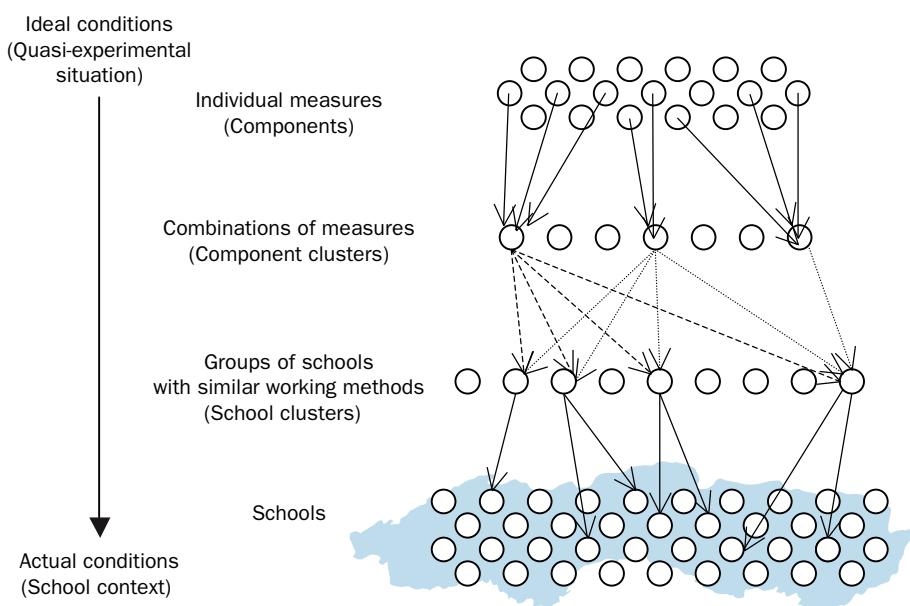
- *Discrimination due to functional disabilities* covers the alternatives "have difficulties in reading, writing or concentrating", "I am visually/hearing-impaired or have a functional disability".
- The response alternatives referred to concerning reasons other than forms of discrimination were "others are stronger", "others are jealous", "someone in my family is different", "I am too fat/thin according to others", and "don't know/have no idea".

The description of the key outcome measures is followed by a report of the different measures the outcome calculations are based on.

3.8 What do schools do to prevent, detect and remedy bullying?

With regard to different analytical levels, the section starts with an illustration of how individual measures, combinations of measures, groups of schools with similar working methods and individual schools are related to each other.

Figure 3.5 Measures under different analytical conditions



The results show the effects of individual measures, combinations of measures and also groups of schools with similar working methods to combat bullying. The figure above illustrates that calculations of outcomes based on individual measures or combinations of measures takes place under more abstract/ideal conditions, namely as if the measures existed in a social vacuum independently of context.

Outcome calculations in relation to groups of schools with similar working methods are based on combinations of measures that exist in more or less developed forms at the participating schools. As there was access to information about social factors (socio-economic status, gender and ethnic background) and contextual conditions (such as organisational conditions and school climate, which were based on both questionnaire and interview data), it has been possible to interpret the outcome of effects at the school cluster level in relation

to the conditions existing within the school cluster, and also how the measures were actually applied in individual schools.

3.8.1 Individual measures

In order to give an overall picture of what schools do to restrict and/or hold back bullying/degrading treatment, a list of measures was compiled (see below). The compilation is based on information from reports, web sites, interviews with school staff, pupils and in some cases parents from participating schools. Some measures are found less often than others. For example, only a few schools have "information about bullying/degrading treatment in school assemblies for pupils", whilst all schools have "common rules to combat bullying or degrading behaviour". It is worth noting that if one and the same measure occurs at a number of schools, it does not necessarily mean that it is equivalent in all respects. Let us give an example. As regards "common rules to combat bullying or degrading treatment", pupils at certain schools were given the opportunity to affect the contents of the rules and/or their formulation; they have together with school staff agreed on the rules to be applied. In other schools, school staff/leaders made decisions on their own about the rules without consulting or asking the pupils. What applies in a specific individual case may be important for compliance with the rules, or to put it more generally – for the impact of measures in practice. Given this background, the measures are described in terms of categories that take account of the differences mentioned above.²⁶ An illustrative example is provided to further clarify how the data collected has been categorised. Schools that to a high degree (H) follow up and evaluate the situation of pupils and the school environment regularly carry out monitoring at the school or municipal level. The results from the questionnaires provide material for deciding on adjustments to routines, and in this way have a direct impact on schools' work on combating bullying/degrading treatment. This differs from schools that regularly carry out follow-up without this having any direct impact on anti-bullying work (M), or from schools that only carry out follow-up intermittently, or completely lack the measure follow-up/evaluation (L). The term C before each measure represents "component" (Table 3.8).

Schools' anti-bullying work essentially involves bringing about changes in behaviour. Pupils who hit, threaten, exclude, tease others etc should with the help of special measures be encouraged to change non-desirable behaviour into socially acceptable behaviour. Bringing about successful and permanent changes in behaviour of this kind is essentially dependent on the involvement of school staff and the ability to inspire change. In other words for the measures to achieve their intended effects, the active involvement of individuals is required.

3.8.1.1 Measures, their nature and conditions for impact in practice

In contrast to medical treatment, the measures described above are active in their very nature. They are not passive – in the sense that they do not function as tablets that affect all people in the same way without the need to make any effort other than swallowing the dissolved tablet in water. To be able to at-

²⁶ In order to avoid erroneous assessments, the categorisation was carried out by two researchers from the research team. Reliability between the assessments amounts to 80 percent. We consider that this approach gives a relatively valid and reliable basis for assessing schools' work on combating bullying/degrading treatment compared with taking for granted that "programme schools" apply "programme measures" in accordance with instructions purely because a particular programme has been purchased.

Table 3.8 Table of component assessments

Component:	L=	M=	H=
C1: Follow-up/evaluation	lacking/carried out intermittently	implemented regularly, but no impact on anti-bullying work	implemented regularly and has direct impact on bullying work/basis for decisions
C2: Relationship-enhancing measures teacher-pupil	not available	elements of relationship-enhancing measures	conscious strategy expressed in acts to create closeness/relations
C3: Relationship-enhancing measures pupil-pupil	not available	elements of relationship-enhancing measures	conscious strategy expressed in acts to create closeness/relations
C4: Special lessons to develop pupils' social competence	lacking/specific measures exist	timetabled and carried out for certain classes	timetabled and carried out for all classes
C5: Pupils as players	not available	non-trained persons exist, they function as observers, rapporteurs	internally or externally trained persons functioning as observers, rapporteurs exist
C6: Pupils' active participation in prevention of bullying	not available	exists to some extent	exist to a high degree, pupils run different activities such as "dialogue with a friend", exercises in class, activities in pupil cafe
C7: Disciplinary strategies	not available	exists, but teachers function independently in relation to them	exists and teachers find support in and act in accordance with them (possibly concerning sanctions applied to breaking rules/unacceptable behaviour)
C8: School rules	not available	exists and produced by school staff	exists and produced together with staff and pupils
C9: Information about bullying/degrading treatment to the pupils (school assembly about bullying for pupils)	not occur	on special occasions	regular meetings
C10: Training material	not available	exists but not used systematically	used systematically
C11: Staff information (brief information about bullying, bullying programmes)	not available	individuals/staff have received information	most staff have received information.
C12: Staff training (training concerning bullying/degrading treatment)	not available	individuals/staff have received training	most staff have received training
C13: Parent information/training	not available	parents are given information	training for parents provided
C14: Break monitoring system	not available	has a timetabled break monitoring system	has a developed break monitoring system, timetabled based on identification of "dangerous places", special staff given the task of being present among/arranging activities for pupils during breaks
C15: Cooperative teams	not available	exists and covers staff with special competence (social pedagogues, special pedagogues, school nurses, counsellors)	in addition to staff with special competence, "ordinary teachers" and pupils are included in the cooperative team
C16: Case documentation	not available	takes place, but not in accordance with established routines	takes place based on established routines
C17: Dealing with bullies	absence/existence remedial routines	remedial and follow-up routines exist	remedial, follow-up and processing/supportive routines exist
C18: Dealing with victims	absence/existence remedial routines	remedial and follow-up routines exist	remedial, follow-up and processing/supportive routines exist
C19: Mediation	not available	elements exist	used as routine when pupils in conflict with each other

tribute any outcome to anti-bullying measures requires players to be active. In the absence of resources or lack of resources, such as competent staff or funds, the conditions for achieving success in anti-bullying work are less favourable compared with a situation where these factors are the opposite. The prospects of achieving successful results are also greater if the measures are supported by

school staff. If the measures are recognised by some staff and not others, their acts may later on counteract the effects of the former group's acts. Note that measures may be anchored amongst the staff at the same time as they may be undermined by a lack of resources, not least if this is of such scope that anti-bullying work could jeopardise the prospects of fulfilling the pedagogical tasks of the curriculum. In addition to the examples mentioned above, there are of course other factors of importance for the measures to achieve impact in practice. Examples of such factors are organisational stability, functioning cooperation in the staff group, support from the management etc. This serves to emphasise the complexity of anti-bullying measures.

Several other measures listed above are included in different programmes that directly or indirectly claim to counteract degrading treatment and bullying, such as e.g. the Farsta Method, Friends, School Comet, Lions Quest, Olweus Programme, SET – Social and Emotional Training, School Mediation, and Step by Step. Although some programmes are not marketed as anti-bullying programmes, they can according to the programme representatives be used for this purpose (see the reports of the National Agency for Education *Granskning av utvärderingar av program mot mobbning 2007* (*Examination of anti-bullying programmes*) and *På tal om mobbning – och det som görs*, (*Speaking of bullying – and what is being done*) 2009). A number of the measures described should also be included in the equal treatment plan that all schools are legally obliged to draw up. The same measure may also be included in different programmes, including the equal treatment plan. What is written above about the nature and conditions for the measures is, of course, as valid for schools working with a programme, as for schools that are only working with an equal treatment plan. Irrespective of whether schools are working on the basis of a programme or not, the conditions for achieving success in anti-bullying work are more favourable at some schools than others. This is indicated, amongst other things, by the results from a web-based staff questionnaire distributed in connection with the last survey (see the third section in the review of results). Looking ahead, it can be revealed that some school staff adapt their anti-bullying work to the situation, which runs the risk of undermining the essence of manual-based programmes and thus frustrating the prospects of achieving an outcome from anti-bullying programmes. The staff in most of the schools in the study also use several programmes, which in this context means that it is difficult, if not impossible, to compare "programme schools" with "pure schools" or "non-programme schools".

3.8.1.2 Combinations of measures as a basis for comparing schools

Instead of comparing "programme schools" with "pure schools" or with "non-programme schools", emphasis has been put on combinations of measures or programme components. Schools that have similar ways of working to combat bullying are compared with schools whose work differs in some respects. This approach is similar to research on application treatment known as *Bona Fide Treatments*, where different forms of treatment are compared with each other on the assumption that all the treatments provided should be effective.²⁷ Put another way, it could be said that "active treatment groups" are compared with each other instead of comparing active "experimental groups" with passive "control

²⁷ See Kelley, Bickman & Norwood (2010).

groups". The material for the comparisons has been developed by means of hierarchical cluster analysis. The aim of using cluster analysis in this context is to construct empirically based classifications of i) measures ii) schools that are more similar to each other in order to make possible comparisons between schools in the evaluation project.

Initially the hierarchical cluster analysis was used to identify different types of measures for combating bullying and degrading treatment. In the analysis, structural patterns are identified by means of grouping individual measures/components into different clusters. A conventional interpretation of these clusters is that measures assigned to the same cluster are more similar than measures assigned to other clusters. For example, "relationship-enhancing measures teacher–pupil" form together with "relationship-enhancing measures pupil–pupil" a *combination of measures* described as *relationship-enhancing measures* (component cluster 2, see below), since in the empirical material, it is more common that these measures occur together as opposed to separately (in the sense "conscious strategy expressed in acts to create closeness/relations"). *Relationship-enhancing measures* are in terms of their contents different than the measure combination *pupil participation in direct anti-bullying work*, which is made up of "school rules", "pupils as players" and "cooperative teams" (component cluster 4, see below). The example is also illuminating as some measure combinations can also be said to be more *indirectly* linked to work against bullying and degrading treatment (cf the first mentioned measure combination), whilst others are *direct* and linked to anti-bullying work (cf the last mentioned measure combination).

After determining different measure combinations, focus has been directed to the schools. The point of making a hierarchical cluster analysis of schools based on the total material (39 schools) is to identify schools that have similar ways of working with similar combinations of measures. The overall reasoning is the same as above. Schools belonging to the same cluster are more like each other with regard to combinations of measures used in anti-bullying work compared with schools belonging to other clusters.

Thus the measures/components (variables) have been cluster analysed as *a first step* and schools (cases) in *a second step*. The results of these analyses are described below (for a more detailed description, see the technical appendix).

3.8.2 Different types of measures used in combating bullying and degrading treatment

The hierarchical cluster analysis of measures resulted in seven types of measures, or component clusters. The results are described in Table 3.9 below. In the table, measure combinations were assigned to two overall categories in relation to whether they have a *direct* or *indirect* link to work on combating bullying and degrading treatment.²⁸

As regards measure combinations that *in a more direct way* can be said to be linked to anti-bullying work, three types of measure combinations were identified (cf component clusters 4, 7 and 1 in Table 3.9). Regarding combinations of measures that in an *indirect way* appear to be linked to work combating bully-

²⁸ The results are based on a seven cluster solution made up of eighteen measures. In the initial cluster analysis, which included all nineteen measures, "staff information" was a cluster of its own under most cluster solutions, and was included in an already existing cluster late in the analysis. "Staff information" as a result was excluded before the analysis was redone.

Table 3.9 Different measure combinations (component clusters) used in the work of combating bullying and degrading treatment

Measures that in a more direct way are linked to work against bullying/degrading treatment			Measures that in a more indirect way are linked to work against bullying/degrading treatment			
Pupil participation in direct anti-bullying work	Documentation/staff training	Detection/remedial measures	Relationship-enhancing measures	Special lessons	Formative measures	Pupil participation in indirect anti-bullying work
Component-cluster 4	Component-cluster 7	Component cluster 1	Component-cluster 2	Component-cluster 3	Component-cluster 6	Component-cluster 5
C8: School rules	C16: Documentation of cases	C1: Follow-up/evaluation	C3: Relationship enhancing measures pupil – pupil	C4: Special lessons	C7: Disciplinary strategies	C6: Pupils' active participation
C5: Pupils as players (rapporteurs)	C12: Staff training involving bullying/degrading treatment	C14: Break monitoring system	C2: Relationship enhancing measures teacher – pupil	C10: Training material	C19: Mediation	
C15: Cooperative teams	C17: Dealing with bullies			C13: Parent information	C9: School assemblies about bullying	
	C18: Dealing with victims					

ing/degrading treatment, four types were distinguished (cf component clusters 2, 3, 5 and 6). These measure combinations appear primarily to be preventative.

A brief description of the different types of measures is given below. Initially direct measure combinations are described. Thereafter follows a description of indirect measure combinations.

- *Pupils' participation in direct anti-bullying work* (component cluster 4) is formed by "school rules", "pupils as players" and "cooperative teams". In schools where these measures occur largely together, it means that the measure combination of pupil participation in combating bullying and degrading treatment is a common feature. Pupils or pupil representatives are present and decide which school rules are to be applied. Some pupils, nominated by their classmates (or chosen by teachers), function as the staff's extended "eyes and ears" and thus help in detecting infringements of rules and incidents that otherwise might have been overlooked by the staff. The incidents were reported, amongst others, to the cooperative team where pupils in some cases are represented together with "ordinary" teachers and staff with special competence (social pedagogues, special pedagogues, school nurses, counsellors). The cooperative team prepares the case by determining if and how the event/breach of rules should be treated.
- *Documentation/staff training* (component cluster 7) consists of "case documentation" and "staff training". At 18 out of 39 schools, this measure combination was used to a high degree, i.e. documentation takes place on the basis of established routines and most staff have received training concerning bullying/degrading treatment.
- *Detection/remedial measures* (component cluster 1) forms a new measure combination made up of "break monitoring system", "follow-up/evaluation",

"dealing with bullies" and "dealing with victims". A high value for the break monitoring system means that it was a developed system that was timetabled, and based on identification of "dangerous places". The material for identifying dangerous places comes from information from follow-up/evaluations, which thus contributes to increasing the awareness of the scope of bullying at the school. The larger the areas that can be covered, the greater the possibility of preventing incidents that could otherwise escalate into something more serious. If and when incidents of a serious nature come to light, discussions are held with the pupils involved in detection, follow-up and processing/supportive routines.

- *Relationship-enhancing measures* (component cluster 2) is directed at creating closeness and good relations. This can involve mentorship, or equivalent, or organisational solutions promoting closeness between both teachers and pupils, and between pupils in different classes/school years.
- *Special lessons* that form their own measure combination (component cluster 3) aim at developing the pupils' social competence through training (such as e.g. life skills, lessons on fundamental values, Olweus lessons, togetherness lessons).
- *Formative measures* (component cluster 6) include "disciplinary strategies", "training material" and "parent information". When teachers use pedagogical material to train pupils' social competence, communication skills, how they respond to provocation etc, they contribute to socialising pupils into becoming responsible citizens. This can be an integral part of regular teaching. Parents who are informed about the working methods can assist teachers in their work by encouraging socially acceptable behaviour. This measure combination also includes disciplinary strategies on how teachers should respond to pupils who behave in unacceptable ways or who break the rules, and what the consequences of this may entail.
- *Pupils' participation in indirect anti-bullying work* (component cluster 5) is made up of "pupils' active participation", "mediation" and "information about bullying/degrading treatment in school assemblies for pupils". Applied to a high degree, these measures refer to activities where pupils hold conversations with friends, lead exercises in the class, are responsible for activities in the school canteen, mediation measures for pupils in conflict with each other, and regular school assemblies about bullying/degrading treatment for pupils. The majority of schools do not have these measures. At schools where they occur, it is more common that they are an occasional part of activities rather than widespread or part of established routines.

Using the results from the cluster analysis of *18 individual measures*, *7 measure combinations* were constructed. More specifically, seven additive indices with detailed information were created.²⁹ In contrast to individual measures, these indices or measure combinations provide a simplified picture of the data. However,

²⁹ Here an example of the design of an additive index is given. Component cluster 4 was formed from three measures: "school rules", "pupils as players" and "cooperative teams". One school with a high value for two of these measures (2) and an average for one (1) receives an index value of 1.67 after the total of measures has been divided by the number of measures ($2+2+1=5/3=1.67$). Component clusters 4, 5 and 6 were formed from the three measures, which is why there is a seven point scale for these indices: 0, 0.33, 0.67, 1.0, 1.33, 1.67 and 2.0. Component cluster 1 was formed from 4 measures and has nine values: 0, 0.25, 0.50, 0.75, 1.0, 1.25, 1.50, 1.75 and 2.0. Component clusters 2 and 7 are made up of two measures each, and have five values: 0, 0.50, 1, 1.50 and 2.0. Component cluster 3 has only three values: 0, 1 and 2.

the intention is not to dismiss the former, but use the latter to identify schools that have similar working approaches to combating bullying and degrading treatment (which have similar *combinations of measures*). This process generates outcome patterns that are easier to handle and interpret compared with taking all measures used in all schools as a starting point.

3.8.3 Groups of schools with similar working approaches for combating bullying/degrading treatment

Combating bullying and degrading treatment is managed in different ways by participating schools. Some schools have purchased special programmes, others apply parts from different programmes, or equal treatment plans. Examining "programme schools" in relation to "pure schools" is in this context not a feasible approach. To be able to compare schools with each other, weight has been attached to what schools do in their anti-bullying work. The basis for distinguishing *groups of schools* (school clusters) *with regard to similar methods for combating bullying/degrading treatment* starts with *different measure combinations* (component clusters), from which seven indices were constructed (see above). In order to avoid bias in the cluster analyses of schools, these indices have been standardised (z score) with a mean value of 0 and a standard deviation of 1. Tables 3.10 and 3.11 below describe the results from an analysis consisting of nine clusters. Table 3.10 shows the standardised values for each individual type of measure in the different school clusters. Number of schools and also which schools (school numbers) in different clusters are shown in the tables. In Table 3.11, this has been simplified by marking school clusters with a standardised value that lies 0.60 standard deviations above (+) or below (-) the mean value. This makes it easier to see which groups of schools have *more or less developed working methods* for combating bullying and degrading treatment, and what these differences consist of.

Table 3.10 Combinations of measures by groups of schools with similar approaches to bullying

Combinations of measures (component clusters)	Groups of schools (school clusters)								
	1	2	3	4	5	6	7	8	9
Direct link to anti-bullying work									
Pupil participation in direct anti-bullying work	0.95	0.92	-1.24	0.28	0.04	-0.65	0.86	-1.28	1.09
CC 4: school rules + pupils as players + cooperative teams									
Documentation, staff training	-0.38	0.88	-1.52	0.58	0.58	0.73	-1.22	-1.10	0.88
CC 7: case documentation + staff training									
Detection/remedial measures	-0.94	-1.06	-0.24	0.79	-0.13	0.79	1.00	-0.69	1.41
CC 1: follow-up/evaluation + break monitoring system + dealing with bullies + dealing with victims									
Indirect link to anti-bullying work									
Relationship-enhancing measures	0.25	0.01	0.76	1.21	-0.16	-0.73	-0.61	-0.43	-1.53
CC 2: relationship-enhancing measures teacher-pupil + pupil-pupil									
CC 3: Special lessons	-0.87	0.45	-0.95	0.45	-1.15	1.05	0.65	0.57	-1.35
Formative measures	-1.32	-0.17	-1.13	1.64	0.19	-0.05	0.56	-0.17	-0.89
CC 6: disciplinary strategies + train. matl. + parent information/training.									
Pupil participation in indirect anti-bullying work	-0.14	-0.14	-0.14	0.74	-0.14	-0.14	0.45	-1.02	2.50
CC 5: pupils active + mediation + school assemblies for pupils									

Schools (school numbers) in different clusters are the following: Cluster 1= 1, 4, 9, 18, 34. Cluster 2= 2, 6, 7, 36. Cluster 3= 3, 32, 39. Cluster 4= 5, 11, 22, 29, 30, 31. Cluster 5= 8, 12, 13, 15, 27, 28. Cluster 6= 10, 16, 17, 26, 37, 38. Cluster 7= 14, 23, 25. Cluster 8= 19, 20, 21, 24, 33. Cluster 9= 35.

Table 3.11 Groups of schools with more or less developed approaches to bullying/degrading treatment

Combinations of measures (component clusters)	Groups of schools (school clusters)								
	1	2	3	4	5	6	7	8	9
Direct link to anti-bullying work									
Pupil participation in direct anti-bullying work	+	+	-			-	+	-	+
CC 4: school rules + pupils as players + cooperative teams									
Documentation, staff training		+	-			+	-	-	+
CC 7: case documentation + staff training									
Detection/remedial measures	-	-		+		+	+	-	+
CC 1: follow-up/evaluation + break monitoring system									
+ dealing with bullies + dealing with victims									
Indirect link to anti-bullying work									
Relationship-enhancing measures			+	+		-	-		-
CC 2: relationship-enhancing measures teacher-pupil + pupil-pupil									
CC 3: Special lessons	-		-		-	+	+		-
Formative measures	-		-	+					-
CC 6: disciplinary strategies + train. matl. + parent information/training.									
Pupil participation in indirect anti-bullying work				+				-	+
CC 5: pupils active + mediation + school assemblies for pupils									

The figures in the table cells show standardised values for different school clusters for different measure combinations (component clusters), which facilitates comparison between different school clusters. Negative/positive values lie under and above the mean value for different types of measures. Let us give an example. As regards *pupil participation in direct anti-bullying work* (component cluster 4), school cluster 1 has a standardised value of 0.95. This means that the value is almost one standard deviation *above* the mean value for component cluster 4. In school cluster 3, the corresponding value is negative, i.e. -1.24, which shows that the value is 1.24 standard deviations below the mean value for component cluster 4. Transferred to individual measures, this means the following (See attachment 5 to this appendix): in school cluster 1, all schools except for one have a high value (2) in terms of "pupils as players", "cooperative teams" and "school rules". In school cluster 3, all schools have low values (0) in terms of "pupils as players", all schools have the value (1) for "cooperative teams"; as regards "school rules", two of three schools have high values (2) while one school has the value (1).³⁰

Table 3.11 has measure combinations that are particularly prominent in a positive or negative sense marked (table cells marked by + and - show that the

30 Here we give an example of the whole calculation procedure. In an earlier note, we illustrated the calculation of index values. An individual school with an index value of 1.67 in component cluster 4, CC4 (school rules + pupils as players + cooperative teams) has e.g. a high value (2) for "pupils as players" and "cooperative teams and instruments" (1) for "school rules" ($2+2+1=5/3=1.67$). In order to get a *composite measure* for CC4 for different school clusters the individual schools' index values were added and then divided by the number of schools in the cluster. An example using school cluster 1. There are five schools in this group. For one of these, the index value for CC4 is equal to 1.67. For other schools, the index value is 2.0. The *composite original value* for CC4 for school cluster 1 is 1.93 ($1.67+2+2+2+2=9.67/5=1.93$). The mean value for CC4 for all schools is 1.48 and the standard deviation is 0.48. After the standardisation procedure (z scores), the mean value for CC4, and for the other component clusters, was set to 0 with a standard deviation of 1. The *standardised value* in school cluster 1 becomes after standardisation 0.95. Since the value is positive, it lies above the mean value. The figure 0.95 gives the magnitude in relation to the mean value, or more precisely, that the original value in school cluster 1 (1.93) is close to 1 (0.95) standard deviation (0.48) above the mean value (1.48) for the variable CC4 ($0.95 \times 0.48 = 0.456 + 1.48 = 1.936$).

standardised value lies 0.60 standard deviations above or below the mean value). Empty table cells mean that the measure combination is not typical of the school cluster in question.

Next follows a description of what characterises different school clusters at the overall level in relation to direct and indirect measure combinations. An example is also given of what is meant by working method. Since school cluster 9 contains only one school, it is not discussed any further in the text.

- In **school cluster I**, anti-bullying work at an overall level is *less developed*. *In relative terms, indirect measure combinations are less developed compared to direct ones.*
 - This applies in particular to *formative measures* (disciplinary strategies + training material + parent information/training) where the standardised values were the lowest of all groups of schools, -1.32. Essentially, this means that all schools apart from one in school cluster 1 lack disciplinary strategies, training material and parent information/training. The standardised value for *detection/remedial measures* (follow-up/evaluation + break monitoring system + dealing with bullies + dealing with victims) is also low, -0.94, which is the second lowest value for all school clusters. This means, amongst other things, that only two of the schools have a timetabled break monitoring system based on the identification of "dangerous places" with special staff organising activities for pupils in the breaks. *Pupils' participation in direct anti-bullying work* (school rules + pupils as players + cooperative teams) is the only direct type of measure showing a high value, 0.95, which is the second highest value. This means that all except for one school have rules drawn up by staff and pupils, have internally or externally trained pupils who function as observers, rapporteurs, and have a cooperative team consisting of staff with special competence (social pedagogues, special pedagogues, school nurses, counsellors), "ordinary" teachers and pupils.
- Overall, it can be stated that work on combating bullying and degrading treatment in **school cluster 2** is *neither more nor less developed*. *Direct groups of measures on the other hand are relatively developed* (no indirect type of measure shows high or low standardised values).
 - The measure combinations concern *pupil participation in direct anti-bullying work* (school rules + pupils as players + cooperative teams) and documentation/staff training (documentation of cases + staff training), where the values were 0.92 and 0.88 respectively. Concerning *pupil participation in direct anti-bullying work*, the picture in school cluster 2 is the same as in school cluster 1, i.e. all except for one school have rules drawn up by staff and pupils, have internally or externally trained pupils who function as observers, rapporteurs, and have a cooperative team consisting of staff with special competence (social pedagogues, special pedagogues, school nurses, counsellors), "ordinary" teachers and pupils. Concerning *documentation/staff training*, most staff at all schools have received training about bullying/degrading treatment, and all schools document cases in accordance with established routines. *Detection/remedial measures* (follow-up/evaluation + break monitoring system + dealing with bullies + dealing with victims), which is also a direct measure combination shows in contrast to what was recently mentioned a low value, -1.06, which is the lowest value for *detec-*

tion/remedial measures among all school clusters. One value that is slightly more than one standard deviation under the mean for *detection/remedial measures* means in terms of school cluster 2 that only one out of four schools has a timetabled and developed break monitoring system.

- Generally **school cluster 3** has *less developed* anti-bullying work. *Proportionately, direct measure combinations are less developed compared to indirect ones.*
 - As regards direct measure combinations, two of three show very low values. The standardised value for *documentation/staff training* (case documentation + staff training) is the lowest of all school clusters, -1.52. The value for *pupil participation in direct anti-bullying work* (school rules + pupils as players + cooperative teams) is the second lowest, -1.24. The low value for documentation/staff training means that none of the schools document cases in accordance with established routines, and that none or only some staff at the schools have received training concerning bullying/degrading treatment. As regards indirect measure combinations, *special lessons* and *formative measures* (disciplinary strategies + training material + parent information/training) have low values, -0.95 and -1.13 respectively. The last mentioned is the second lowest value and means that all schools lack disciplinary strategies and training material. The only type of measure that is more developed is *relationship-enhancing measures* (0.76), which means that two of three schools apply relationship-enhancing measures as a conscious strategy to promote relationships between teachers and pupils, and between pupils.
- At an overall level, **school cluster 4** has *more developed* working methods to combat bullying and degrading treatment. The work is *very largely developed as regards indirect types of measures, and partially developed concerning direct measures.*
 - Regarding indirect types of measures, the highest value was found for *formative measures*, 1.64 (disciplinary strategies + training material + parent information/training) in this school cluster. School cluster 4 differs from other clusters in that no school lacks disciplinary strategies, training material or parent information/training. The highest value is for *relationship-enhancing measures*, 1.21, which exists in school cluster 4 (relationship-enhancing measures teacher-pupil + relationship-enhancing measures pupil-pupil). This means all schools have a conscious strategy for creating closeness/relations between not only teachers and pupils, but also between pupils. As regards direct measure combinations, the value for *detection/remedial measures* is relatively high, 0.79 (follow-up/evaluation + break monitoring system + dealing with bullies + dealing with victims).
- **School cluster 5** is least prominent. Most measures have a standardised value, which in this context is not categorised as either low or high. In general, the measures for combating bullying and degrading treatment *were neither more nor less developed.*
 - In terms of individual measures with one exception. The only exception applies to *special lessons*, where the value is -1.15, which is the second lowest of all school clusters. More specifically this means that 5 of 6 schools lack special lessons, whilst one school has special lessons for certain classes.

- In general terms, **school cluster 6** can be said to have *more developed working methods* for combating bullying and degrading treatment. The work is *relatively developed in terms of direct measure combinations, which proportionately are also developed to a higher degree compared with indirect measure combinations*.
 - The standardised values for different measure combinations in terms of *documentation/staff training* (documentation of cases + staff training) and *detection/remedial measures* (follow-up/evaluation + break monitoring system + dealing with bullies + dealing with victims) are 0.73 and 0.79 respectively. These values conceal the fact that the majority of staff at all schools have undergone training in bullying/degrading treatment, that all apart from one school document incidents in accordance with established routines, that all schools regularly carry out follow-up, have a timetabled break monitoring system and have at least remedial and follow-up routines for pupils involved in bullying, either as victims or perpetrators. A measure combination that is less developed, concerns *pupil participation in direct anti-bullying work* (school rules + pupils as players + cooperative teams). Among the indirect measures, the highest value is for CC3, 1.05, in this school cluster, which means that *special lessons* are timetabled and carried out for all classes in all schools. One indirect measure combination shows a relatively low value. This is for CC2, and means that relationship-enhancing measures between teachers and pupils, and between pupils (*relationship-enhancing measures*) are lacking at half of the schools.
- **School cluster 7** resembles previous clusters and has *more developed* anti-bullying work: the work is *relatively developed in terms of direct measure combinations, which proportionately are also developed to a higher degree compared with indirect measure combinations*.
 - The standardised value for *detection/remedial measures* (follow-up/evaluation + break monitoring system + dealing with bullies + dealing with victims) is the second highest value (1.0). In this school cluster, all schools regularly carry out follow-ups that have a direct impact on anti-bullying work, and all except for one school have a timetabled break monitoring system that is based on identifying "dangerous places" (only one school has a timetabled break monitoring system), and one school has remedial, follow-up and processing/supportive routines for pupils either as victims or perpetrators of bullying, whilst others have remedial and follow-up routines for these pupils. *Pupil participation in direct anti-bullying work* (school rules + pupils as players + cooperative teams) has a standardised value of 0.86, which means that all schools have high values for "school rules" and "cooperative teams", and that all schools except for one have high values for "pupils as players". *Documentation/staff training* is a direct measure combination whose standardised value in this school cluster is the second lowest, -1.22, which i.a. means that two of three schools lack case documentation. As regards indirect measure combinations, special lessons has a value of 0.65, which is the second highest of all school clusters, whilst relationship-enhancing measures has a negative value of -0.61 and may thus be regarded as a less developed measure combination.
- **School cluster 8** has generally *less developed* anti-bullying work. In particular, this *applies to direct measure combinations*, where all measure combinations

have low standardised values, as is the case with indirect measure combinations.

- In the latter, the value for *pupil participation in indirect anti-bullying work* (pupils active in preventative work + mediation + school assemblies for pupils) is the lowest amongst all school clusters, -1.02, which means that all schools lack "pupils active in preventative work", "school assemblies about bullying for pupils" and "mediation". This school cluster also has the lowest value for *pupil participation in direct anti-bullying work*, -1.28 (school rules + pupils as players + cooperative teams). Amongst other things, this means that all schools have school rules decided on by school staff, and that two of the five schools lack cooperative teams.

There are thus both similarities and differences in working methods on combatting bullying and degrading treatment among different school clusters, which in itself is hardly surprising. If different "programmes" that claim to be effective against bullying are compared, we see they also have similarities and differences in measures for anti-bullying work.

3.8.4 Something about approaches when calculating outcomes

The chapter on results reports, amongst other things, the effects of individual measures/components, measure combinations (component clusters) and groups of schools with similar working methods against bullying and degrading treatment (school clusters). The construction of different output measures, the categorisation of *individual measures* (into low, medium and high), the construction of different *measure combinations* and *groups of schools with similar working methods* have been reported above. Common to the variables, individual measures, measure combinations, and groups of schools with similar working approaches, is that they describe data at the *macro or meso levels* – or more specifically at the school level. The output measure describes data at the *microlevel*, and here two kinds of data have been used: not only longitudinal and cross-section data from groups of pupils who answered the questionnaire in different surveys (aggregate level), but also longitudinal data from a cohort of pupils who answered the questionnaires in all surveys (individual level). Access to different kinds of output data means that estimates of outcomes are based on different factors. At the aggregate level, different measures are related to a group of bullied pupils. The pupil group in the first survey differs partly from that in the last survey, since some pupils have completed compulsory school at the same time as others have started. At the individual level, measures are examined in relation to how "the bullying situation" between surveys has *changed*, which has been made possible by the fact that the data material comes as responses from the same pupils at different points in time.

The outcome calculation is based on i.a. differences in the frequency of outcomes (bullying, bullying and/or degrading treatment) among schools that have "strong" and "weak" measures and combinations of measures.

3.8.4.1 "Strong" and "weak" measures and combinations of measures

As regards the calculation of outcomes for *individual measures/components*, this is based on differences in bullying frequency among schools that have "weak" and "strong" components. The term "weak" corresponds to schools whose anti-bullying measures were originally assessed as "low" and "average" whilst

the term "strong" was used to refer to schools whose measures were "to a high degree" oriented to counteracting bullying/degrading treatment. The difference between "weak" and "strong" is best shown by an example. A weak component regarding *follow-up/evaluation* means that the measure in question is lacking/carried out intermittently (0 = L, low degree) or carried out regularly without having an impact on bullying (1 = M, medium degree). A strong component means that follow-up is carried out regularly, that its results are used as a basis for decisions, and thus have a direct impact on anti-bullying work (2 = H, high degree).

Calculation of the effects of *measure combinations* are based on differences between schools that have "weak" and "strong" component clusters. The division into "weak" and "strong" component clusters is based on the same principle as above. The measure combination *pupil participation in direct anti-bullying work* (component cluster 4) is formed from three measures: "school rules", "pupils as players" and "cooperative teams". One school that has a high value for two of these measures (2) and an average for one (1) receives an index value of 1.67 after the total of measures has been divided by the number of measures ($2+2+1=5/3=1.67$). A school that has a low value (0) for two of the measures and an average value of 1 (1) has an index value of 0.33 ($0+1+0=1/3=0.33$). Since the component cluster in question is formed from three measures, the index for the different schools could take one of the following values: 0, 0.33, 0.67, 1.0, 1.33, 1.67 and 2.0. To transform this seven step scale into a variable with two parts with the values "weak" and "strong", the values are approximated in the first step: 0 and 0.33 is rounded to value 0; 0.67, 1.0 and 1.33 are rounded to value 1; 1.67 and 2.0 are rounded to value 2. Thereafter the newly formed values 0 (L) and 1 (M) are merged, which corresponds to a "weak" component cluster whilst the value 2 (H) represents a "strong" component cluster. The calculation procedure for the other component clusters is the same irrespective of whether the index has a 9 step scale (cf component cluster 1 formed from 4 measures) or 5 steps (cf component clusters 2 and 7, which consist of two measures) – i.e. first rounding to a 3 point scale (0, 1 and 2), and then values 0 and 1 are merged ("weak") whilst value 2 represents a "strong" component cluster.

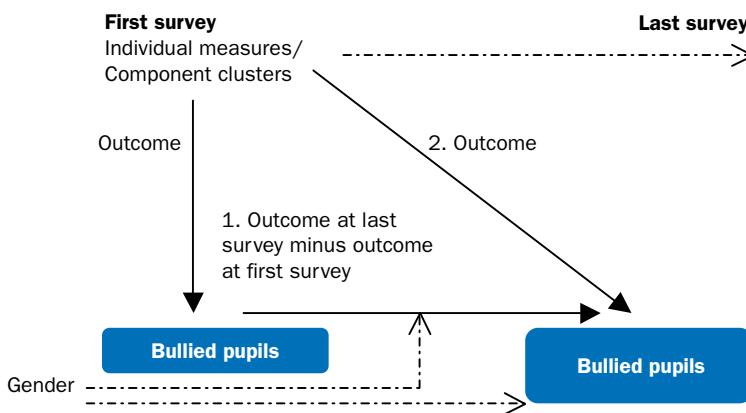
3.8.4.2 Outcomes at aggregate and individual levels

Outcomes from measures, measure combinations and groups of schools with similar working methods for combating bullying and degrading treatment are reported using Odds ratios, which themselves have been calculated on the basis of differences in outcome frequencies (bullied, bullied and/or subjected to degrading treatment) in relation to i.a. "strong" and "weak" measures and combinations of measures.

Figure 3.6 below illustrates the setup when the effects of individual measures and component clusters are examined from both longitudinal and cross-section data for pupils who responded to questionnaires in the different surveys (aggregate level).

The variables at macro/meso levels – i.e. individual measures and combinations of measures (component clusters) – have been based on information collected in close connection with the first survey. Most of the participating schools use different "programme measures" and some schools at the time of the first interview had decided to introduce further programme measures. The dotted

Figure 3.6 Effects of individual measures/component clusters, aggregate level



arrow that goes from the "first survey" to the "last survey" indicates an assumption that the measures were to a higher or lower degree also applied in the last survey. What actually applies at individual schools is i.a. related to how closely school staff adhere to the programme. As mentioned above, the variables at the school level are classified as weak and strong. The variable at the micro level refers to pupils who were bullied in different surveys. The dotted arrow that goes from the variable gender to bullied pupils and to the change in outcome indicates that the outcomes were also calculated with adjustments for gender. This applies to the calculations of all outcomes.

In "model 1" different components are examined in relation to how outcomes between the surveys have changed (longitudinal data at aggregate level). The model is based on the assumption that schools that have strong components during the survey period reduce bullying more than schools that have weak components. Under ideal survey conditions, the proportion of pupils bullied in the first survey is assumed to be approximately as large independently of whether schools have strong or weak components. Such an initial outcome would in other words mean that the measure in question did not have any outcome in the first survey (Odds ratio value not significant). (a) If the difference in frequency of bullying in the last survey is significantly lower among schools with strong components compared to schools with weak components, this indicates that the measure is effective (value for Odds ratio is significant). Over time there has been a change in outcomes, which is the reason it can be said that *the measures have reduced bullying* (difference in Odds ratio values between the first and last survey is significant. Cf Ttofi et al. 2008).

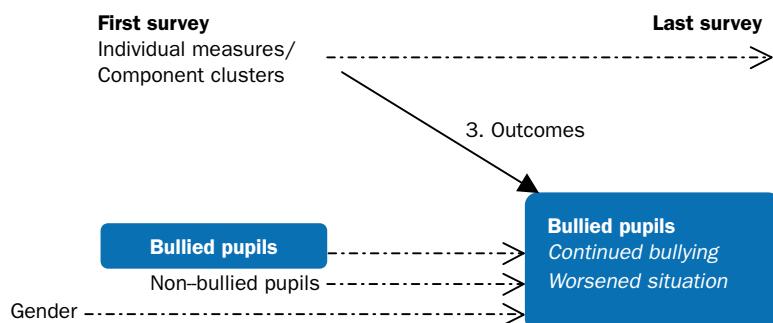
As schools for some years have been obliged to work actively on preventing and counteracting degrading treatment, it is difficult if not impossible to imagine a school lacking any form of active measures. On the contrary, the schools in the first survey have more or less developed working methods for combating bullying and degrading treatment. Some individual measures can thus very well have the effect shown in the first survey. (b) Model 1 also catches measures that have changed from an outcome in the first survey to having a still bigger outcome in the last survey, as well as measures that had a negative outcome in the first survey and a positive outcome in the last. If the change in effects in the latter case is not sufficiently large (in a positive direction), this can result in nega-

tive or iatrogenic effects. With model 1, there is a risk that measures that had an equivalent effect in both surveys are disregarded, for example in cases where schools with strong measures are associated with a relatively low proportion of bullying in both surveys, compared with schools that have weak measures. It can happen that the change in outcomes over time is too small to be evident. Model 2 is used to compensate for this.

In "model 2", strong and weak measures are related to the frequency with which pupils were bullied in the last survey (cross-section data at aggregate level). (c) If the proportion is significantly lower in schools with strong components, this indicates that the measure has a *positive effect on bullying* independently of whether an earlier survey had any effects, negative effect or had a lower or equivalent effect in the last survey. When assessing the effects, measures showing significant effects in model 1 are given greater weight than the effects in model 2. If significant effects occur not in model 1, but in model 2, this indicates that the measure has a positive effect.

Figure 3.7 shows the reasoning for outcomes from the individual measures and component clusters we have examined on the basis of data from the same pupils at different points in time (longitudinal data at the individual level).

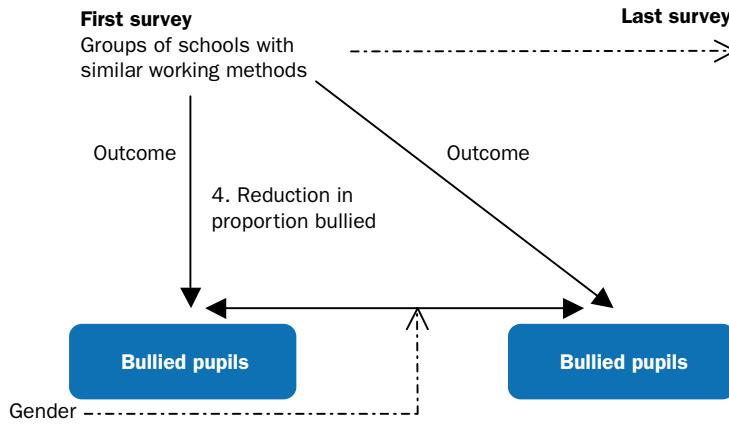
Figure 3.7 Outcomes of individual measures/component clusters, individual level



The continuous line between macro/meso and micro levels shows which variables the calculation of outcomes is based on in "model 3". The variables at the school level are the same as above and thus not commented on further. On the other hand, the variable at the micro level is different. It refers to individuals who were bullied in both surveys (cf *continued to be bullied*) and to individuals who were not bullied in the first, but in the last survey (cf *worse situation*). When estimating outcomes, the proportion of pupils bullied at schools where individual measures or combinations of measures were classified as strong is compared with the proportion of pupils bullied at schools where these were classified as weak. (d) Positive outcomes indicate that the measures in question *reduced bullying of individuals who had been bullied for shorter or longer periods*. The first group mentioned is made up of individuals whose situation deteriorated. In relation to the outcomes calculated for models 1 and 2, the outcomes for model 3 (individual level) were given greater weight.

As regards the calculation of effects of reductions in bullying at groups of schools with similar working methods, longitudinal data at the aggregate and individual level are used. Figure 3.8 below describes the design in the former case.

Figure 3.8 Outcomes at groups of schools with similar approaches, aggregate level



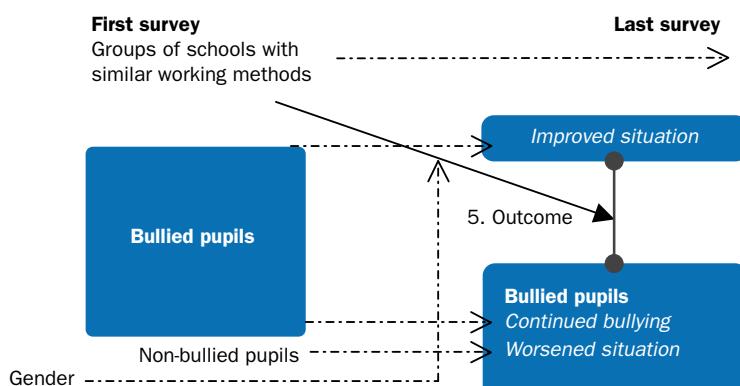
In "model 4", the macro variable consists of groups of schools with similar working approaches. The school clusters were related to the proportion of pupils bullied in the first and last survey. Output calculations are based on differences in bullying frequency in the different surveys. The schools included in the different groups function as self-controls. As in the models described earlier, outcomes are calculated with controls for gender. (e) Positive outcomes indicate that a school cluster with a particular combination of measures has succeeded in reducing bullying during the survey period.

Finally, the structure is illustrated when calculating outcomes at the individual level (see Figure 3.9).

The macro variable in "model 5" is the same as above; on the other hand the variable at the micro level is different. When calculating effects, which are also controlled for gender, the proportion of pupils in different school clusters who obtained an *improved situation* is compared to the proportion of pupils who *continued to be bullied* or who obtained a *worse situation*. The proportion of pupils whose situation improved functions as a point of reference in this respect.

(f) Positive or negative outcomes give indications of the school cluster's ability to remedy bullying of individuals in relation to shortcomings in their capacity to remedy and prevent new incidents.

Figure 3.9 Outcomes for groups of schools with similar approaches, individual level



4 Ethical requirements for evaluating longitudinal interventions

4.1 The purpose of an ethical review

The main purpose of an ethical review is to assess whether a proposed intervention or research approach involves acts that can be regarded as morally dubious. Acts with good intentions can also create situations with risks or actually lead to an individual being harmed. The alternative acts can be ethically questioned in two fundamentally different ways. First there can be an objection to the act itself, which makes it unacceptable whatever the consequences may be. In an evaluation context, this would take place with the individuals concerned being treated without respect, or for example, in our specific context, school pupils at risk are exposed to still greater risks. The second factor that can create ethical doubt is whether a negative balance occurs between expected positive and negative consequences from an evaluation.

Four well-established principles can be put forward as grounds for an ethical review. They should be tested against a detailed examination of the contents of an evaluation strategy. When data is collected from individuals below the age of legal majority, particularly high demands are imposed. Even though school pupils could be reached through a school and the question thus comes under the moral responsibility of the headteacher and the school, the requirement nevertheless remains that an evaluation approach should satisfy the most stringent requirements.

The principle of doing good in an evaluation context should mean that the aim of the approach is beneficial, at least theoretically, for all parties affected. The focus of the evaluation, where recurring cases of bullying in principle mean that victimised children are at risk in a precarious power imbalance with their prospective tormentors, and thus risking their health, entails striking a balance between perpetrators and victims, a balance that should always be loaded in favour of the victim. This may entail striking a difficult balance.

The principle of not causing harm entails a similar balance to be struck as above, however, without the risk of counterproductive consequences. No participating individual should risk personal victimisation as a result of an evaluation.

The principle of autonomy requires respect for the rights of participating individuals to make decisions about themselves. There are special requirements in a school context. The voices of pupils' guardians/parents, pupils themselves and the school, through its principal organiser, must be taken into account when considering participation.

Simply expressed, this means *the principle of fairness* that different persons, for example with different cultural backgrounds, gender or social status, should be treated identically. The principle of fairness in a bullying situation means that dealing with an individual who has been victimised should not harm or run the risk of harming the perpetrators.

The principles do not form a complete ethical system or provide guidance on how ethical problems should be solved, and particularly not where a large evaluation will affect many individuals on a number of occasions. In addition, it is

not uncommon that conflicts between these principles occur. The principles are reminiscent of key aspects that should be taken into account when assessing different action alternatives in a comprehensive evaluation.

Apart from these principles, *personal integrity* where each person has the right to a personal sphere constitutes an important ethical dimension. Moving into the personal sphere without the approval of the individual runs the risk of undermining personal integrity. For example, non-authorised persons can get access to sensitive personal data, or persons, particularly children, can be included in different activities and programmes without first being informed of the purpose and giving their consent. In a school where sensitive information about individual pupils is collected as a part of an evaluation, clear ethical undertakings may be required if the headteacher is to have the right to obtain such data. Does a headteacher have the right to "negotiate" consent about the collection of information by giving various undertakings about the use of such data, however, anonymised it may be?

According to the UN Convention on the Rights of the Child, the child's best interests and thus those of school pupils, should come first in all acts concerning the child. In addition, the rights of children to express their views and have them acted on in questions concerning them is emphasised. The Convention on the Rights of the Child also lays down the right of the child to develop psychologically, socially and morally.

Ethical and social aspects of prevention programmes must also be put in relation to possible evaluations of such aspects. An independent evaluation phase may involve completely new ethical questions that must be dealt with.

4.2 Ethics affecting researchers in their evaluation approaches

Research at an institution of higher education should be carried out as laid down in the Act on Higher Education, be carried out taking into account good research praxis in accordance with expected ethical criteria. The responsibility lies with the management of the higher education institution, usually the head of department at the institution (by extension vice-chancellor). The vice-chancellor is responsible for staff complying with relevant laws and ordinances. A not unusual problem may be that a research team consists of researchers employed at several different universities. This means that the head of department/vice chancellor's responsibility as principal stretches beyond his or her own institution of higher education.

In addition, it is not uncommon that a research project or an evaluation is carried out for another principal. It is not certain that another principal/purchaser shares the ethical responsibility or, possibly, has the same views on ethical responsibility.

4.3 Research involving children

Research studying children can be problematic. This applies not least to the requirement to obtain the informed consent of the children. The ability of schoolchildren to be aware of the consequences of participating in research or evaluation is relatively limited, and possibly non-existent amongst younger children.

Article 24 of the European Parliament's resolution *Mot en EU-strategi för barnets rättigheter* (*Towards a European strategy for children's rights*), asserted "the im-

portance that all children have the right to participate and that their experiences and views should always be taken into account in questions that concern them, and that account be taken of the child's age, maturity and intellectual development". The term *child* covers each person under the age of 18. In addition, it was decided that "this right is absolute and should not be violated"; that there must exist "forms for communicating with all children, even those who do not express themselves in a way that is easy for adults to understand". It is important that a child's rights and their realisation includes the right to protection of personal information. This means that an evaluation must take special account of this.

4.4 Research in the humanities and social sciences

Research in the humanities and social sciences seldom takes place without special requirements for a review of the ethics of the research and reflection thereof. This applies not least in the school area where much of the information that can be the basis for research is collected naturally as a part of the school's regular daily activities. Should a school in carrying out, for instance, its health promoting mission collect information about pupils' BMI (Body Mass Index)? Headings such as "Swedish schoolchildren have not become fatter and fatter" (Dagens medicin, 2009) appear to be a legitimate subject for research. It is quite unlikely that each pupil whose BMI index is used as material in such studies has actually been asked for their consent. The child is hardly likely to be harmed by having its height and weight listed. Can the same argument, or the lack of the need for an argument, be given to the collection of information about bullying or the risk of bullying in school? Is the argument the same if the question concerns the behaviour of the perpetrators in contrast to the status of the victims?

Earlier humanistic social science, *Ethical research principles in these areas*, was replaced in 2004 by the Act on Ethical Review (Act 2003:460). The act refers i.a. to research where there is a risk that participants may be affected physically or psychologically. The importance of the act is how the individual's welfare is given priority over the needs of society and science.

Applications for an ethical review of research and thus research-based evaluation approaches should according to the law be assessed by regional boards. A change in the legislation in 2008 clarified the definition of the concept "research". Here research is defined as scientific, experimental or theoretical work carried out for the purpose of obtaining knowledge, including development work on scientific grounds. Although scientific evaluation is not specifically mentioned, it is reasonable to assume that it is included. The law also clarified what "handling of personal information" could mean: "personal information should in future be ethically assessed irrespective of whether the research person has given express consent or not" (op. cit.). It is clear that collection of data concerning individuals is covered by the Ethical Review Act. This also applies in situations where ongoing interventions may involve some form of parallel collection of data about situation and outcomes.

4.5 Research and data collection via the Internet

Web-based data collection is a rapidly developing research activity. As this became the chosen data collection strategy, it was important to take special account of the ethical requirements and risks involved. Data collection over the

Internet creates some difficulties in terms of giving consent. Different guidelines are under development and one example exists i.a. at the Association of Internet Researchers (<http://aoir.org/>). In contacts with children and school pupils, there are a number of special communication difficulties from an ethical perspective. Respondents to an online questionnaire do not meet a physical person, and do not receive in their hands the type of physical entity a traditional paper-based questionnaire represents. In the same way, answers in an electronic medium exist and can under certain circumstances be irrevocable, a situation that does not exist when using a paper-based questionnaire.

The evaluation planning considered the use of paper questionnaires, but given the target group's growing use of the Internet, and based on research results indicating a number of advantages from using online procedures, it was decided to use an electronic form for self-reporting of bullying behaviour. This accentuated the need for an ethical review.

4.6 Application to the Regional Ethical Review Board in Uppsala

The project team decided to transfer the application for ethical review to the University of Gävle, where Professor Peter Gill was appointed as the person nominally responsible for the research, and as a result Lennart Öhlund, Vice Chancellor, at the Institute for pedagogy, didactics and psychology took on the principal responsibility. Gill and Öhlund signed the application submitted to the review board in Uppsala.

4.6.1 Individual data

Of particular importance, and after much discussion at the planning meeting, the project team decided to submit an application to collect individual data in three surveys: a baseline questionnaire and two follow-up surveys. The reasons for this decision were research-based. National behaviour for programme interventions, according to the government's assignment, focused primarily on *bullying* (see section dealing with the term "bullying"). An evaluation in a school context takes place in a situation where at the start of every school year there is a change in the cohorts at the school. One class leaves and is replaced by a class of new pupils. Since the evaluation design is longitudinal with follow-up over several school years, the option of carrying out an "extended selection cohorts" quasi-experimental design was considered (Olweus (2005) *Psychology, Crime & Law*, 11 (4), 389–402). Such a selection would mean that results in one cohort are compared with those of the following year's incoming cohort. This enables a baseline comparison to be created at the aggregate level. With access to individual data some empirical problems connected with the use of aggregate data are made easier.

Aggregate data becomes less sensitive in longitudinal studies if the target behaviour is relatively rare and the population in a school is changing. Individual data creates opportunities to monitor individuals over time. This creates an important increase in the sensitivity of measurements, in our case concerning school children subjected to bullying, and also school children who themselves reported that they subjected their school friends to bullying.

The decision about individual data was included in the final application to the ethical review board.

4.7 Frames for the ethical review application

Below is a short extract from the descriptions sent to the Regional Ethical Review Board in Uppsala. The project was given the title "Evaluation of programmes frequently used to combat bullying in Sweden". The description explained that the term *bullying* was to be understood in terms of the following definition: "bullying is a repeated act involving an individual or individuals deliberately and intentionally trying to cause somebody harm or distress" (National Agency for Education 2006). The project was described as "a longitudinal study of adolescents who had been victimised by bullying in a number of compulsory schools in Sweden"; these adolescents would be monitored over time and that the study would be carried out over a period of three years. The project was initiated by the government (Government assignment U2007/1205/S). The project was described as "commissioned research". The study was described as having three separate questionnaires.

The application explained how we considered it was particularly important "to be able to monitor individual pupils over three years". In addition, it was also stated that "the use of data on bullying is unusual in the research area. Usually studies are based on group levels, which means that the individual's experiences from being bullied and changes in these experiences can be hidden in the general trend studied at the aggregate level". Finally, it was explained how "we particularly wanted to give prominence to this aspect of the proposed evaluation project".

Below follows a detailed description of how and what data would be collected. The study would be carried out "as a questionnaire survey filled in by use of computers". The sample was described as follows: "pupils in school years 4 to 9 will come for 30 to 45 minutes to answer questions concerning their experiences from being victimised by bullying, and if they have perpetrated such acts on others. Both these aspects – being subjected to and subjecting others to bullying – are key elements in the questions put. They will also answer questions connected to security and life orientation (KASAM). Pupils respond to the questionnaires which mainly contain questions with predetermined alternative responses. The questions deal with whether pupils have been victimised by bullying and if they subject others to this".

The procedure itself is described as "pupils write their name and the class they are attending on the first page (screen dump) in the questionnaire. This must take place for the pupils to proceed further. We provided information that this was necessary as we would come back to them on two further occasions in the following two years. (This applies to pupils in school years 4–7, as the pupils in school years 9 and 8 will only participate in the first and second survey)".

Finally, it was explained that "after data collection is carried out, the material is encoded and a data file created. Pupils' responses are examined. Pupils' personal data is transformed into an internal code. Only those carrying out the study have access to the file translating the internal codes into national ID numbers. The key to the encoding is stored and locked in a safe in premises with an alarm system".

The application to the board was submitted in February 2008 and granted in June 2008.

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Technical appendix

Technical appendix

The technical appendix gives a detailed description of how we have gone about identifying i) social and physical forms of pupils' victimisation; ii) measure combinations; and iii) groups of schools with similar working methods to combat bullying and degrading treatment.

Social and physical victimisation

Table 1 below describes the questions where the pupils are encouraged to answer whether in recent months they have been victimised by any of the following:

Table 1 Main questions

Main questions (frequency)	Response alternatives				
	No, it has not happened	Some time	A couple times a month	A couple times a week	Nearly every day
A) Has been mocked, teased or called nasty names					
B) Other pupils have tried to get school friends to think badly about you					Has no idea
C) Other pupils have used the Internet, mobile phones, e-mail to circulate malicious messages					Don't know
D) Has been excluded, ostracised					
E) Has been pushed, held					
F) Other pupils have touched you in a sexual way					
G) Has been threatened with blows					
H) Has been hit, kicked					
I) A teacher/member of staff has said unpleasant, nasty things to you					

Pupils who gave any of the alternatives "Some time", "Several times a month", "Several times a week" or "Nearly every day" received a follow-up question. This is illustrated by question A: *Why do you think you have been teased, mocked, called nasty names?* The responses to the follow-up questions are given in the column farthest to the left in Table 2 below.

Table 2 Table of categories showing different grades of seriousness of pupils subjected to negative acts

Victimised/ Why victimised?	0. No/ No idea/ Don't know	Some time	Several times a month	Several times a week	Nearly every day
In fun			1. Subjected to pranks		
Disagreement		2. Seldom victimised due to disagreement		3. Often victimised due to disagreements	
Don't know		4. At risk of further victimisation		5. Victimised with unclear intent	
Harmed/ intimidated	6. Degrading treatment			7. Bullied	

The figures in Table 2 above show the values of the variable based on response combinations from the main and follow-up questions. Pupils who, for instance, stated that they had been teased, mocked, called nasty names "several times a month", "several times a week", "nearly every day" (to the main question) in

combination with the intent "harmed/intimidated" (to the follow-up question) were categorised as *bullied* (7). Pupils who chose the same alternative to the main question, but in combination with the intent "for fun" were categorised as *subjected to pranks* (1).

Hierarchical cluster analysis: social and physical victimisation in terms of bullying/degrading treatment

In order to examine how negative acts carried out with malicious intent (according to bullied pupils) are related to each other, we have used hierarchical cluster analysis. Cluster analysis resembles factor analysis in that the analytical method identifies structural characteristics of a collection of objects. Usually objects are made up of study units (e.g. individuals), but they may also consist of variables, which we used in this case. Before the cluster analyses, the categories in Table 2 above were recoded into binary variables. Pupils classified as bullied (7) and subjected to degrading treatment (6) were given the value 1, whilst pupils with other category values (0–5) were given the value 0.

Another similarity with factor analysis is that cluster analysis groups objects in clusters so that objects belonging to the same cluster are more similar than those belonging to other clusters (Hair et al., 2006). Similarities between each pair of objects ("*interobject similarity*") are assessed either by a distance measure or an association measure, or a correlation measure, which we used here. In contrast to factor analysis, an object (variable) can only belong to a cluster (in factor analysis a variable can be a part of many factors). For this reason, cluster analysis of variables can be compared to a discriminant form of factor analysis that identifies variables explaining the dimensions of the data (not the latent dimensions as in factor analysis).

In a hierarchical cluster analysis, each object (variable) initially forms its own cluster. The first thing that happens in the analysis is that the two most similar variables form a first cluster. At every stage thereafter, variables are combined as follows: a) two individual variables form a new cluster b) *or* a variable is combined into an already existing cluster c) two clusters form a new cluster.

In the first cluster analysis, we have included all nine variables (see Table 3).³¹ The analysis with nine clusters begins thus. Next the clusters were combined with those that were most similar.

In Table 3, which is read from right to left, the variable "pushed" is combined with "hit" in the first step (see column 8 cluster). The fact that these clusters are most similar means that with the chosen method, the strongest correlation occurs between these variables. In the next step (7 cluster), the variable "threatened" is combined with an already existing cluster consisting of "pushed–hit". Next "mocked" was combined with "other pupils have tried to get school friends to think badly about you" (6 clusters), followed by "ostracised", which was combined with the variable pair mentioned (cluster 5). In research into bullying, these newly formed clusters could be described in terms of *direct or physical bullying* (cf the light grey marked cells) and *indirect or relationship disturbing/social bullying* (cf. dark grey marked cells).

³¹ The cluster analyses are based on 7 809 pupils (out of 8 347) responding to the questionnaire in the first survey, which gives a valid percent measure of 93.6.

Table 3 Horizontal Icicle: all variables

Case	Number of clusters							
	1	2	3	4	5	6	7	8
6. Others have touched you in a sexual way	X	X	X	X	X	X	X	X
	X	X						
5. Teachers or other members of staff have said nasty and unpleasant things	X	X	X	X	X	X	X	X
	X							
8. Threatened with blows	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	
9. Hit, kicked by other pupils	X	X	X	X	X	X	X	X
	X	X	X	X	X	X	X	
7. pushed/held against my will	X	X	X	X	X	X	X	X
	X	X	X					
3. Other pupils have used the Internet etc to circulate malicious messages	X	X	X	X	X	X	X	X
	X	X	X	X				
4. Has been ostracised, excluded	X	X	X	X	X	X	X	X
	X	X	X	X	X			
2. Other pupils have tried to get school friends to think badly about me	X	X	X	X	X	X	X	X
	X	X	X	X	X			
1. Mocked, called nasty names	X	X	X	X	X	X	X	X

Cluster Method: Between-groups linkage; Measure: Phi 4-point correlation.

The three following steps involve the variables "other pupils have used the Internet, mobiles etc to spread malicious messages", "teachers or other school staff have said nasty and unpleasant things" and "others have touched you in a sexual way". The question of negative acts via e-mail was first included in an already existing cluster consisting of "mocked-think badly about-ostracised" (cf column 4 cluster), then in an already existing cluster consisting of "pushed-hit-threatened" (cf column 3 cluster). In the last step, "teacher question" and "sexual touching" forms a new and separate cluster. The fact that "the teacher question" and the question of "touching in a sexual way" forms its own cluster in the penultimate stage, supports the idea that the variables in question are qualitatively different compared to the other variables. This is also evident in Table 4 below, which in a simple and clear way shows which variables form a cluster given different cluster solutions.

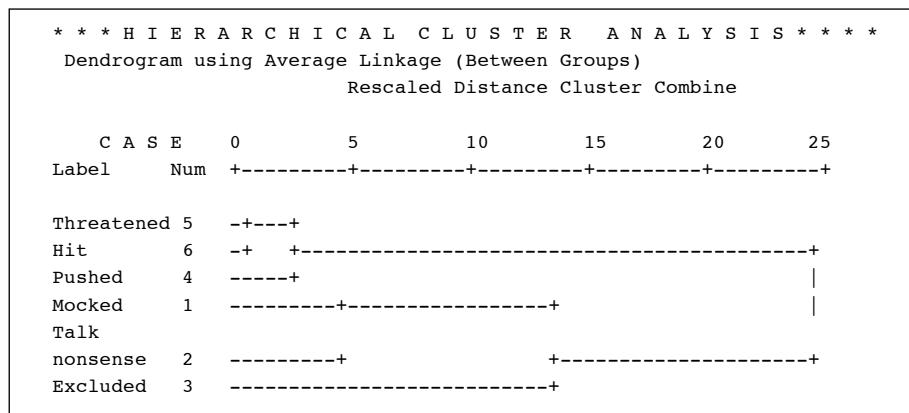
Table 4 Cluster Membership: all variables

Case	5 Clusters	4 Clusters	3 Clusters	2 Clusters
1. Mocked, called nasty names	1	1	1	1
2. Other pupils have tried to get school friends to think badly about you	1	1	1	1
3. Other pupils have used the Internet etc to circulate malicious messages	2	1	1	1
4. Has been ostracised, excluded	1	1	1	1
5. Teachers or other members of staff have said nasty and unpleasant things	3	2	2	2
6. Others have touched you in a sexual way	4	3	3	2
7. Pushed/held against my will	5	4	1	1
8. Threatened with blows	5	4	1	1
9. Hit, kicked by other pupils	5	4	1	1

Cluster Method: Between-groups linkage; Measure: Phi 4-point correlation.

In a two cluster solution, the "teacher question" and the question on "touched in a sexual way" together form a cluster (2) while other variables form a different one (1). When the number of clusters increases, the "teacher question" and "touched in a sexual way" each form their own cluster. In a five cluster solution, six of nine variables build two clear clusters (cf the variables belonging to clusters 1 and 5), whilst the other three form their own separate clusters. This indicates that the last three variables mentioned, i.e. "negative acts via e-mail", "teacher question" and "touched in a sexual way" should be excluded, and the analysis thereafter carried out again since the result is affected by the variables included in the analysis. After this had been implemented, we received the following result:³²

Table 5 Dendrogram: bullied/degrading treatment by other pupils.



The Dendrogram above can be read from left to right. It appears from the results that the variables "threatened" and "hit" are combined in the first stage (cf the first +, which in relation to the horizontal line indicates that these variables show the smallest distance/highest correlation). Thereafter a joint cluster (cluster 2) was formed between those "pushed" together with the variable pair "threatened-hit". In the following two steps, the cluster is formed consisting of the variables "mocked", "others have tried to get pupils to think badly of me by talking rubbish about me" and "ostracised" (cluster 1). In the last step, clusters 1 and 2 are combined into a joint cluster (which is uninteresting as the aim here is to identify different forms of bullying/degrading treatment). When the same cluster analysis is carried out with only boys and girls as respondents, the results are the same,³³ namely:

32 This cluster analysis was based on 7 948 pupils (out of 8 347) responding to the questionnaire in the first survey, and gives a valid figure of 95.2 percent.

33 As regards boys, the cluster analysis is based on 3 892 persons (of 4 143), which gives a valid percentage of 93.9 percent. In the first stage, "mocked" is combined with "others have tried to get pupils to dislike me by talking rubbish about me". In the second, "threatened" and "hit" are combined. In the third step, "ostracised" is combined with the variable pair "mocked-thinks badly about", and in a fourth "pushed" is combined with the variable pair "threatened-hit". As regards girls, the cluster analyses are based on 4 046 persons (of 4 187), which gives a valid percentage measure of 96.6 percent. In the first step, "pushed" was combined with "hit". In the second step, "threatened" is combined with the variable pair "pushed-hit". In the third "mocked" is combined with "others have tried to get pupils to dislike me by talking rubbish about me" and in a fourth "ostracised" is combined with the variable pair "mocked-think badly about".

- "mocked", "others have tried to get pupils to dislike me by talking rubbish about me" and "ostracised" forms a cluster.
- "pushed", "hit" and "threatened" forms another cluster.

The former describes a social and the latter a physical form of victimisation of a more serious type.

Factor analysis: social and physical victimisation in the form of negative acts

To examine how negative acts carried out on the basis of very different motives relate to each other, we have applied exploratory factor analysis. The data material for factor analysis was made up of nine variables with seven response categories, coded in accordance with the scheme in Table 1. The results of the factor analysis also give a good indication of the extent to which the division into social and physical forms of victimisation of more serious kinds also functions for a broader perspective of pupils' victimisation.

With the help of factor analysis, underlying patterns of a collection of variables that are correlated with each other can be identified. The analytical method, which assumes that correlations can be calculated for all the variables in the analysis, takes as its point of departure the existence of such an underlying structure (Hair et al., 2006). The factor analysis is formally based on Pearson's correlation coefficient r and thus requires interval or ratio data. In practice, however, data of an ordinal or ranking nature is often used. According to Bar-mark (2009), this functions excellently as the number of response categories is not too small (5 or more). The factor analysis that we carried out took as its starting point a correlation matrix based on Spearman's rho (correlation measure for data of an ordinal or ranking nature).³⁴

Against the background of the results of the cluster analysis above, it could be expected that the "teacher question" and the question about whether one had been "touched in a sexual way" shows a deviating pattern compared with the other questions.

Table 6 shows a first factor solution based on all types of victimisation and without any conditions concerning the number of factors (loadings under 0.40 are not shown).³⁵

Table 6 Rotating factor matrix (a): all variables

		Factors	
		1	2
VICTIMISATION:	has been mocked, called nasty names	.509	.443
VICTIMISATION:	other pupils have tried to get school friends to think badly about you	.654	
VICTIMISATION:	other pupils have used the Internet, mobile phones etc to circulate malicious messages	.464	
VICTIMISATION:	has been ostracised, excluded	.438	
VICTIMISATION:	teachers or other school staff have said nasty and unpleasant things		
VICTIMISATION:	others have touched you in a sexual way		
VICTIMISATION:	threatened with blows	.602	
VICTIMISATION:	pushed/held tight against my will	.647	
VICTIMISATION:	hit, kicked by other pupils	.637	

Extraction Method: Principal Axis Factoring. Rotation Method: Varimax with Kaiser Normalisation. a Rotation converged in 3 iterations.

³⁴ See <http://www.spss-tools.net/Syntax/FA/FAwithSpearmanCorrelation.txt>.

³⁵ Factor loading of +/-0.30 to +/-0.40 is acceptable (Hair et al. 2006); loadings around +/-0.50 is regarded as medium (Brace, Kemp & Snelgar, 2006) and if they exceed +/-0.70 as strong (Hair et al., 2006).

The factor solution above distinguishes two factors.³⁶ In order to get a clear indication of this, prior to the next factor analysis we made *conditional calculations* by specifying a two factor solution, at the same time as we excluded irrelevant variables in order to *improve the factors* as much as possible. This applies not only to "the teacher question" and the question about "being touched in a sexual way", which is not included in any factor (as these variables show factor loading under 0.40), but also the question about whether one "has been mocked", which loads into both the factors. The results are presented in Table 7 below (different tests indicate that the variable collection is appropriate for factor analysis).³⁷

Table 7 Rotated factor matrix exclusive of the questions "touched in a sexual way", "teachers said nasty/unpleasant things" and "been mocked, teased"

	Factors	
	1	2
VICTIMISATION: other pupils have tried to get school friends to think badly about you		.689
VICTIMISATION: other pupils have used the Internet, mobile phones etc to circulate malicious messages		.439
VICTIMISATION: has been ostracised, excluded		.445
VICTIMISATION: threatened with blows		.608
VICTIMISATION: pushed/held tight against my will		.639
VICTIMISATION: hit, kicked by other pupils		.658

Extraction Method: Principal Axis Factoring. Rotation Method: Varimax with Kaiser Normalisation. a Rotation converged in 3 iterations.

Factor loading gives the degree of correlation between different variables and factors. For example, the variable hit/kicked is assumed to be largely conditioned by factor 1. With the chosen calculation method, *common factor analysis*, it can be said that the factors reflect two underlying dimensions of victimisation in a broad sense:³⁸ one dimension covered by negative acts consisting of "others have tried to get pupils to dislike me by talking rubbish about me", "negative acts via electronic communications" and "ostracised", and another dimension which consists of "threatened with blows", "pushed" and "hit".

In the next factor analysis, we have chosen to include the same variables as in the two cluster solution – i.e. the variables "mocked", "others have tried to get pupils to think badly of me by talking nonsense about me" and "ostracised" and

36 The first factor analysis is based on 7 804 pupils (out of 8 347).

37 A test showing to what extent the variables are appropriate for use in a factor analysis is the Kaiser-Meyer-Olkin's measure of sampling adequacy (KMO). This test calculates the degree of variance that can be explained by the factors, and provides a warning if the variables do not correlate with each other to the extent necessary to identify the underlying dimensions. The test value should be above 0.50 (Hair et al.), alternatively above 0.60 (Brace, Kemp & Snelgar, 2006) for the variable collection to be accepted. In the current case the corresponding value is 0.806. Another means of getting guidance on whether the variables are suitable for factor analysis can be found in the matrix "anti-image correlation". The diagonal in the matrix gives the KMO values for each variable, indicating the degree to which the different variables can be explained by other variables in the analyses. According to Djurfeldt & Barmark (2009), values exceeding 0.70 are desirable. In the factor solution, the lowest value is 0.791, which indicates that the correlation between all variables is relatively high. The reliability tests using Cronbach's alpha for factor 1 is 0.761 and 0.625 for factor 2. The lowest threshold value is usually considered to be 0.70, but with exploratory research a value of 0.60 is acceptable (Hair et al., 2006).

38 Calculation of factors is only based on the proportion of the distribution which is *common*, on the proportion of the variance in the different variables that co-vary with one of the other variables. This "extraction method" is recommended where the aim is to obtain a picture of theoretically relevant phenomena (Hair et al. 2006; Djurfeldt & Barmark, 2009). A factor solution with *component factor analysis*, where the calculation is based on the *total* distribution of the variables, generates higher factor loadings (four above .700, and one above .800) and with the difference that "excluded" is loaded into both factors.

the variables "pushed", "threatened with blows" and "hit" – to compare the pattern of outcomes between victimisation in a narrow sense (bullying and degrading treatment) and in a broad sense (negative acts). The results are presented in Table 8 below.

Table 8 Rotated factor matrix exclusive of the questions "touched in a sexual way", "teachers said nasty/unpleasant things" and "negative acts via e-mail"

		Factors	
		1	2
VICTIMISATION:	has been mocked, called nasty names	.406	.601
VICTIMISATION:	other pupils have tried to get school friends to think badly about you	.524	
VICTIMISATION:	has been ostracised, excluded	.615	
VICTIMISATION:	threatened with blows	.571	
VICTIMISATION:	pushed/held tight against my will	.616	
VICTIMISATION:	hit, kicked by other pupils	.649	

Extraction Method: Principal Axis Factoring. Rotation Method: Varimax with Kaiser Normalisation. a Rotation converged in 3 iterations.

The variable "mocked" loads in both factors and is significantly higher in factor 2. The outcome is similar to the result in the two cluster solution. A factor formed from the variables "threatened", "pushed" and "hit" and one of the variables "mocked", and "others have tried to get pupils to dislike me by talking rubbish about me" and "ostracised".

The reliability test (Cronbach's alpha) shows a higher value when the variable "mocked" is combined with "other pupils have got school friends to think badly about you" and "ostracised" (0.717), compared with "negative acts by e-mail", "other pupils have got school friends to think badly about you" and "ostracised" (0.625). This is an argument for giving priority to the factor solution in Table 8 in preference to the outcome in Table 7. Another factor supporting this is that factor analysis based only on boys and girls gives a highly similar result.³⁹ Overall, it can be said that the factors in Table 8 reflect two underlying dimensions of victimisation in a broad sense (negative acts).

- One dimension covered by negative acts consisting of "mocked", "others have tried to get pupils to dislike me by talking rubbish about me" and "ostracised".
- Another dimension consists of "threatened", "pushed" and "hit".

Since both cluster and factor analysis indicate the same thing, it is reasonable to refer to a social and physical form of victimisation in a narrow sense (bullying and degrading treatment) and in a broader sense (negative acts).

³⁹ The factor analysis of girls is based on 3 985 pupils. Kaiser-Meyer-Olkin's measure of sampling adequacy (KMO) = 0.837. The reliability test with (Cronbach's alpha) shows a value of 0.748 for the variable combination "threatened", "pushed" and "hit" and a value of 0.706 for the variable combination "mocked", "other pupils have got school friends to think badly about you" and "ostracised". Similar to the results for the total material, "mocked" is loaded in both factors, however significantly higher in the factor formed by the last mentioned variables. The factor analysis of boys is based on 3 815 pupils. Kaiser-Meyer-Olkin's measure of sampling adequacy (KMO) = 0.860. The reliability test with (Cronbach's alpha) shows a value of 0.726 for the variable combination "mocked", "other pupils have got school friends to think badly about you" and "ostracised" and a value of 0.765 for the variable combination "threatened", "pushed" and "hit". The variables "threatened" and "pushed" are loaded into both factors even though higher in the factor formed by the last mentioned variables.

Different types of measures used in the work of combating bullying and degrading treatment

As already mentioned above, each object in a hierarchical cluster analysis forms its own cluster in the beginning. In the first step of the analysis the objects that are most like each other form the first cluster, in the second step the remaining objects that are most like each other build a second cluster etc. In this context the objects are formed from individual measures/components in the first step of the analysis, and from individual measures *or* by already existing clusters for the second step of the analysis. The initial cluster analysis of measures, which was based on 19 components divided into three categories (low, average and high), shows that "staff information" remains in a cluster of its own under relatively many analytical steps and is then combined with an already existing cluster later in the analysis. This indicates that "staff information" should be excluded before the analysis is carried out again. After this had been carried out, we obtained the following results.

Table 9 Outcome from the analysis of 18 measures/components

Stage	Cluster Combined		Coefficients	Stage Cluster First Appears		Next stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
1	16	17	351,000	0	0	11
2	8	14	1989.000	0	0	7
3	1	13	3974.500	0	0	11
4	10	12	5998.000	0	0	6
5	2	3	8071.000	0	0	15
6	7	10	10880.833	0	4	13
7	5	8	13703.500	0	2	14
8	9	18	16742.500	0	0	10
9	11	15	20270.000	0	0	14
10	6	9	24209.667	0	8	16
11	1	16	28261.417	3	1	12
12	1	4	32645.167	11	0	13
13	1	7	37643.083	12	6	15
14	5	11	43150.917	7	9	17
15	1	2	50828.067	13	5	16
16	1	6	62820.154	15	10	17
17	1	5	81431.500	16	14	0

The figures under the columns Cluster Combined/Cluster 1 Cluster 2 give the components as follows:

1: Follow-up/evaluation, 2: Relationship-enhancing measures teacher-pupil, 3: Relationship-enhancing measures pupil-pupil, 4: Special lessons, 5: Pupils as players, 6: Pupils' active participation in prevention, 7: Disciplinary strategies, 8: School rules, 9: School assemblies about bullying, 10: Training material, 11: Staff training (bullying/degrading treatment), 12: Parent information/training, 13: Break monitoring system, 14: Cooperative teams, 15: Case documentation, 16: Dealing with bullies, 17: Dealing with victims, 18: Mediation.

The cluster analysis of the components uses *Ward's cluster method*. Similarities between each pair of objects is assessed by means of a distance measure *Squared Euclidean distance*. *Ward's method* maximises the distance between clusters ("between group distance") and minimises the distance within a cluster ("within group distance"). Each step in the cluster analysis starts with a calculation of the distance between all pairs of objects for all study units. The pair of objects showing the smallest distance forms the first cluster. After this, the distance was calculated once again between each pair of objects (where an object is now made up from the first cluster formed) and once again forms a cluster from the

objects with the smallest distances. The procedure continues until all objects form a common cluster.

Since *Ward's method* calculates data in accordance with a procedure resembling variance analysis, it can be said that the method is based on minimising the squared sum of the distance within the cluster, or the error sum of squares, ESS. In each step of the analysis, objects which make the smallest contribution to the increase in the total sum of squares within cluster-distance are combined (total sum of squares, TSS). To assess how large a proportion of the error variance that can be explained by a given cluster solution (explained error sum of squares, EESS), the following formula was used: $TSS-ESS/TSS$ (total squared sum minus error variance divided by the total sum of the squares). The objects which were combined in the first step of the analysis are thus those showing the lowest error variance (ESS), which is equivalent to the highest explained error sum of squares (EESS).

In the initial steps of the cluster analysis "dealing with bullies" and "dealing with victims" form a first cluster (cf step 1 in table 9), which means that the measures most resemble each other out of all possible combinations of measures (of 39 schools, 35 have been classified in the same way as regards the measures "dealing with bullies" and "dealing with victims", i.e. as low-low, average-average or high-high). The coefficient in Table 9, "the agglomeration coefficient", describes the squared sum of the within cluster-distance at each step of the analysis. In the first step, the value is 351. In relation to the total squared sum of within cluster-distance, this means that heterogeneity in a 17 cluster solution is very small, 0.4 percent ($351/81\ 431.5$). Heterogeneity, which indicates how different objects are in a cluster, is on the other hand maximal in the last step of the analysis where all objects form a common cluster.

The aim of using cluster analysis in this context is to reduce data, to differentiate clusters that are more similar than dissimilar to each other, and can thus be said to reflect different dimensions or measure combinations. It is also important before further analysis, as combination measures are also the foundation for differentiating groups of schools using similar working approaches to combating bullying and degrading treatment. Given this background, the question of what number of clusters best describe the dimensionality of the data is not unimportant. A disadvantage of cluster analysis is that there are no general rules, such as different significance tests for choosing the number of clusters. To determine an optimal number of clusters, we chose to base this on an explained variance in errors of 2/3. The cluster solution coming closest to this criteria is in step 11, which corresponds to a 7 cluster solution where the variance in explained errors amounts to 65.3% ($((81\ 431.5-28\ 261.417)/81\ 431.5)$). With a 7 cluster solution, we obtain the following results. (Table 10).

The outcome from a seven cluster solution gives a pattern that can be interpreted consisting of the following clusters:

- *Cluster 1:* C1: Follow-up/evaluation, C14: Break monitoring system, C17: Dealing with bullies, C18: Dealing with bullies
- *Cluster 2:* C2: Relationship-enhancing measures teacher-pupil, C3: Relationship-enhancing measures pupil-pupil
- *Cluster 3:* C4: Special lessons
- *Cluster 4:* C8: School rules, C15: Cooperative teams, C5: Pupils as players
- *Cluster 5:* C9: School assembly about bullying, C19: Mediation, C6: Pupils' active participation

Table 10 Results from a nine cluster solution of measures/components

Case	7 Clusters
Follow-up/evaluation	1
Relationship-enhancing measures teacher-pupil	2
Relationship-enhancing measures pupil-pupil	2
Special lessons	3
Pupils as players	4
Pupils' active participation in prevention	5
Disciplinary strategies	6
School rules	4
School assemblies about bullying	5
Training material	6
Staff training (bullying/degrading treatment)	7
Parent information/training	6
Break monitoring system	1
Cooperative teams	4
Case documentation	7
Dealing with bullies	1
Dealing with victims	1
Mediation	5

- *Cluster 6:* C10: Training material, C13: Parent information, C7: Disciplinary strategies
- *Cluster 7:* C12: Staff training about bullying/degrading treatment, C16: Case documentation

"Special lessons" forms its own cluster not just in this seven cluster solution, but also in most cluster solutions (in all cluster solutions with more than six clusters). With a six cluster solution "special lessons" are combined with a cluster created earlier consisting of "follow-up/evaluation", "break monitoring system", "dealing with bullies" and "dealing with victims" (cf step 12 in Table 9). One argument in favour of prioritising a 7 cluster solution over a 6 cluster solution is that the nature of the last mentioned measures, which form cluster 1, are of a detection/remedial type. This differs from "special" lessons which should rather be regarded as an example of preventative measures. Based on the results, we have constructed 7 additive indices which we represent in terms of component clusters.

Groups of schools with similar working approaches for combating bullying/degrading treatment

The material for identifying groups of schools (school clusters) with similar methods for combating bullying/degrading treatment is based on different combinations of measures (component clusters), from which we constructed seven indices (see above). In order to avoid bias in the cluster analyses of schools, we have standardised these indices (z score) with a mean value of 0 and a standard deviation of 1. Table 11 below describes the outcome from the cluster analysis based on all participating schools.

When choosing the number of clusters, we chose as above to base this on an explained variance in errors of 2/3. The cluster solution coming closest to this criteria is in step 30, which corresponds to a 9 cluster solution where the variance in explained errors amounts to 65.2% ($(9 \cdot 266 - 92.433)/266$). With a 9 cluster solution, we obtained the following results. (Table 12).

Table 11 Outcome from the step analyses of 39 schools

Stage	Cluster Combined			Coefficients	Stage Cluster First Appears		Next stage
	Cluster 1	Cluster 2	Coefficients		Cluster 1	Cluster 2	
1	13	27	.190	0	0	9	
2	14	23	.822	0	0	19	
3	37	38	1.470	0	0	16	
4	30	31	2.119	0	0	12	
5	10	17	2.911	0	0	20	
6	4	9	3.723	0	0	14	
7	6	7	4.535	0	0	15	
8	24	33	5.749	0	0	17	
9	13	15	7.163	1	0	26	
10	12	28	8.713	0	0	21	
11	19	20	10.374	0	0	29	
12	11	30	12.121	0	4	22	
13	32	39	14.287	0	0	23	
14	1	4	16.471	0	6	28	
15	2	6	18.676	0	7	27	
16	16	37	21.231	0	3	20	
17	21	24	24.109	0	8	29	
18	22	29	27.088	0	0	22	
19	14	25	30.305	2	0	34	
20	10	16	33.821	5	16	24	
21	8	12	37.862	0	10	26	
22	11	22	42.226	12	18	30	
23	3	32	46.810	0	13	32	
24	10	26	51.651	20	0	34	
25	18	34	56.548	0	0	28	
26	8	13	62.095	21	9	33	
27	2	36	68.347	15	0	31	
28	1	18	74.930	14	25	31	
29	19	21	83.358	11	17	32	
30	5	11	92.433	0	22	36	
31	1	2	102.962	28	27	35	
32	3	19	113.851	23	29	37	
33	8	35	125.533	26	0	35	
34	10	14	139.569	24	19	36	
35	1	8	154.623	31	33	37	
36	5	10	179.639	30	34	38	
37	1	3	217.920	35	32	38	
38	1	5	266.000	37	36	0	

Table 12 Results from a nine cluster solution of schools

Case	9 Clusters
1	1
2	2
3	3
4	1
5	4
6	2
7	2
8	5
9	1
10	6
11	4
12	5
13	5
14	7
15	5
16	6
17	6
18	1
19	8
20	8
21	8
22	4
23	7
24	8
25	7
26	6
27	5
28	5
29	4
30	4
31	4
32	3
33	8
34	1
35	9
36	2
37	6
38	6
39	3

The following schools (school number) form clusters:

- Cluster 1 = 1, 4, 9, 18, 34
- Cluster 2 = 2, 6, 7, 36
- Cluster 3 = 3, 32, 39
- Cluster 4 = 5, 11, 22, 29, 30, 31
- Cluster 5 = 8, 12, 13, 15, 27, 28
- Cluster 6 = 10, 16, 17, 26, 37, 38
- Cluster 7 = 14, 23, 25
- Cluster 8 = 19, 20, 21, 24, 33
- Cluster 9 = 35

ATTACHMENT I

Further information

Data collection method – qualitative data

Interviewers' implementation round 1

One and a half hours was set aside for each interview. Most interviews with school leaders, teachers and staff with special responsibility for the school's anti-bullying work required this amount of time. Pupil interviews were sometimes carried out over a shorter period. At most schools, the visit was well prepared with a timetable for interviews, premises for interviews and participants who were prepared for when and where the interviews would take place. At some schools the visit was less well prepared as information about time and place for the interviews had not been received by all participants. Some schools we had to revisit as not all interviews could be carried out because of a lack of preparation or unforeseen events during the visit.

All interviews were recorded. The transcriptions were done by a person outside the research team. This was done very thoroughly and as carefully as possible, including those parts of the interview where the participants spoke at cross-purposes. Each interview transcript covers between 10 and 30 pages.

Interviewers' implementation round 2

The interviews were carried out in essentially the same way as in the first interview round. The following differences are worth noting: The time allocated for each interview was on this occasion one hour. Two of the interviewers chose to carry out their school visits together and divide the interview groups between them. As it was important to have rapid access to the interview material, the transcriptions were carried out this time by several persons outside the research team.

Processing and analysis of the interview material

Processing and analysis of the interview material was in principle largely the same in the first round as in the second round. A case description was created for each of the schools. These descriptions contain a presentation of the interview groups and school infrastructure with possible impact on the school's work on combating bullying and degrading treatment. In round two, changes were observed in the interviewees' picture of the school in relation to the components.

Ethical considerations

The contact persons at the different schools were given the task of making sure that the participation of adults was entirely voluntary. As regards the pupils, the contact person had the task of asking a number of pupils about their possible participation. The interviewers received the addresses of the pupils' guardians/parents from the contact person. It was then the interviewers' responsibility to

inform the guardians/parents by letter about the aim of the study and request passive consent⁴⁰ that their child could participate in the interview. All interviews started with a brief description of the purpose of the study, that participation was voluntary and that no names, of either the schools or the persons interviewed would be used in any reports.

⁴⁰ If the pupils (and/or their guardians) did not wish to participate, this was communicated to the school's contact person or the interviewer.

ATTACHMENT 2

Interview guide round 1

Interview guide's contents:

- School leader "new programme schools" p. 100
- School leader "old programme schools" p. 102
- School leader comparison schools p. 104
- Teachers "new programme schools" p. 106
- Teachers comparison schools p. 110
- School health staff – Pupil welfare team –anti-bullying team etc. p. 112
- Pupils p. 114

School leaders interviewed at "new programme schools" 2008

Areas and issues	Aim	Comments
A. Generally about the school		
How long have you been working as the headteacher		
Total		
At this school		
Describe how the school is organised	How flexible is the organisation? What influence do the different stakeholders in the school have?	Grouping system System for distribution of power and responsibility
Teacher teams		
Pupil groupings		
Cooperation partners		
In which groups are decisions made about what (possible focus on this programme)		
How would you describe the "climate" at this school		
Can you give examples of norms/rules of how people behave towards each other in the school (as adult, as pupil)	What norms are there at the school on behaviour towards each other?	The norm system
What is permitted?	Are these linked to a rewards and sanctions system encouraging the achievement of desired targets?	
What is prohibited?	Are the boundaries for unacceptable behaviour defined?	
How do you know this?	Are pupils and staff conscious of the norms?	
How are the rules made?	Can any unconscious norms be detected?	
How should you be to be regarded as a good school leader at this school? Changes?		
How should you be as a teacher to be liked at the school? Changes?		
How should you be as a pupil to be liked at this school?		
B. School's experiences of bullying		
Describe what you think about when you hear the word "bullying"	In what way is bullying defined at the school? In relation to degrading treatment?	Compare with the definition of bullying we are working with in this evaluation
Degrading treatment (kb)		
Differences between bullying and degrading treatment		
Estimate how many pupils at your school are subjected to bullying – by other pupils, by teachers		
What types of events and conflicts do you see regularly, and when do you think school leaders/adults should intervene		
Describe how you are working today on combating bullying and degrading treatment at the school	How would you describe the school's policy for preventing bullying and degrading treatment? Policy for presence of adults	Compare this description with a description of the work in relation to more concrete cases described in the next question
Describe how you work(ed) earlier/today		

Areas and issues	Aim	Comments
<p>Describe your experiences of concrete bullying incidents at this school</p> <p>How, where, and when have earlier incidents taken place?</p> <p>What bullying incidents have you been involved with?</p> <p>How did you get to know that bullying occurred?</p> <p>What measures were taken (work teams, school leaders, parents, pupils)?</p> <p>What were the consequences?</p> <p>If you suspect bullying, what do you do? (has it happened, what measures were taken?)</p> <p>If someone (pupil, parent, teacher) gets in touch with you and draws your attention to a possible bullying incident (someone is being bullied/someone is bullying), what do you do? (has it happened, what measures were taken?)</p> <p>If someone (pupil, parent, teacher) tells you a teacher has subjected a pupil to degrading treatment – what do you do? (has it happened, what measures were taken?)</p>	<p>In what way is the school's anti-bullying policy described?</p> <p>How would you describe the school's earlier experiences of combating bullying?</p> <p>The questions are intended as a description of something that has happened, but could also be hypothetical – an awareness of what one could consider doing if something new happens</p> <p>Define</p> <p>Prevent</p> <p>Remedy</p>	<p>Compare with the programme that is being introduced</p>
C. Programme work		
<p>Describe the background to the decision to introduce programme X</p> <p>Has a survey been carried out of the school's "climate"/teachers' and pupils' well-being in the school's psychosocial environment?</p> <p>How was this survey carried out?</p> <p>What did this survey show?</p> <p>In what way have the results from the survey influenced the decision to introduce the programme?</p> <p>School leaders' own roles in decision making process</p> <p>Which programme did you choose?</p> <p>Why this particular programme?</p> <p>In relation to other programmes?</p> <p>How do you view this programme in relation to the curriculum?</p>	<p>Is there a mechanism for documenting shortcomings and remedying them?</p> <p>Is there any kind of evaluation system?</p> <p>How well can the programme be considered to have been anchored?</p> <p>The programme in relation to a holistic view/vision?</p>	<p>Quality assurance system</p> <p>Communication system</p> <p>Decision system</p> <p>System for distribution of power and responsibility</p> <p>Norm system</p>
<p>Describe what decisions the introduction of the programme was based on</p> <p>Who has been involved in the decision-making? (municipal school management, local school management, teachers, other school staff, pupils, parents)</p> <p>Who has not been involved?</p> <p>To what extent does X believe he/she has been involved in the decision?</p> <p>Who/which groups are considered to have had the greatest influence on the decision (formally, informally)?</p> <p>Did you all agree or was there resistance?</p>	<p>In what way was the introduction of the programme anchored?</p> <p>Have different groups exercised real influence?</p> <p>Is the decision closely related to the group responsible for its implementation?</p> <p>Legitimacy</p> <p>Confidence</p>	<p>Decision system</p> <p>Communication system</p> <p>System for distribution of power and responsibility</p> <p>Norm system</p>
<p>Describe how you worked to introduce the programme</p> <p>What do you regard as unique to this particular programme?</p> <p>What do you expect should happen?</p> <p>What should the results be?</p> <p>How do you think you will be able to achieve this?</p> <p>Have you started the project in this programme?</p> <p>Who will be working with the programme – who is responsible for what?</p> <p>How was the implementation carried out – continuously or special measures?</p> <p>Special resources (time, material, money)?</p> <p>Work to introduce the programme?</p> <p>Training in relation to the programme?</p> <p>How so far do you assess the effectiveness of the programme in terms of defining, remedying and preventing bullying?</p> <p>Are there already differences in how you are working to combat bullying compared with earlier?</p>	<p>Is the work carried out with the programme disseminated?</p> <p>What kind of influence do the pupils have?</p> <p>Awareness of the programme?</p> <p>How clear or unclear are the goal descriptions?</p> <p>What are the main ingredients of the goal descriptions, e.g. co-operation between teachers, teacher/pupil relations, teaching patterns/working approaches?</p> <p>Capacity for improvement – are you thinking or planning in terms of a process, activities over time, what are you planning to do first, and then later?</p>	<p>Power and responsibility system</p> <p>Adherence to the programme</p> <p>Legitimacy</p>
<p>Describe how this programme fits in with your earlier anti-bullying work</p> <p>How does your work with this programme fit in with your earlier work on bullying?</p> <p>Can you already see that this programme has certain strengths and weaknesses?</p> <p>What will you do now that you couldn't do before?</p>	<p>Does X view the introduction of the programme as part of a process?</p>	<p>Capacity for improvement</p>

Interview guide school leaders at "old programme schools" 2008

Areas and issues	Aim	Comments
A. Generally about the school		
How long have you been working as the headteacher		
Total		
At this school		
Describe how the school is organised		
Teacher teams	How flexible is the organisation?	Grouping system
Pupil groupings	What influence do the different stakeholders in the school have?	System for distribution of power and responsibility
Cooperation partners		
In which groups are decisions made about organising the work on combating bullying and degrading treatment?		
How would you describe the "climate" at this school		
Can you give examples of norms/rules of how people behave towards each other in the school (as adult, as pupil)?	What norms are there at the school on behaviour towards each other?	The norm system
What is permitted?	Are these linked to a rewards and sanctions system encouraging the achievement of desired targets?	
What is prohibited?	Are the boundaries for unacceptable behaviour defined?	
How do you know this?	Are pupils and staff conscious of the norms?	
How are the rules made?		
How should you be to be liked as a school leader at this school?		
Changes?	Can any unconscious norms be detected?	
How should you be as a teacher to be liked at the school?		
Changes?		
How should you be as a pupil to be liked at this school? Changes?		
B. School's experiences of bullying		
Describe what you think about when you hear the word "bullying"		
Degrading treatment?	In what way is bullying defined at the school?	Compare with the definition of bullying we are working with in this evaluation
Differences between bullying and degrading treatment?	In relation to degrading treatment?	
Estimate how many pupils at your school are subjected to bullying – by other pupils, by teachers?		
What types of events and conflicts do you see regularly, and when do you think school leaders or teachers should intervene?		
What types of events do you see regularly, and when do you think that adults should intervene?		
Describe how you are working today on combating bullying and degrading treatment at the school		
	How would you describe the school's policy for preventing bullying and degrading treatment?	Compare this description with a description of the work in relation to more concrete cases described in the next question
	Policy for presence of adults?	
Describe your experiences of concrete bullying incidents at this school		
How, where, and when have earlier incidents taken place?	In what way is the school's anti-bullying policy described?	Compare with the programme they say they are working with
What bullying incidents have you been involved with?	How would you describe the school's earlier experiences of combating bullying?	Adherence to the programme
How did you get to know that bullying occurred?		
What measures were taken (work teams, school leaders, parents, pupils)?	The questions are intended as a description of something that has happened, but could also be hypothetical – an awareness of what one could consider doing if something new happens	
What were the consequences?		
If you suspect bullying, what do you do? (has it happened, what measures were taken?)		
If someone (pupil, parent, teacher) gets in touch with you and draws your attention to a possible bullying incident (someone is being bullied/someone is bullying), what do you do? (has it happened, what measures were taken?)		
If someone (pupil, parent, teacher) tells you a teacher has subjected a pupil to degrading treatment – what do you do? (has it happened, what measures were taken?)		

Areas and issues	Aim	Comments
C. Programme work		
Describe the background to your decision to introduce programme X a few years ago	Is there a mechanism for documenting shortcomings and remedying them? Is there any kind of evaluation system? How well can the programme be considered to have been anchored? The programme in relation to a holistic view/vision?	Quality assurance system Communication system Decision system System for distribution of power and responsibility Norm system
Has a survey been carried out of the school's "climate"/teachers' and pupils' well-being at the school/the school's psychosocial environment when the programme was introduced? Is there now a mapping? How was this survey carried out? What did this survey show? In what way did the results from the mapping influence the decision to introduce the programme? School leader's role in the decision-making process? Which programme did you choose? Why this particular programme? In relation to other programmes? How do you view this programme in relation to the curriculum?		
Describe what decisions the introduction of a programme was based on	In what way was the introduction of the programme anchored? Have different groups exercised real influence? Is the decision closely related to the group responsible for its implementation? Define Remedy Prevent	Decision system Communication system System for distribution of power and responsibility Norm system
Who was involved in the decision-making? (municipal school management, local school management, teachers, other school staff, pupils, parents) Who did not participate? To what extent does X believe he/she has been involved in the decision? Who/which groups are considered to have had the greatest influence on the decision (formally, informally)? Did you all agree or was there resistance?		
Describe how you are working with the programme	Is the work carried out with the programme disseminated? What kind of influence do the pupils have? Awareness of the programme? How clear or unclear are the goal descriptions? What are the main ingredients of the goal descriptions, e.g. co-operation between teachers, teacher/pupil relations, teaching patterns/working approaches? Capacity for improvement – are you thinking or planning in terms of a process, activities over time, what are you planning to do first, and then later?	Power and responsibility system Adherence to the programme Legitimacy
If a school leader came from another school to you and wanted advice on their work for combating bullying, and wanted to introduce this programme, what would you say?	Have the school's experiences been systematised?	Capacity for improvement
Positively Difficulties Results Combined with other work Have you thought about changing?		

Interview guide school leaders in "comparison schools" 2008

Areas and issues	Aim	Comments
A. Generally about the school		
How long have you been working as the headteacher		
Total		
At this school		
Describe how the school is organised		
Teacher teams	How flexible is the organisation?	Grouping system
Pupil groupings	What influence do the different stakeholders in the school have?	System for distribution of power and responsibility
Cooperation partners		
In what groups are decisions made about what? (possibly focusing on work combating bullying)		
How would you describe the "climate" at this school?		
Can you give examples of norms/rules of how people behave towards each other in the school (as adult, as pupil)?	What norms are there at the school on behaviour towards each other?	The norm system
What is permitted?	Are these linked to a rewards and sanctions system encouraging the achievement of desired targets?	
What is prohibited?	Are the boundaries for unacceptable behaviour defined?	
How do you know this?	Are pupils and staff conscious of the norms?	
How are the rules made?		
How should you be to be liked as a school leader at this school?		
Changes?	Can any unconscious norms be detected?	
How should you be as a teacher to be liked at the school?		
Changes?		
How should you be as a pupil to be liked at this school? Changes?		
B. School's experiences of bullying		
Describe what you think about when you hear the word "bullying"		
Degrading treatment?	In what way is bullying defined at the school?	Compare with the definition of bullying we are working with in this evaluation
Differences between bullying and degrading treatment?	In relation to degrading treatment?	
Estimate how many pupils at your school are subjected to bullying – by other pupils, by teachers?		
What types of events and conflicts do you see regularly, and when do you think school leaders or teachers should intervene?		
Describe how you work to combat bullying and degrading treatment at the school		
	How would you describe the school's policy for preventing bullying and degrading treatment?	Compare this description with a description of the work in relation to more concrete cases described in the next question
	Policy for presence of adults?	
Describe your experiences of concrete bullying incidents at this school		
How, where, and when have earlier incidents taken place?	In what way is the school's anti-bullying policy described?	Compare with the programme they say they are working with
What bullying incidents have you been involved with?	How would you describe the school's earlier experiences of combating bullying?	Adherence to the programme
How did you get to know that bullying occurred?	The questions are intended as a description of something that has happened, but could also be hypothetical – an awareness of what one could consider doing if something new happens	
What measures were taken (work teams, school leaders, parents, pupils)	Define	
What were the consequences?	Remedy	
If you suspect bullying, what do you do?	Prevent	
If someone (pupil, parent, teacher) gets in touch with you and draws your attention to a possible bullying incident (someone is being bullied/someone is bullying), what do you do?		
If someone (pupil, parent, teacher) tells you a teacher has subjected a pupil to degrading treatment – what do you do? (has it happened, what measures were taken?)		

Areas and issues	Aim	Comments
C. Programme work		
What you would say if you received an invitation to present your anti-bullying work	Is there a mechanism for documenting shortcomings and remedying them?	Quality assurance system
When was this way of working introduced?	Is there any kind of evaluation system?	Communication system
Has a survey been carried out of the school's "climate"/teachers' and pupils well-being at the school/ the school's psychosocial environment?	How well anchored was the work?	Decision system
In what way do the results of this/these affect your work?	Work in relation to a holistic view/vision?	System for distribution of power and responsibility
School leader's role	Is the work on combating bullying disseminated?	Norm system
What do you regard as specific to your anti-bullying work?	What kind of influence do the pupils have?	Adherence to the programme
What results do you think you see?	Awareness of the work?	Legitimacy
How did you reach this point?	How clear or unclear are the goal descriptions?	Capacity for improvement
How did you get started?	What are the main ingredients of the goal descriptions, e.g. co-operation between teachers, teacher/pupil relations, teaching patterns/working approaches?	
Who is working on defining/remedying and preventing bullying and degrading treatment – who takes responsibility for what?	Capacity for improvement – are you thinking or planning in terms of a process, activities over time, what are you planning to do first, and then later?	
How did the implementation of your work take place?	Have the school's experiences been systematised?	
Training in relation to anti-bullying work?		
Positively?		
Difficulties?		
Results?		
Is it combined with other work?		
Contact and inspiration from established programmes?		
Describe what decisions your work on combating bullying is based on	How has the decision on working in this way been anchored?	Decision system
Who has been involved in the decision-making – (municipal school management, local school management, teachers, other school staff, pupils and parents)?	Have different groups exercised real influence?	Communication system
Who has not been involved?	Is the decision closely related to the group responsible for its implementation?	System for distribution of power and responsibility
To what extent does X believe he/she has been involved in the decision to work in this way?		Norm system
Who/which groups are considered to have had the greatest influence on choice of working methods (formally, informally)?		

Interview guide teachers at "new programme schools" 2008

Areas and issues	Aim	Comments
A. Generally about the school		
Tasks		
Subject		
Pupil groups		
Teachers' resources		
Number of years a teacher		
How many years at this school		
Describe how the school is organised	How flexible is the organisation? What influence do the different stakeholders in the school have?	Grouping system System for distribution of power and responsibility
Who are your closest cooperation partners? In which groups are decisions made about what?		
How would you describe the "climate" at this school?	What norms are there at the school on behaviour towards each other? Are these linked to a rewards and sanctions system encouraging the achievement of desired targets? Are the boundaries for unacceptable behaviour defined? Are pupils and staff conscious of the norms? Can any unconscious norms be detected?	The norm system
Can you give examples of norms/rules applicable to how people behave towards each other in this school? What is permitted? What is prohibited? How do you know this? How are the rules made? How should you be as a teacher to be liked at the school? Changes? How should you be to be liked as a school leader at this school? Changes? How should you be as a pupil to be liked at this school?		
B. School's experiences of bullying		
Describe what you think about when you hear the word "bullying"	In what way is bullying defined at the school? In relation to degrading treatment?	Compare with the definition of bullying we are working with in this evaluation
Degrading treatment? Differences between bullying and degrading treatment? Estimate how many pupils at your school are subjected to bullying – by other pupils, by teachers? What types of events do you see regularly, and when do you think that adults should intervene? What does it mean to treat somebody in a degrading way? What does it mean to be bullied? Estimate how many pupils at your school are subjected to bullying – by other pupils, by teachers		
Describe how you are working today on combating bullying and degrading treatment at the school	How would you describe the school's policy for preventing bullying and degrading treatment? Policy for presence of adults?	Compare this description with a description of the work in relation to more concrete cases described in the next question
Describe your experiences of concrete bullying incidents at this school	How is the school's anti-bullying policy described? How would you describe the school's earlier experiences of combating bullying? The questions are intended as a description of something that has happened, but could also be hypothetical – an awareness of what one could consider doing if something new happens Define Remedy Prevent	Compare with the programme that is being introduced
How, where, and when have earlier incidents taken place? What bullying incidents have you been involved with? How did you get to know that bullying occurred? What measures were taken (work teams, school leaders, parents, pupils)? What were the consequences? If you suspect bullying, what do you do? If someone (pupil, parent, other teacher) gets in touch with you and draws your attention to a possible bullying incident, what do you do? (Has it happened?) If a parent/pupil gets in touch with you and tells you that another teacher has subjected a pupil to degrading treatment, what do you do? (Has it happened?)		

Areas and issues	Aim	Comments
C. Programme work		
Describe the background to the decision to introduce programme X	Is there a mechanism for documenting shortcomings and remedying them?	Quality assurance system
Has a survey been carried out of the school's "climate"/pupils' and teachers' well-being at the school/ the school's psychosocial environment?	Is there any kind of evaluation system?	Communication system
How was this survey carried out?	How well can the programme be considered to have been anchored?	Decision system
What did this survey show?	The programme in relation to a holistic view/vision?	System for distribution of power and responsibility
In what way have the results from the survey influenced the decision to introduce the programme?	Legitimacy	Norm system
Teachers' role in decision processes	Confidence	
Which programme did you choose?		
Why this particular programme?		
In relation to other programmes?		
How do you view this programme in relation to the curriculum?		
Describe what decisions the introduction of the programme was based on	In what way was the introduction of the programme anchored?	Decision system
Who has been involved in the decision-making? (municipal school management, local school management, teachers, other school staff, pupils, parents)	Have different groups exercised real influence?	Communication system
Who has not been involved?	Is the decision closely related to the group responsible for its implementation?	System for distribution of power and responsibility
To what extent does X believe he/she has been involved in the decision?		Norm system
Who/which groups are considered to have had the greatest influence on the decision (formally, informally)?		
How do you regard this?		
Your attitude to the programme. Did you all agree or was there resistance?		
Describe how you worked to introduce the programme	Is the work carried out with the programme disseminated?	Power and responsibility system
What do you regard as unique to this particular programme?	What kind of influence do the pupils have?	Adherence to the programme
What do you expect should happen?	Awareness of the programme?	Legitimacy
What should the results be?	How clear or unclear are the goal descriptions?	
How do you think you will be able to achieve this?	What are the main ingredients of the goal descriptions, e.g. co-operation between teachers, teacher/pupil relations, teaching patterns/working approaches?	
Have you started the project in this programme?	Capacity for improvement – are you thinking or planning in terms of a process, activities over time, what are you planning to do first, and then later?	
Teachers' input?		
Who will be working with the programme – who is responsible for what?		
How was the implementation carried out – continuously or special measures?		
Special resources (time, material, money...)?		
Training in relation to the programme?		
How do you assess so far the effectiveness of the programme – strengths and weaknesses?		
Pupils' reactions?		
Describe how this programme fits in with your earlier anti-bullying work	Does X view the introduction of the programme as part of a process?	Capacity for improvement
How does your work with this programme fit in with your earlier work on bullying?		
Are there any differences in how you are currently working against bullying, compared with earlier?		

Interview guide teachers at "old programme schools" 2008

Areas and issues	Aim	Comments
A. Generally about the school		
Tasks		
Subject		
Pupil groups		
Teachers' resources		
Number of years a teacher		
How many years at this school		
Describe how the school is organised	How flexible is the organisation? What influence do the different stakeholders in the school have?	Grouping system System for distribution of power and responsibility
Who are your closest cooperation partners? In which groups are decisions taken about what (possible focus on anti-bullying work)?		
How would you describe the "climate" at this school?	What norms are there at the school on behaviour towards each other? Are these linked to a rewards and sanctions system encouraging the achievement of desired targets? Are the boundaries for unacceptable behaviour defined? Are pupils and staff conscious of the norms? Can any unconscious norms be detected?	The norm system
Can you give examples of norms/rules applicable to how people behave towards each other in this school? What is permitted? What is prohibited? How do you know this? How are the rules made? How should you be to be liked, a good teacher at this school? Changes? How should you be to be liked as a school leader at this school? Changes? How should you be as a pupil to be liked at this school? Changes?		
B. School's experiences of bullying		
Describe what you think about when you hear the word "bullying" Degrading treatment? Differences between bullying and degrading treatment?	In what way is bullying defined at the school? In relation to degrading treatment?	Compare with the definition of bullying we are working with in this evaluation
Estimate how many pupils at your school are subjected to bullying – by other pupils, by teachers? What types of events and conflicts do you see regularly, and when do you think that teachers or school leaders should intervene?		
Describe how you are working today on combating bullying and degrading treatment at the school Break system	How would you describe the school's policy for preventing bullying and degrading treatment? Policy for presence of adults?	Compare this description with a description of the work in relation to more concrete cases described in the next question
Describe your experiences of concrete bullying incidents at this school How, where, and when have earlier incidents taken place? What bullying incidents have you been involved with? How did you get to know that bullying occurred? What measures were taken (work teams, school leaders, parents, pupils)? What were the consequences? If you suspect bullying, what do you do? If someone (pupil, parent, other teacher) gets in touch with you and draws your attention to a possible bullying incident, what do you do? (Has it happened?) If a parent/pupil gets in touch with you and tells you that another teacher has subjected a pupil to degrading treatment, what do you do? (Has it happened?)	How is the school's anti-bullying policy described? How would you describe the school's earlier experiences of combating bullying? The questions are intended as a description of something that has happened, but could also be hypothetical – an awareness of what one could consider doing if something new happens Define Remedy Prevent	Compare with the programme they say they are working with Adherence to the programme

Areas and issues	Aim	Comments
C. Programme work		
Retrospective: Describe the background to your decision to introduce programme X a few years ago Has a survey been carried out of the school's "climate"/teachers' and pupils well-being/the school's psychosocial environment? How was this survey carried out? What does this mapping show? In what way have the results of the survey influenced the decision to introduce and work further with the programme? Which programme did you choose? Why this particular programme? In relation to other programmes? How do you view this programme in relation to the curriculum?	Is there a mechanism for documenting shortcomings and remedying them? Is there any kind of evaluation system? How well can the programme be considered to have been anchored? The programme in relation to a holistic view/vision?	Quality assurance system Communication system Decision system System for distribution of power and responsibility Norm system
Retrospective: Describe what decisions the introduction of the programme was based on Who was involved in the decision-making? (municipal school management, local school management, teachers, other school staff, pupils, parents) Who did not participate? Teachers' role in the introduction of the programme? To what extent does X believe he/she has been involved in the decision? Who/which groups are considered to have had the greatest influence on the decision (formally, informally)? Did you agree? Resistance?	In what way was the introduction of the programme anchored? Have different groups exercised real influence? Is the decision closely related to the group responsible for its implementation? Legitimacy Confidence	Decision system Communication system System for distribution of power and responsibility Norm system
Describe how you are working with the programme What do you regard as unique to this particular programme? What results do you think you see? How did you reach this point? How did you get started? Who is working with the programme – who is responsible for what? How was the implementation carried out – continuously or special measures? Training in relation to the programme? Special resources (time, material, money...)? How do you assess the effectiveness of the programme in terms of defining, remedying and preventing bullying?	Is the work carried out with the programme disseminated? What kind of influence do the pupils have? Awareness of the programme? How clear or unclear are the goal descriptions? What are the main ingredients of the goal descriptions, e.g. co-operation between teachers, teacher/pupil relations, teaching patterns/working approaches? Capacity for improvement – are you thinking or planning in terms of a process, activities over time, what are you planning to do first/later?	Power and responsibility system Adherence to the programme Legitimacy
If teachers from another school came to you and wanted advice in their anti-bullying work and wanted to introduce this programme, what would you say? Positively Difficulties Results Combined with other work	Have the school's experiences been systematised?	Capacity for improvement

Interview guide teachers at "comparison schools" 2008

Areas and issues	Aim	Comments
A. Generally about the school		
Tasks		
Subject		
Pupil groups		
Teachers' resources		
Number of years a teacher		
How many years at this school		
Describe how the school is organised	How flexible is the organisation? What influence do the different stakeholders in the school have?	Grouping system System for distribution of power and responsibility
Who are your closest cooperation partners? In which groups are decisions made about what?		
How would you describe the "climate" at this school?	What norms are there at the school on behaviour towards each other? Are these linked to a rewards and sanctions system encouraging the achievement of desired targets? Are the boundaries for unacceptable behaviour defined? Are pupils and staff conscious of the norms? Can any unconscious norms be detected?	The norm system
Can you give examples of norms/rules applicable to how people behave towards each other in this school? What is permitted? What is prohibited? How do you know this? How are the rules made? How should you be as a teacher to be liked at the school? Changes? How should you be to be liked as a school leader at this school? Changes? How should you be as a pupil to be liked at this school? Changes?		
B. School's experiences of bullying		
Describe what you think about when you hear the word "bullying"	In what way is bullying defined at the school? In relation to degrading treatment?	Compare with the definition of bullying we are working with in this evaluation
Degrading treatment? Differences between bullying and degrading treatment? Estimate how many pupils at your school are subjected to bullying – by other pupils, by teachers? What types of events and conflicts do you see regularly, and when do you think that teachers or school leaders should intervene?		
Describe how you are working today on combating bullying and degrading treatment at the school	How would you describe the school's policy for preventing bullying and degrading treatment? Policy for presence of adults?	Compare this description with a description of the work in relation to more concrete cases described in the next question
Describe your experiences of concrete bullying incidents at this school	In what way is the school's anti-bullying policy described? How would you describe the school's earlier experiences of combating bullying? The questions are intended as a description of something that has happened, but could also be hypothetical – an awareness of what one could consider doing if something new happens Define Remedy Prevent	Compare with the programme they say they are working with Adherence to the programme
How, where, and when have earlier incidents taken place? What bullying incidents have you been involved with? How did you get to know that bullying occurred? What measures were taken (work teams, school leaders, parents, pupils)? What were the consequences? If you suspect bullying, what do you do? If someone (pupil, parent, other teacher) gets in touch with you and draws your attention to a possible bullying incident, what do you do? (Has it happened?) If a parent/pupil gets in touch with you and tells you that another teacher has subjected a pupil to degrading treatment, what do you do? (Has it happened?)		

Areas and issues	Aim	Comments
C. Programme work		
What would you say if you received an invitation from another school to present your schools work on combating bullying?		
Has a survey been carried out of the school's "climate"/teachers' and pupils' well-being in the school/ the school's psychosocial environment?	Is there a mechanism for documenting shortcomings and remedying them?	Quality assurance system
In what way have the results of this affected your work on combating bullying?	Is there any kind of evaluation system?	Communication system
School leader's role?	How well anchored was the work?	Decision system
What do you regard as specific to your anti-bullying work?	Work in relation to a holistic view/vision?	System for distribution of power and responsibility
What results do you think you see?	Is the work on combating bullying disseminated?	Norm system
How did you reach this point?	What kind of influence do the pupils have?	Adherence to the programme
How did you get started?	Awareness of the work?	Legitimacy
How have you allocated responsibility for anti-bullying work – who has responsibility for what?	How clear or unclear are the goal descriptions?	Capacity for improvement
How was implementation carried out – continuously or special measures?	What are the main ingredients of the goal descriptions, e.g. co-operation between teachers, teacher/pupil relations, teaching patterns/working approaches?	
Training in relation to anti-bullying work?	Capacity for improvement – are you thinking or planning in terms of a process, activities over time, what are you planning to do first, and then later?	
Positively?	Have the school's experiences been systematised?	
Difficulties?		
Results?		
Is it combined with other work?		
Contact and inspiration from established programmes?		
Retrospective: Describe what decisions your work on combating bullying is based on		
Who was involved in the decision-making? (municipal school management, local school management, teachers, other school staff, pupils, parents)	In what way was the introduction of the programme anchored?	Decision system
Who did not participate?	Have different groups exercised real influence?	Communication system
Teachers' role in developing the work?	Is the decision closely related to the group responsible for its implementation?	System for distribution of power and responsibility
Who/which groups are considered to have had the greatest influence on the decision over how you are now working (formally, informally)?		Norm system

Interview guide school health staff/pupil welfare team/bullying team, etc.2008

Areas and issues	Aim	Comments
A. Generally about the school		
Tasks		
Number of years as...		
How many years at this school		
Describe how the pupil welfare team at the school is organised	How flexible is the organisation? What influence do the different stakeholders in the school have?	Grouping system System for distribution of power and responsibility
Who are your closest cooperation partners?		
Who has responsibility for what?		
How would you describe the "climate" at this school?	What norms are there at the school on behaviour towards each other?	The norm system
Can you give examples of norms/rules applicable to how people behave towards each other in this school?	Are these linked to a rewards and sanctions system encouraging the achievement of desired targets?	
What is permitted?	Are the boundaries for unacceptable behaviour defined?	
What is prohibited?	Are pupils and staff conscious of the norms?	
How do you know this?	Can any unconscious norms be detected?	
How are the rules made?		
How should you be to be liked ... at this school?		
How do you think you should be to be liked as a teacher at this school? Changes?		
How do you think you should be to be liked as a school leader at this school? Changes?		
How do you think you should be as a pupil to be liked at the school? Changes?		
B. School's experiences of bullying		
Describe what you think about when you hear the word "bullying"	In what way is bullying defined at the school? In relation to degrading treatment?	Compare with the definition of bullying we are working with in this evaluation
Degrading treatment?		
Differences between bullying and degrading treatment?		
Estimate how many pupils at your school are subjected to bullying – by other pupils, by teachers?		
What types of events and conflicts do you see recurring daily, and when do you think that adult should intervene?		
Describe how you are working today on combating bullying and degrading treatment at the school	How would you describe the school's policy for preventing bullying and degrading treatment? Policy for presence of adults?	Compare this description with a description of the work in relation to more concrete cases described in the next question
Describe your experiences of concrete bullying incidents at this school	In what way is the school's anti-bullying policy described? How would you describe the school's earlier experiences of combating bullying?	Compare with the programme they say they are working with Adherence to the programme
How, where, and when have earlier incidents taken place?		
What bullying incidents have you been involved with?		
How did you get to know that bullying occurred?		
What measures were taken (pupil welfare team, work team, school leader, parents, pupils)?	The questions are intended as a description of something that has happened, but could also be hypothetical – an awareness of what one could consider doing if something new happens	
What were the consequences?	Define	
If you suspect bullying, what do you do?	Remedy	
If someone (pupil, parent, other teacher) gets in touch with you and draws your attention to a possible bullying incident, what do you do? (Has it happened?)	Prevent	
If a parent/pupil gets in touch with you and tells you that another teacher has subjected a pupil to degrading treatment, what do you do? (Has it happened?)		

Areas and issues	Aim	Comments
C. Programme work		
What would you say if you received an invitation from another school to present your schools work on combating bullying?	Is there a mechanism for documenting shortcomings and remedying them?	Quality assurance system
Has a survey been carried out of the school's "climate"/pupils' and teachers' well-being in the school/school's psychosocial environment?	Is there any kind of evaluation system?	Communication system
In what way have the results of this affected your work on combating bullying?	How well anchored was the work?	Decision system
School leader's role?	Work in relation to a holistic view/vision?	System for distribution of power and responsibility
Pupil welfare team's role?	Is the work on combating bullying disseminated?	Norm system
What do you regard as specific to your anti-bullying work?	What kind of influence do the pupils have?	Adherence to the programme
What results do you think you see?	Awareness of the work?	Legitimacy
How did you reach this point?	How clear or unclear are the goal descriptions?	Capacity for improvement
How did you get started?	What are the main ingredients of the goal descriptions, e.g. co-operation between teachers, teacher/pupil relations, teaching patterns/working approaches?	
How have you allocated responsibility for anti-bullying work – who has responsibility for what?	Capacity for improvement – are you thinking or planning in terms of a process, activities over time, what are you planning to do first, and then later?	
How was implementation carried out – continuously or special measures?	Have the school's experiences been systematised?	
Training in relation to anti-bullying work?		
Positively?		
Difficulties?		
Results?		
Is it combined with other work?		
Contact and inspiration from established programmes?		
Retrospective: Describe what decisions your work on combating bullying is based on		
Who were involved in the decision-making – (municipal school management, local school management, teachers, other school staff, pupils, parents)?	In what way was the introduction of the programme anchored?	Decision system
Who did not participate?	Have different groups exercised real influence?	Communication system
Teachers' role in developing the work?	Is the decision closely related to the group responsible for its implementation?	System for distribution of power and responsibility
Who/which groups are considered to have had the greatest influence on the decision over how you are now working (formally, informally)?		Norm system

Interview guide pupils 2008

Areas and issues	Aim	Comments
A. Generally about the school		
Class		
Number of teachers		
What you did before you came here		
Describe a typical school day at the school		
What is the most common way of working at the school – you work with your own tasks, you work in a group together with others, the teacher talks and you listen and answer questions, other ...		
How would you describe behaviour towards each other at the school?	What norms are there at the school on behaviour towards each other? Are these linked to a rewards and sanctions system encouraging the achievement of desired targets? Are the boundaries for unacceptable behaviour defined? Are pupils and staff conscious of the norms? Can any unconscious norms be detected?	The norm system
Can you give examples of norms/rules applicable to how people behave towards each other in this school? What is permitted? What is prohibited? How do you know this? How are the rules made? How should you be to be liked as a pupil/friend at this school? How should you be as a teacher to be liked at the school?		
B. School's experiences of bullying		
Describe what you think about when you hear the word "bullying"	In what way is bullying defined at the school? In relation to degrading treatment? Presence of adults? Absence of adults?	Compare with the definition of bullying we are working with in this evaluation
What types of events and conflicts are common at this school? What does it mean to be bullied? By other pupils? By teachers? Concrete examples? Estimate how many pupils at your school you think may have been victims of bullying – by other pupils, by teachers What do you think degrading treatment is? Concrete examples Do you consider that this happens in special places – which? Situations where bullying can occur?		
C. Programme work		
What is done at the school to prevent children and youth being bullied?	In what way is the school's anti-bullying policy described? How would you describe the school's earlier experiences of combating bullying? The questions are intended as a description of something that has happened, but could also be hypothetical – an awareness of what one could consider doing if something new happens	Compare with the programme they say they are working with Adherence to the programme
If a friend tells you that she/he has problems with one or more other persons at the school, what would you do? How do adults at the school get to know that somebody has been bullied at the school? What do they do then? What were the consequences? Does the school have any special way of working to combat bullying and degrading treatment (programme)? At the school, teachers and the headteacher say they are working with programme X to create a good atmosphere in the school/counteract bullying –are you aware of this? Give your assessment of what is good about this way of working. What is less good? Do you see any change over time? How do you think the work on combating bullying is functioning? Good/less good?		
D. Influence		
What do you think works well at your school? What do you think works badly? What you do if you want to change something that is not good? Do you know of any improvements that pupils are trying to bring about? What influence have you had on the school's work of introducing programme x?	How well anchored was the work? What kind of influence do the pupils have? Awareness of the work?	Quality assurance system Communication system Decision system System for distribution of power and responsibility Norm system Legitimacy Capacity for improvement

ATTACHMENT 3

Interview guide round 2

Team

Themes/question areas	Examples of orientation questions	Aim
A. Generally about the school		
Changes since the first interview	<p>Describe changes in the school over the last year that you think may have had an impact on the school's work in combating bullying and degrading treatment:</p> <ul style="list-style-type: none"> - Pupil composition - Staff - Organisation - "School climate" - School management - Your work 	<p>Changes concerning the school's infrastructure Relationship-enhancing measures teacher-pupil Relationship-enhancing measures pupil-pupil</p>
B. School's anti-bullying work		
The bullying situation at the school	<p>Estimate how many pupils at your school are subjected to bullying – by other pupils, by teachers</p> <p>How can you as a team keep yourselves informed about the situation?</p> <p>What types of events and conflicts do you see occurring daily?</p>	<p>Awareness of problems at one's own school The evaluation system Norm system Systematic documentation</p>
Describe your experiences of concrete bullying incidents in the last year	<p>How did you get to know that bullying occurred? How do you deal with bullies? How do deal with victims? Investigate? Remedy? Follow-up? Support? The team's responsibilities? Competence within the team?</p>	<p>How is the school's anti-bullying policy described? Define Prevent Remedy Cooperative teams Documentation Dealing with bullies and dealing with victims Systematic approach to remedies</p>
Describe what you consider to be important in the school's work on combating bullying and degrading treatment	<p>What ingredients do you consider important in the school's work on combating bullying and degrading treatment?</p> <p>What are you satisfied with? What are you less satisfied with?</p>	<p>Comparing the description from last time (Here it is necessary to examine the school descriptions to be prepared, and be able to follow up what was said last time) Preventative Remedial School's work with the programme Systematic implementation</p>
C. Programme work		
The questions vary depending on the team's involvement in the work of the programme, but they may also be important in assessing the work "from outside"		
Programmes at the school (If the school has its own variant, they cannot refer to a programme, they should describe it)	<p>What/which programme(s) do you work with at the school? The Farsta Method, Step by Step, School Comet, Olweus, Mediation, Lions Quest, SET, Friends?</p> <p>Why this/these particular programme(s)? Which programmes are you directly involved in?</p>	<p>How schools define their work in relation to programmes School's work with the programme</p>
Describe the advantages and disadvantages of the programme(s) you're using (If the school has its own variant, they should describe its advantages and disadvantages)	<p>What do you see as specific to this programme (work)? Who works with the programme(s) (question) – who is responsible for what? Special resources (time, material, money)? Work involved in introducing the programme (work)? Pupil influence?</p>	Experienced implementability

Themes/question areas	Examples of orientation questions	Aim
Possibly check the following: What decisions have been fundamental in your work on combating bullying and degrading treatment?	Who has been involved in the decisions on the work of combating bullying and degrading treatment? (municipal school management, local school management, teachers, other school staff, pupils, parents) Who has not been involved? To what extent do the members of the team think they have a say in the decision? Resistance?	Implementation Legitimacy Confidence In what way was the introduction of the programme anchored? Have different groups exercised real influence? Is the decision closely related to the group responsible for its implementation? Anchoring anti-bullying measures
D. The components Some were in the earlier interview		
Relationship-enhancing measures teacher-pupil and pupil-pupil	Do you consider that the school has any special strategies for creating good relations between teachers and pupils? Do you see that the school has any special strategies for creating good relations between the pupils?	Relationship-enhancing measures teacher-pupil Relationship-enhancing measures pupil-pupil
Follow-up/evaluation	Has a survey been carried out of the school's "climate"/teachers' and pupils' well-being in the school's psychosocial environment? How was this carried out? What did this show? Have the results of the mapping affected the organisation of your work?	Is there a mechanism for documenting shortcomings and remedying them? How well can the programme be considered to have been anchored? The evaluation system Evaluation/Follow-up
Special lessons (If they were not involved in this, they may be important in assessing the work)	Specific measures? If necessary? Timetabled for certain classes? Timetabled for all classes?	Special lessons Degree of systematic approach
Pupils' participation in combating bullying and degrading treatment	Describe the role of pupils Not trained? Internally trained? Externally trained?	Pupil participation Pupils' confidence
Strategies for creating order among the pupils (An important group who may have an external perspective on this)	What happens if pupils: - come too late? - disturb during lessons? - argue in breaks? Are there any consequences for everyone? Informal? Formal?	Disciplinary strategies Degree of systematic approach
School rules/class rules? (An important group who may have an external perspective on this)	Rules at the school? Are there any special rules concerning bullying and degrading treatment? What awareness do you think that the pupils have about them?	School rules/class rules Degree of influence
Meetings where questions of bullying and degrading treatment taken up?	Are you as a team involved in organising and carrying out meetings about bullying and degrading treatment: - for staff? - for pupils? - for parents? Specific measures? If necessary? Recurring?	Joint meetings Degree of systematic approach
Pedagogical material in the work of combating bullying and degrading treatment?	Has the team any material on combating bullying and degrading treatment that has been distributed or they are working with? Describe how it is used	Training material Degree of systematic approach

Themes/question areas	Examples of orientation questions	Aim
Training of staff in the school against bullying and degrading treatment?	Training of the team's staff? Does the team train other staff? Who is trained? In what? Scope? Basic training In-service training New employees?	Programme training Internal training Other external training related to bullying
Parent information	Does the team have any responsibility for informing/training parents?	Parent information training Distribution of power and responsibility
Break monitoring system	What do you think about the school's break monitoring system?	Break monitoring system
Pupils' confidence in schools' anti-bullying work	How do you assess the pupils' confidence in the school's work on combating bullying and degrading treatment	Pupils' confidence in anti-bullying work
Anchoring anti-bullying measures	How well do you consider that the school's anti-bullying work is anchored in the school	Anchoring anti-bullying work at the school Extent to which a shared view exists

Pupils

Themes and areas	Orientation questions	Aim
A. Generally about the school		
School's social working environment	<p>If a new pupil starts in your class and she/he asked you about how you behave towards each other in your class, what would you say?</p> <p>If she/he asked how pupils from other classes behave towards each other, what would you say?</p> <p>Is there any way of being that others find difficult to accept?</p> <p>What are the persons who are popular at the school like?</p>	<p>School's norm system</p> <p>Normality?</p>
B. School's anti-bullying work		
The bullying situation at the school	How many pupils in your class do you think would fill in a questionnaire stating that he/she felt bullied – by other pupils, by teachers?	Awareness of problems at one's own school
Change	Measures in the class?	
What does the school do?	<p>What is done in your class (at the school) to stop the bullying of pupils?</p> <p>What would you do if you were bullied at school?</p> <p>Who would you turn to?</p> <p>If a friend told you that he/she had problems with one or several persons at the school, what would you do?</p> <p>How do the adults get to know that somebody has been bullied at the school?</p> <p>What do you do at the school to those who bully others?</p> <p>What do you do at the school for those who have been bullied?</p> <p>What in the school's work are you satisfied with?</p> <p>What are you less satisfied with? What would you like this to look like?</p>	<p>Pupils' confidence in the school's work on combating bullying and degrading treatment</p> <p>Dealing with bullies</p> <p>Dealing with victims</p> <p>Pupils' participation in the work</p>
C. Programme work		
Programmes at the school	At the school, teachers and the headteacher say that they are working with programme X to create a good atmosphere at the school/counteract bullying – are you aware of this?	Pupils' participation in the work
Change	Assess – what is good about this way of working? What is less good?	<p>Pupils' awareness of the work</p> <p>Pupils' confidence in the work</p>
Pupils' influence?	<p>Have you been involved in deciding on the school's work on combating bullying and degrading treatment?</p> <p>How would you like to influence the school's work on combating bullying and degrading treatment?</p>	<p>Pupils' influence</p> <p>Pupil participation</p> <p>Pupils' confidence</p>
D. The components		
Follow-up/evaluation	<p>Have you been involved in and had to answer questions about how you feel at school?</p> <p>Continuity?</p> <p>Information about results?</p> <p>Discussion of results in classes?</p> <p>What impact has this had? Have you seen that this has led to any changes?</p>	<p>Is there a mechanism for documenting shortcomings and remedying them?</p> <p>Is there any kind of evaluation system?</p>
Special lessons	<p>Are there special lessons where you work on questions concerning bullying and degrading treatment, or to get a better atmosphere in the class?</p> <p>Sometimes, for instance at start of term?</p> <p>When something happened?</p> <p>Timetabled for certain classes?</p> <p>Timetabled for all classes?</p> <p>Assess these lessons</p>	<p>Special lessons</p> <p>Degree of systematic approach</p>

Themes and areas	Orientation questions	Aim
Pupils' participation in combating bullying and degrading treatment	Are there any pupils at the school who are more involved in anti-bullying work? What do they do? How do you choose them? Training? Assess this work	Pupil participation Pupils' confidence
Strategies for creating order among the pupils	What happens if someone: - comes too late? - disturbs during lessons? - argues in breaks? Do you feel that there are differences between the teachers? In what way then? What differences are there between the teachers? What do you think is the best way of creating some order? Are the rules important? In what way?	Disciplinary strategies Degree of systematic approach
School rules/class rules	Give examples of rules Who has decided on them? Assess the rules What rules do you want to have?	School rules/class rules Degree of influence
Meetings where questions of bullying and degrading treatment are taken up	Have you been involved when someone at your school has had a meeting where bullying and degrading treatment has been taken up? Specific measures? If necessary? Recurring e.g. start of term?	Joint meetings Degree of systematic approach
Training material	There are textbooks in mathematics and history – is there any counterpart for dealing with how we relate to each other? Describe how it is used and by whom?	Training material Degree of systematic approach
Break monitoring system	What do you do during the breaks? Are there any places at the school where you feel unsafe? Are there places at the school where it is more likely bullying takes place? Are there teachers/other staff present during the breaks? What do they do? Do you see if unpleasant things happen between pupils? Do you think it is important that staff are together with the pupils during the breaks? Why? Why not?	Break monitoring system
Relationship-enhancing measures teacher-pupil	Describe how contact is between teachers at the school? Is there anything being done to make contacts better?	Relationship-enhancing measures teacher-pupil
Relationship-enhancing measures pupil-pupil	Describe how contact is with pupils who are not in your class Is there anything being done to make contact between all the pupils in the school good?	Relationship-enhancing measures pupil-pupil

Other staff

Themes and areas	Orientation questions	Aim
A. Generally about the school		
	We need different views of the school and its working climate. In your position you probably view the situation at the school in a slightly different way than the teachers, pupils and school management	
School's work climate	How do you experience the working climate at the school: Your own situation? The climate between teachers? The climate between pupils? The climate between teachers and pupils? What type of conflicts do you see daily at the school? If conflicts occur, where do they most often occur? Possible involvement in the school's work on combating bullying and degrading treatment? Prepared to become more involved?	School's infrastructure Participation
B. School's anti-bullying work		
The bullying situation at the school	How many pupils do you think might answer a question saying they had been bullied at the school? Do you think that this has become more/less? What is it based on?	Awareness of problems at one's own school
Describe your experiences of concrete bullying incidents in the last year	Have you had any experience of any bullying incidents at the school? Describe what happened? What did the school do? What was the result?	Awareness of how the school works
C. Programme work		
Programmes at the school	Do you know if the school is working with a special programme to combat bullying? Information about this? Instructions in the programme on how you should act if you detect bullying/degrading treatment? It is said that the school is working with programme X, what do you know about this work? Do you see any advantages? Do you see any disadvantages?	Clarity and anchoring of the school's work Participation School culture
D. The components		
Follow-up/evaluation	Are there any evaluations of the climate at the school that you have taken part in? Do you know about the results from studies that have been done?	Are there any indications of an evaluation system that also takes up views from other members of staff?
Training in the work of combating bullying and degrading treatment	Have you taken part in any course/theme day dealing with the problems of bullying and degrading treatment?	
Strategies for creating order among the pupils	What happens if pupils: - argue in breaks? - argue in the school canteen? - litter/graffiti?	Disciplinary strategies Degree of systematic approach
School rules/class rules	What rules do you consider important at the school? How are they followed?	School rules
Training of school staff	Do you participate in training/information on combating bullying and degrading treatment?	Extent to which systematic approach is taken
Break monitoring system	Describe the situation in the breaks? Are you involved in the break monitoring system? Views about this?	Participation School culture

Themes and areas	Orientation questions	Aim
Overall assessment	How do you assess the school's work on combating bullying and degrading treatment? What is positive? What is negative? What would you do in a different way?	

Parents

Themes and areas	Orientation questions	Aim
A. Generally about the school		
School's work climate	<p>We need different views of the school and its working climate. In your position you probably view the situation at the school in a slightly different way than the teachers, pupils and school management ...</p> <p>If a parent came to you and told you that his/her child will be starting at the school and wanted to get an idea of the school, what would you say?</p> <p>Describe how you view your child's situation at the school</p> <p>Positively? Negatively?</p> <p>The climate between teachers? The climate between pupils? The climate between teachers and pupils? Climate between the school and parents</p>	<p>Awareness of the school's work climate Norm system</p>
B. School's anti-bullying work		
The bullying situation at the school	How common do you think the problem of bullying and degrading treatment is at the school?	Awareness of problems at the school
Change	How do you know this?	
Describe your experiences of concrete bullying incidents in the last year	<p>Do you have any experience from any bullying incident at the school? What happened? Measures? Results?</p> <p>Information about what you should do if you became aware that somebody at the school had been bullied or subjected to degrading treatment?</p> <p>If a parent came to you and told you that his/her child had been bullied, what advice would you give?</p>	<p>How is the school's anti-bullying policy described Dealing with bullies Dealing with victims</p>
Describe what you see of the school's work against bullying and degrading treatment	If you got the task as a parent to describe what you think the school should do to combat bullying and degrading treatment, what would you say?	<p>Special lessons Pupils as players Dealing with bullies Dealing with victims Cooperative teams Systematic implementation</p>
Change		
C. Programme work		
Programmes at the school (If this hasn't yet come up)	<p>Have you received any information that the school is working with a special programme to combat bullying and degrading treatment?</p> <p>Informed when? Where? How?</p> <p>Can you describe how you are working with the programme?</p> <p>As a parent what knowledge and experience do you have of the school's work with programme X?</p> <p>What do you see as the advantages? What do you see as the disadvantages?</p>	<p>Experienced implementability Parents' awareness Anchoring of the work</p>

Themes and areas	Orientation questions	Aim
D. The components		
Follow-up/evaluation	Describe the school's development dialogues Well-being? Bullying? Plus and minus? As a parent have you been involved in and filled in any questionnaire or been interviewed by the school about your child's well-being/school situation? What do you know about any surveys that have been done on bullying and degrading treatment at the school? Continuity? Information about the results? Where? When? Desire to be informed? Equal treatment plans?	The evaluation system Evaluation/Follow-up
Strategies for creating order among the pupils	Do know what happens if a pupil: - comes late? - argues in lessons? - argues in breaks? How do you view the school's ability to keep order amongst the pupils?	Disciplinary strategies Degree of systematic approach
School rules/class rules	Information about which rules apply at the school? In your "child's" class? Can you give examples of some rules that apply at your child's school? How do you know about them? What do you think about the school's rules? Consequences? Compliance?	School rules/class rules Degree of influence
Parent information	Information – how, when, assess Theme days – how, when, assess Training – how, when, assess Information about these elements? Do you usually participate? Contents? Parent influence?	Parent information Distribution of power and responsibility
Break monitoring system	What does your child tell you about the breaks? What does he/she think? What do you know about the school's break monitoring system? Informed when? Your views about the system? Based on what?	Break monitoring system
Pupils' confidence in schools' anti-bullying work	How do you view your child's confidence in the school's work on combating bullying and degrading treatment?	Pupils' confidence in schools' anti-bullying work?
Parents' confidence in the school's anti-bullying work	What confidence do you have in the school's work on combating bullying and degrading treatment? Improvements?	Parent information Anchoring

ATTACHMENT 4

Guidelines for determining the schools' component values

Current component	Determining possible component values
PREVENT	
Follow-up/evaluation	<p>General description:</p> <p>This refers to the follow-up and evaluations carried out at the school or municipal level and which are mentioned in the interviews.</p> <p>0 = Not exist 1 = Exists, but not carried out regularly 2 = Exists and carried out regularly, but does not impact anti-bullying work/has no direct impact 3 = Exists and carried out regularly, and has a direct impact on bullying work/basis for decisions</p>
Relationship-enhancing measures teacher-pupil	<p>0 = Not exist 1 = Elements of relationship-enhancing measures 2 = Conscious strategy expressed in acts to create closeness/relations</p> <p>Comments:</p> <ol style="list-style-type: none"> Elements of relationship-enhancing measures: When the school has been organised to create greater closeness between teachers and pupils. For instance, organisational planning, mentorship, coaching dialogues etc. Concrete cases concerning the mentor system where a teacher has additional responsibility for a smaller group of pupils, or where two teachers share the class teacher's responsibility for pupils in a class. Or when the distance between the teachers' workroom and the pupils' classroom and facilities are close to each other. A conscious strategy = When something is described in the interviews about creating better contact between teachers and pupils. Statements made both spontaneously and to direct questions.
Relationship-enhancing measures pupil-pupil	<p>0 = Not exist 1 = Elements of relationship-enhancing measures 2 = Conscious strategy expressed in acts to create closeness/relations</p> <p>Comments:</p> <ol style="list-style-type: none"> Elements of relationship-enhancing measures: When the school is organising its activities to create greater closeness between pupils at the school. For instance, organisational planning such as how classes are assigned to school premises, mentoring across class boundaries, theme days where all pupils in the school, or in a work team do something together. A conscious strategy = In the interviews when something is described to create better contact between the school's pupils
Special lessons	<p>General description:</p> <p>This refers to lessons arranged to develop pupils' social skills, empathy and reinforcing the school's work on foundation values – e.g. through life skills, lessons on foundation values, Olweus lessons or lessons on "Togetherness" etc.</p> <p>0 = Not exist 1 = Sometimes/specific measures/e.g. at start of term 2 = Where necessary (e.g. as a consequence of "incidents") 3 = Timetabled and carried out for certain classes 4 = Timetabled and carried out for all classes</p> <p>Comments:</p> <ol style="list-style-type: none"> Sometimes/specific measures can be at the start of term, during a theme day or similar, and are proactive in the sense that they do not need to be preceded by an earlier event. Where necessary can occur when a need has been recognised and that a targeted measure is carried out such as a theme day, discussion in one or more classes, incidents during breaks, accidents etc. Timetabled and carried out for certain classes – Perhaps a decision has been made that everyone in year 5 should have lessons in life skills, girl-boy dialogues. Or there are classes that have special needs, and for this reason more timetabled effort is put in. Schools where this is timetabled for all classes end up here, but it is evident that the majority of teachers do not carry out these lessons for one reason or another. Timetabled and carried out for all classes – Here all classes are involved and all teachers carry out the lessons.

Current component	Determining possible component values
Pupils as players	General description:
	<p>This refers to pupils who play a role in prevention and help school staff by being their "eyes and ears" and informing them about what is going on among school pupils (e.g. peers, mates, peer supports or similar) and if they have had any type of training.</p>
	<p>0 = Not exist 1 = Exists without training 2 = Exists, trained</p>
Pupils' active participation in prevention of bullying	General description:
	<p>This refers to pupils who play an active role in preventative work such as organising something nice in the pupil cafe, or exercises in their classes. This also covers activities such as dialogue with a friend etc.</p>
	<p>0 = Non-existent 1 = Low/unsystematic 2 = High/systematic</p>
Disciplinary strategies	General description:
	<p>This refers to rules with sanctions 0 = No formal disciplinary strategies exist 1 = Formal disciplinary strategies exist, but teachers act independently of them 2 = Formal disciplinary strategies exist to support teachers, and which they try to follow</p>
	Comments:
	<p>Strategies exist on how the school should act if pupils do not act in a way that is acceptable to the school. The school not only has rules but also consequences if they are not followed – e.g. if it is noisy in the school canteen, if pupils come too late etc. This does not refer to the strategies that the school has for dealing with perpetrators of bullying and degrading treatment, as this falls within the scope of remedial work.</p> <ol style="list-style-type: none"> 0. There are no jointly determined strategies at the school 1. There are formal strategies setting out how staff should act, but they have no importance in terms of how teachers act 2. There are formal strategies setting out how staff should act and teachers try to act in line with these. <p>The differences between 1 and 2 relate to the degree to which their acts correspond. Teachers' and pupils' statements thus become instrumental.</p>
School rules with focus on their development	General description:
	<p>Here special attention is paid to how school rules are drawn up 0 = Not exist 1 = Exist and drawn up by school staff 2 = Exist and drawn up in cooperation between staff/pupils</p>
	Comments:
	<ol style="list-style-type: none"> 2. Exist and drawn up in cooperation between staff/pupils – as the pupil group changes the whole time, it becomes difficult at the start of every school year to hold discussions about rules. Here the reference is to school rules where pupils have been involved in their formulation, even though perhaps not pupils in all classes at the time of the interview attend the school. In cases where the pupil council has been involved, this is clearer.
School assemblies about bullying in the school	General description:
	<p>Refers to the occasions when pupils meet to receive some form of information about bullying and degrading treatment. 0 = Does not occur 1 = Occurs intermittently 2 = Occurs regularly</p>
	Comments:
	<ol style="list-style-type: none"> 1. School assemblies can be arranged after an incident or to introduce a special measure. Some programmes also have school assemblies, e.g. when the programme is being introduced in a school.

Current component	Determining possible component values
Training material	<p>General description: Refers to material at the school that can help the staff in preventative work of combating bullying and degrading treatment. Examples: the foundation values book, programme material, material the school itself has produced etc,</p> <p>0 = Not exist 1 = Exists, but not used systematically 2 = Used systematically</p> <p>Comments:</p> <ol style="list-style-type: none"> Exists, but not used systematically: Some teachers use it, others don't. Used systematically: This is material that is used and mentioned as a support or direct guide in preventative work.
Staff information	<p>General description: Refers to targeted measures that cannot be categorised as training, such as brief information about a programme or about bullying.</p> <p>0 = Not exist 1 = Exists and carried out for individuals 2 = Exists and carried out for most</p> <p>Comments:</p> <ol style="list-style-type: none"> Exists and carried out for individuals = parts of the staff have received it. Exists and carried out for the majority = most of the staff have received the information.
Training of school staff	<p>General description: Refers to targeted measures of a training nature, such as training in a programme or other training concerning bullying and degrading treatment. Both basic and supplementary education, external and internal were covered.</p> <p>0 = Not exist 1 = Carried out for individuals 2 = Carried out for most</p> <p>Comments:</p> <ol style="list-style-type: none"> Exists and carried out for individuals = may be training in the Farsta Method, which some other staff are participating in. Exists and carried out for the majority = here training exist, which the majority of school staff participate in. This can be training provided by persons externally and/or training provided by pilots trained at the school.
Parent information/training	<p>0 = Not exist 1 = Information 2 = Training</p> <p>Comments:</p> <ol style="list-style-type: none"> Information = this covers e.g. information through brochures sent to homes at the start of a new school year, information about parent meetings, information about the parents' association etc. Training = covers schools providing parents with training irrespective of how many take up the offer.
Systematic implementation	<p>General description: Refers to an overall assessment of the measures the school takes to prevent bullying and degrading treatment.</p> <p>0 = Not exist 1 = Partial systematic approach exists 2 = Highly systematic approach exists</p> <p>Comments:</p> <ol style="list-style-type: none"> Does not exist = when what is done takes place more through individual measures where people in the interviews are not linked to each other. Some elements of a systematic approach = where there is an idea behind what is done, and a picture of how the different parts fit together. A largely systematic approach exists = where the preventative measures are largely based on evaluations of pupils' situation at the school, and where some interview groups show an awareness of how the school's preventative work is organised (and why).

Current component	Determining possible component values
DETECT	
Break monitoring system	<p>0 = Lacks break monitoring system 1 = Has break monitoring timetable, but not developed 2 = Has a developed break monitoring system</p> <p>Comments:</p> <ol style="list-style-type: none"> Has a break monitoring system, but it is not developed = There is a timetable which states when teachers should function as break hosts. It is difficult for us to determine if it functions. A developed break monitoring system = This system contains more than a timetable of when teachers should act as break hosts. E.g. "Dangerous places" have been identified, which affects where teachers are during the breaks, there are special staff who have the task of being present among pupils during the breaks (e.g. in the pupil cafe) and arranging activities during the breaks, events in the breaks are documented etc.
REMEDY	
Cooperative teams	<p>General description: Refers to cooperative teams with the task of remedying incidents of bullying/degrading treatment</p> <p>0 = Lacks cooperative teams 1 = Exists, and covers staff with special competence 2 = Exists and covers staff with special competence and pedagogical staff 3 = Exists and covers staff with special competence, pedagogical staff and pupils</p> <p>Comments:</p> <ol style="list-style-type: none"> Exists and covers staff with special competence = a team consisting of counsellors, school nurses, socionoms, special pedagogues or similar but which lacks "regular" teaching staff. Exists and covers staff with special competence and pedagogical staff = a group which also includes teaching staff for the daily teaching. As 1 and 2 but the group also includes pupil representatives.
Case documentation	<p>0 = Does not take place 1 = Takes place, but not in accordance with established routines 2 = Takes place based on established routines</p> <p>Comments:</p> <ol style="list-style-type: none"> When someone in the interview can describe the steps in the documentation process, who is responsible for writing, what, and when, and for whom.
Dealing with bullies	<p>0 = No routines 1 = Has routines, remedial 2 = Has routines, remedial and follow-up 3 = Has routines, remedial, follow-up, and processing</p> <p>Comments:</p> <ol style="list-style-type: none"> Routines for how to act towards perpetrator(s) when it is established that a pupil has been subjected to bullying/degrading treatment. What is done to stop the perpetrators? Routines on how to act to stop perpetrator(s), and routines on how to follow up an incident to guarantee that the bullying has ceased? As in 1 and 2, there are also routines on how to work over the long-term in order to help perpetrators get a deeper insight into their acts and help them in this process.
Dealing with victims	<p>0 = No routines 1 = Has routines, investigatory 2 = Has routines, investigatory and follow-up 3 = Has routines, investigatory, follow-up and supportive</p> <p>Comments:</p> <ol style="list-style-type: none"> Routines on how to proceed in identifying suspected bullying incidents. Routines on how to identify a suspected incident and how to follow up the incident with the victim. In addition to 1 and 2 also support and help for the pupil who has been bullied/subjected to degrading treatment, and which is more than a follow-up of to determine if the incident has ceased.
Mediation	<p>General description: Refers to whether there are any routines for mediation between pupils who are in conflict.</p> <p>0 = Not exist 1 = Elements of mediation exist, but not as a routine 2 = Exists, and used as a routine</p> <p>Comments:</p> <ol style="list-style-type: none"> Sometimes these may occur as elements in a school's remedial work, but have not been introduced as a routine.

Current component	Determining possible component values
Systematic implementation	<p>General description: Refers to an overall assessment of the measures the school takes to remedy bullying and degrading treatment.</p> <p>0 = Not exist 1 = Partial systematic approach exists 2 = Highly systematic approach exists</p> <p>Comments:</p> <ul style="list-style-type: none"> 0. Does not exist = when what is done takes place more through individual measures where people in the interviews are not linked to each other. 1. Some elements of a systematic approach = where there is an idea behind what is done, and a picture of how the different parts fit together. 2. A largely systematic approach exists = where the remedial measures partly build on an evaluation/follow-up of bullying incidents they are working with, and where some interview groups shown awareness of how the schools' remedial work is organised (and why).
OTHER	
Pupils' confidence in the school's anti-bullying work	<p>General description: Refers to an overall assessment of pupils' awareness of and attitude to the school's work against bullying and degrading treatment.</p> <p>0 = Negative confidence 1 = Neither negative nor positive 2 = Positive confidence</p> <p>Comments:</p> <ul style="list-style-type: none"> 0. Negative confidence = when most statements from the pupils express criticism and/or dissatisfaction with the school's work 1. Indifferent = when most statements are expressed with indifference without being directly critical or expressing dissatisfaction. Also included here are schools, where pupil groups are not involved in the work. 2. Positive confidence = where most statements express confidence in the school's work, where the pupils are largely satisfied with what the school is doing
Anchoring anti-bullying work at the school	<p>General description: Refers to the anchoring of anti-bullying work at the school amongst staff.</p> <p>0 = No 1 = Yes, to some degree 2 = Yes, to a high degree</p> <p>Comments:</p> <ul style="list-style-type: none"> 0. No = when the school's work against bullying/degrading treatment is described as the responsibility of one or more at the school. 1. Yes, to some degree = when the school's work is described as something that is expected to involve all of the staff, but where the statement nevertheless shows that not all of the staff feel involved. 2. Yes, to a high degree = when the school's work involves all staff, and the statement shows that they all feel a responsibility and are involved even though the work may not always involve them equally.

ATTACHMENT 5

Component assessment of individual schools in groups of schools with similar working methods

	School cluster																							
	1					2				3			4					5						
	School		School			School		School			School			School		School			School		School			
	1	4	9	18	34	2	6	7	36	3	32	39	5	11	22	29	30	31	8	12	13	15	27	28
CC1																								
C1	L	M	M	L	L	L	M	M	M	M	L	M	H	M	H	H	H	M	L	M	H	M	H	M
C14	H	H	M	L	M	M	M	H	L	M	M	M	H	H	H	H	M	H	M	H	M	M	M	M
C17	M	M	M	M	L	M	M	L	M	H	M	M	M	H	H	M	M	M	M	M	M	M	M	M
C18	M	M	M	M	L	M	M	L	M	H	M	M	M	H	M	M	M	M	M	M	M	H	M	
CC2																								
C2	M	H	M	M	M	H	M	H	L	H	H	M	H	H	H	H	H	H	L	M	M	M	M	L
C3	M	H	H	H	L	H	H	L	L	H	H	M	H	H	H	H	H	H	L	M	H	H	H	M
CC3																								
C4	M	L	L	M	L	H	M	M	H	M	L	L	H	M	H	H	M	M	L	M	L	L	L	L
CC4																								
C8	M	H	H	H	H	H	H	H	H	H	H	M	H	H	H	H	M	H	H	M	M	M	M	M
C15	H	H	H	H	H	H	H	H	H	M	M	M	H	H	H	H	H	H	H	H	H	H	H	H
C5	H	H	H	H	H	H	H	H	H	M	L	L	M	M	H	L	M	M	M	M	H	M	H	M
CC5																								
C9	L	L	L	L	L	L	L	L	L	L	L	L	H	L	L	H	L	L	L	L	L	L	L	L
C19	M	L	L	L	M	L	L	L	L	L	M	M	M	M	L	L	L	L	L	H	L	L	L	H
C6	L	M	L	M	M	M	H	M	L	L	M	L	H	L	L	L	H	H	L	L	M	L	M	L
CC6																								
C10	L	L	L	M	L	H	M	M	M	L	L	L	H	M	H	H	H	M	M	M	M	M	M	M
C13	L	L	L	M	L	L	L	M	L	L	M	M	M	M	M	H	M	M	M	M	M	M	M	M
C7	L	L	L	L	L	M	M	L	L	L	L	L	M	H	H	H	M	H	M	M	L	L	L	M
CC7																								
C12	M	M	H	M	H	H	H	H	H	L	M	M	H	M	H	H	H	M	H	H	H	H	H	M
C16	H	H	M	L	M	H	H	H	H	M	M	L	H	H	H	H	H	H	M	H	H	H	H	H

A scheme of the component assessments is given below.

	School cluster														
	6						7		8				9		
	School			School			School				School				
10	16	17	26	37	38		14	23	25	19	20	21	24	33	35
	M	H	H	H	M	M	H	H	H	M	M	M	M	L	H
	H	H	M	H	M	M	H	H	M	M	M	M	M	M	H
	M	M	M	H	H	H	M	M	H	L	M	M	M	H	H
	M	M	M	H	H	H	M	M	H	L	M	M	M	M	M
	M	L	L	H	L	L	L	M	L	M	H	L	M	M	L
	M	L	H	M	L	L	H	M	L	M	M	L	L	M	L
	H	H	H	H	H	H	H	H	M	H	H	H	M	M	L
	M	M	H	M	H	M	H	H	H	M	M	M	M	H	H
	H	M	H	H	M	H	H	H	H	L	L	M	M	M	H
	M	L	L	L	M	M	M	H	H	L	L	M	M	H	H
	L	H	M	L	L	L	L	L	H	L	L	L	L	L	L
	L	L	M	L	L	L	L	L	L	L	L	L	L	L	H
	M	L	L	L	M	L	M	H	L	L	L	L	L	L	H
	M	M	M	M	H	M	H	M	M	M	M	M	L	L	
	M	M	M	M	M	M	M	M	M	M	M	L	L	H	M
	L	L	L	L	L	L	L	M	M	L	M	L	M	L	L
	H	H	H	H	H	H	H	H	L	H	H	H	L	L	H
	M	H	H	H	H	H	H	L	L	M	L	L	M	M	H

Table of component assessments

Component:	L=	M=	H=
C1: Follow-up/evaluation	lacking/carried out intermittently	implemented regularly, but no impact on anti-bullying work	implemented regularly and has direct impact on bullying work/basis for decisions
C2: Relationship-enhancing measures teacher-pupil	not available	elements of relationship-enhancing measures	conscious strategy expressed in acts to create closeness/relations
C3: Relationship-enhancing measures pupil-pupil	not available	elements of relationship-enhancing measures	conscious strategy expressed in acts to create closeness/relations
C4: Special lessons to develop pupils' social competence	lacking/specific measures exist	timetabled and carried out for certain classes	timetabled and carried out for all classes
C5: Pupils as players	not available	non-trained persons exist, they function as observers, rapporteurs	internally or externally trained persons functioning as observers, rapporteurs exist
C6: Pupils' active participation in prevention of bullying	not available	exists to some extent	exist to a high degree, pupils run different activities such as "dialogue with a friend", exercises in class, activities in the pupil cafe
C7: Disciplinary strategies	not available	exists, but teachers function independently in relation to them	exists and teachers find support in and act in accordance with them (possibly concerning sanctions applied to breaking rules/unacceptable behaviour)
C8: School rules	not available	exists and drawn up by school staff	exists and drawn up in cooperation by staff and pupils
C9: Information about bullying/degrading treatment to the pupils (school assembly about bullying for pupils)	not occur	on special occasions	regular meetings
C10: Training material	not available	exists but not used systematically	used systematically
C11: Staff information (brief information about bullying, bullying programmes)	not available	individuals/staff have received information	most staff have received information.
C12: Staff training (training concerning bullying/degrading treatment)	not available	individuals/staff have received training	most staff have received training
C13: Parent information/training	not available	parents are given information	training for parents provided
C14: Break monitoring system	not available	has a timetabled break monitoring system	has a developed break monitoring system, timetabled based on identification of "dangerous places", special staff given the task of being present among/arranging activities for pupils during breaks
C15: Cooperative teams	not available	exists and covers staff with special competence (social pedagogues, special pedagogues, school nurses, counsellors)	in addition to staff with special competence, "ordinary teachers" are included in the cooperative team
C16: Case documentation	not available	takes place, but not in accordance with established routines	takes place based on established routines
C17: Dealing with bullies	absence/existence remedial routines	remedial and follow-up routines exist	remedial, follow-up and processing/supportive routines exist
C18: Dealing with victims	absence/existence remedial routines	remedial and follow-up routines exist	remedial, follow-up and processing/supportive routines exist
C19: Mediation	not available	elements exist	used as routine when pupils in conflict with each other

Table attachment

Table attachment

Table A.1 Pupils' victimisation in relation to meaningfulness (KASAM) by i) younger and older pupils ii) schools with lower and higher proportion of pupils entitled to mother tongue tuition. Number and percent.

		School year			
		4 – 6		7 – 9	
		Not victimised	Victimised but not bullied	bullied	Not victimised
Number in group		1082	1546	252	1911
When I speak to teachers or other school staff, I get the impression that they really understand me	Yes	72%	54%	49%	42%
I often feel unsure about myself at school	No	66%	52%	30%	64%
I usually understand why my classmates behave as they do	Yes	49%	46%	49%	41%
I often feel confused or lost at school	No	85%	73%	53%	81%
KASAM: Comprehensibility	Mean	10.45	9.83	9.13	9.95
High values = positive. Max. value: 12	No. re- sponses	1014	1411	231	1737
					2535
					345

Table A.2 Pupils' victimisation in relation to manageability (KASAM) by i) younger and older pupils ii) schools with lower and higher proportion of pupils entitled to mother tongue tuition. Number and percent.

		School year			
		4 – 6		7 – 9	
		Not victimised	Victimised but not bullied	bullied	Not victimised
Number in group		1082	1546	252	1911
In the event of any difficulties occurring at school, I know that I can always get help from teachers/other school staff	Yes	85%	74%	59%	65%
I can usually manage my school tasks and home work	Yes	83%	75%	71%	72%
I think that teachers treat me unfairly	No	76%	60%	43%	64%
I am certain that it will work out well for me at school, even though sometimes it is hard	Yes	88%	80%	64%	75%
I have been let down by teachers I trusted	No	75%	57%	39%	68%
KASAM: Manageability	Mean	13.92	13.11	11.99	13.11
High values = positive. Max. value: 15	No. re- sponses	1007	1419	232	1753
					2530
					343

Table A.3 Pupils' victimisation by number of friends in the class. Number and percent.

How many friends do you have in the class?		Socially and/or physically:			
		Not victimised	Victimised (but not bullied)	Bullied	Total
All – most teachers	1367	1515	154	3036	
	54.7%	41.4%	26.5%	45.0%	
Approximately half – several teachers	801	1421	212	2434	
	32.0%	38.8%	36.4%	36.1%	
One teacher	180	382	91	653	
	7.2%	10.4%	15.6%	9.7%	
No teachers	153	341	125	619	
	6.1%	9.3%	21.5%	9.2%	
Total	2501	3659	582	6742	
	100.0%	100.0%	100.0%	100.0%	

Table A.4 Pupils' victimisation in relation to teachers who care. Number and percent.

		Socially and/or physically:			
		Not victimised	Victimised (but not bullied)	Bullied	Total
Teachers care about you	All – most teachers	1367	1515	154	3036
		54.7%	41.4%	26.5%	45.0%
Approximately half – several teachers	801	1421	212	2434	
		32.0%	38.8%	36.4%	36.1%
One teacher	180	382	91	653	
		7.2%	10.4%	15.6%	9.7%
No teachers	153	341	125	619	
		6.1%	9.3%	21.5%	9.2%
Total	2501	3659	582	6742	
	100.0%	100.0%	100.0%	100.0%	

Table A.5 Pupils' victimisation by social relations to classmates and teachers

		Socially and/or physically:			
		Not victimised	Victimised (but not bullied)	Bullied	Total
Group membership	Very low (no pupil friend/no teacher who cares)	5	8	43	56
		0.3%	0.4%	18.8%	1.4%
Low (1 pupil friend / 1 teacher who cares)	2	8	8	18	
		0.1%	0.4%	3.5%	.4%
High (2–3 pupil friends/some teachers who care)	62	211	42	315	
		3.5%	10.0%	18.3%	7.7%
Very high (4 or more pupil friends/about half-all teachers)	1687	1886	136	3709	
		96.1%	89.3%	59.4%	90.5%
Total	1756	2113	229	4098	
	100.0%	100.0%	100.0%	100.0%	

Table A.6 Changes in social and physical bullying over time. Individual components and component clusters.

Measures and combinations of measures	OR	CI	z	P
C1: Follow-up/evaluation	1.32	1.03–1.70	2.155	0.0312
C2: Relationship-enhancing measures teacher-pupil	0.99	0.77–1.26	-0.118	ns
C3: Relationship-enhancing measures pupil–pupil	1.14	0.92–1.41	1.230	ns
C4: Special lessons	1.05	0.85–1.30	0.445	ns
C5: Pupils as players	0.80	0.65–0.99	-2.051	0.0403
C6: Pupils active in prevention	1.39	0.99–1.94	1.914	0.0556
C7: Disciplinary strategies	1.61	1.09–2.37	2.372	0.0177
C8: School rules	0.98	0.79–1.20	-0.214	ns
C9: School assemblies about bullying	1.24	0.86–1.80	1.156	ns
C10: Training material	0.90	0.66–1.24	-0.627	ns
C12: Staff training (bullying/degrading treatment)	1.23	0.99–1.52	1.867	0.0619
C13: Parent information/training	0.99	0.59–1.65	-0.054	ns
C14: Break monitoring system	1.30	1.03–1.65	2.225	0.0261
C15: Cooperative teams	1.30	1.03–1.63	2.198	0.0279
C16: Case documentation	1.15	0.94–1.42	1.333	ns
C17a: Dealing with bullies	1.08	0.85–1.36	0.602	ns
C17b: Dealing with bullies	1.34	0.96–1.86	1.715	0.0863
C18a: Dealing with victims	1.08	0.84–1.39	0.579	ns
C18b: Dealing with victims	1.24	0.89–1.73	1.286	ns
C19: Mediation	0.95	0.63–1.44	-0.239	ns
Component cluster 1	1.31	1.05–1.64	2.398	0.0165
Component cluster 2	1.13	0.92–1.40	1.157	ns
Component cluster 3 see special lessons	1.05	0.85–1.30	0.445	ns
Component cluster 4	0.92	0.75–1.14	-0.752	ns
Component cluster 5	0.98	0.39–2.50	-0.038	ns
Component cluster 6	1.22	0.70–2.13	0.693	ns
Component cluster 7	1.05	0.84–1.31	0.426	ns

Table A.7 Changes in social and physical bullying over time for girls. Individual components and component clusters.

Measures and combinations of measures	OR	CI	z	P
C1: Follow-up/evaluation	1.51	1.04–2.18	2.191	0.0285
C2: Relationship-enhancing measures teacher-pupil	0.89	0.62–1.27	-0.634	ns
C3: Relationship-enhancing measures pupil–pupil	0.92	0.67–1.25	-0.543	ns
C4: Special lessons	1.14	0.83–1.56	0.814	ns
C5: Pupils as players	0.85	0.63–1.16	-1.019	ns
C6: Pupils active in prevention	1.85	1.13–3.02	2.435	0.0149
C7: Disciplinary strategies	1.21	0.71–2.07	0.714	ns
C8: School rules	1.14	0.84–1.55	0.858	ns
C9: School assemblies about bullying	1.94	1.12–3.33	2.384	0.0171
C10: Training material	0.85	0.54–1.34	-0.690	ns
C12: Staff training (bullying/degrading treatment)	1.18	0.86–1.62	1.034	ns
C13: Parent information/training	0.66	0.31–1.40	-1.090	ns
C14: Break monitoring system	1.46	1.03–2.08	2.127	0.0334
C15: Cooperative teams	1.25	0.88–1.76	1.237	ns
C16: Case documentation	1.05	0.78–1.43	0.335	ns
C17a: Dealing with bullies	1.50	1.07–2.12	2.322	0.0202
C17b: Dealing with bullies	1.45	0.85–2.47	1.362	ns
C18a: Dealing with victims	1.67	1.15–2.41	2.705	0.0068
C18b: Dealing with victims	1.65	0.97–2.81	1.837	0.0662
C19: Mediation	0.78	0.44–1.38	-0.861	ns
Component cluster 1	1.82	1.31–2.53	3.597	0.0003
Component cluster 2	0.93	0.68–1.26	-0.464	ns
Component cluster 3 see special lessons	1.14	0.83–1.56	0.814	ns
Component cluster 4	1.06	0.78–1.44	0.387	ns
Component cluster 5	5.48	0.86–35.17	1.795	0.0727
Component cluster 6	0.62	0.30–1.29	-1.276	ns
Component cluster 7	0.92	0.67–1.28	-0.469	ns

Table A.8 Changes in social and physical bullying over time for boys. Individual components and component clusters.

Measures and combinations of measures	OR	CI	z	P
C1: Follow-up/evaluation	1.14	0.80–1.62	0.715	ns
C2: Relationship-enhancing measures teacher-pupil	1.08	0.77–1.53	0.457	ns
C3: Relationship-enhancing measures pupil–pupil	1.38	1.03–1.86	2.135	0.0328
C4: Special lessons	1.08	0.81–1.45	0.526	ns
C5: Pupils as players	0.76	0.57–1.02	-1.835	0.0665
C6: Pupils active in prevention	1.04	0.65–1.66	0.153	ns
C7: Disciplinary strategies	2.14	1.20–3.83	2.561	0.0104
C8: School rules	0.84	0.64–1.12	-1.162	ns
C9: School assemblies about bullying	0.78	0.46–1.31	-0.936	ns
C10: Training material	0.96	0.62–1.51	-0.158	ns
C12: Staff training (bullying/degrading treatment)	1.27	0.95–1.71	1.605	ns
C13: Parent information/training	1.34	0.66–2.73	0.800	ns
C14: Break monitoring system	1.19	0.86–1.63	1.057	ns
C15: Cooperative teams	1.31	0.96–1.79	1.683	0.0924
C16: Case documentation	1.22	0.92–1.62	1.373	ns
C17a: Dealing with bullies	0.76	0.54–1.05	-1.649	0.0991
C17b: Dealing with bullies	1.21	0.79–1.85	0.875	ns
C18a: Dealing with victims	0.68	0.48–0.98	-2.063	0.0391
C18b: Dealing with victims	0.99	0.64–1.51	-0.068	ns
C19: Mediation	1.08	0.59–1.96	0.242	ns
Component cluster 1	0.94	0.69–1.28	-0.363	ns
Component cluster 2	1.35	1.01–1.81	2.028	0.0426
Component cluster 3 see special lessons	1.08	0.81–1.45	0.526	ns
Component cluster 4	0.82	0.61–1.09	-1.392	ns
Component cluster 5	0.17	0.03–1.08	-1.877	0.0605
Component cluster 6	2.80	1.08–7.26	2.115	0.0344
Component cluster 7	1.17	0.86–1.59	1.026	ns

Table A.9 Changes in social bullying over time. Individual components and component clusters.

Measures and combinations of measures	OR	CI	z	P
C1: Follow-up/evaluation	1.17	0.88–1.55	1.062	ns
C2: Relationship-enhancing measures teacher-pupil	1.02	0.77–1.36	0.166	ns
C3: Relationship-enhancing measures pupil–pupil	1.14	0.90–1.45	1.064	ns
C4: Special lessons	1.21	0.95–1.54	1.537	ns
C5: Pupils as players	0.77	0.60–0.97	-2.196	0.0281
C6: Pupils active in prevention	1.35	0.92–1.97	1.553	ns
C7: Disciplinary strategies	1.67	1.06–2.62	2.212	0.0270
C8: School rules	0.98	0.77–1.23	-0.211	ns
C9: School assemblies about bullying	1.07	0.71–1.61	0.329	ns
C10: Training material	0.88	0.61–1.27	-0.697	ns
C12: Staff training (bullying/degrading treatment)	0.85	0.70–1.03	-1.671	0.0947
C13: Parent information/training	0.85	0.49–1.47	-0.589	ns
C14: Break monitoring system	1.25	0.96–1.63	1.645	0.1000
C15: Cooperative teams	1.22	0.94–1.59	1.488	ns
C16: Case documentation	1.20	0.95–1.52	1.547	ns
C17a: Dealing with bullies	1.13	0.87–1.48	0.926	ns
C17b: Dealing with bullies	1.22	0.85–1.75	1.065	ns
C18a: Dealing with victims	1.17	0.88–1.55	1.099	ns
C18b: Dealing with victims	1.22	0.85–1.75	1.065	ns
C19: Mediation	0.95	0.61–1.50	-0.210	ns
Component cluster 1	1.26	0.98–1.62	1.832	0.0670
Component cluster 2	1.12	0.88–1.42	0.909	ns
Component cluster 3 see special lessons	1.21	0.95–1.54	1.537	ns
Component cluster 4	0.87	0.69–1.10	-1.193	ns
Component cluster 5	0.77	0.24–2.45	-0.449	ns
Component cluster 6	1.04	0.56–1.96	0.129	ns
Component cluster 7	1.04	0.81–1.33	0.286	ns

Table A.10 Changes in social bullying over time for girls. Individual components and component clusters.

Measures and combinations of measures	OR	CI	z	P
C1: Follow-up/evaluation	1.52	1.02–2.27	2.068	0.0386
C2: Relationship-enhancing measures teacher-pupil	0.86	0.58–1.26	-0.797	ns
C3: Relationship-enhancing measures pupil–pupil	0.95	0.68–1.33	-0.281	ns
C4: Special lessons	1.19	0.85–1.67	1.014	ns
C5: Pupils as players	0.90	0.65–1.26	-0.609	ns
C6: Pupils active in prevention	1.71	0.99–2.94	1.937	0.0527
C7: Disciplinary strategies	1.16	0.65–2.06	0.503	ns
C8: School rules	1.08	0.78–1.50	0.451	ns
C9: School assemblies about bullying	2.03	1.12–3.66	2.345	0.0190
C10: Training material	0.84	0.52–1.37	-0.705	ns
C12: Staff training (bullying/degrading treatment)	1.18	0.84–1.66	0.972	ns
C13: Parent information/training	0.62	0.28–1.38	-1.173	ns
C14: Break monitoring system	1.41	0.96–2.06	1.740	0.0819
C15: Cooperative teams	1.26	0.87–1.82	1.201	ns
C16: Case documentation	1.12	0.81–1.56	0.683	ns
C17a: Dealing with bullies	1.52	1.05–2.20	2.240	0.0251
C17b: Dealing with bullies	1.32	0.75–2.32	0.968	ns
C18a: Dealing with victims	1.58	1.07–2.34	2.288	0.0221
C18b: Dealing with victims	1.32	0.75–2.32	0.968	ns
C19: Mediation	0.85	0.45–1.60	-0.518	ns
Component cluster 1	1.65	1.16–2.34	2.808	0.0050
Component cluster 2	0.93	0.67–1.29	-0.431	ns
Component cluster 3 see special lessons	1.19	0.85–1.67	1.014	ns
Component cluster 4	1.00	0.72–1.39	0.012	ns
Component cluster 5	–	–	–	ns
Component cluster 6	0.71	0.33–1.56	-0.846	ns
Component cluster 7	0.94	0.66–1.33	-0.368	ns

Table A.11 Changes in social bullying over time for boys. Individual components and component clusters.

Measures and combinations of measures	OR	CI	z	P
C1: Follow-up/evaluation	0.86	0.57–1.30	-0.698	ns
C2: Relationship-enhancing measures teacher-pupil	1.21	0.79–1.84	0.876	ns
C3: Relationship-enhancing measures pupil–pupil	1.33	0.93–1.89	1.583	ns
C4: Special lessons	1.24	0.87–1.75	1.190	ns
C5: Pupils as players	0.64	0.45–0.90	-2.554	0.0106
C6: Pupils active in prevention	1.06	0.62–1.83	0.224	ns
C7: Disciplinary strategies	2.78	1.30–5.93	2.638	0.0083
C8: School rules	0.86	0.61–1.21	-0.865	ns
C9: School assemblies about bullying	0.50	0.27–0.93	-2.180	0.0293
C10: Training material	0.75	0.43–1.33	-0.979	ns
C12: Staff training (bullying/degrading treatment)	1.31	0.93–1.86	1.525	ns
C13: Parent information/training	1.15	0.53–2.49	0.349	ns
C14: Break monitoring system	1.14	0.78–1.65	0.663	ns
C15: Cooperative teams	1.15	0.79–1.68	0.754	ns
C16: Case documentation	1.24	0.88–1.73	1.231	ns
C17a: Dealing with bullies	0.77	0.52–1.13	-1.332	ns
C17b: Dealing with bullies	1.05	0.65–1.70	0.205	ns
C18a: Dealing with victims	0.79	0.52–1.20	-1.110	ns
C18b: Dealing with victims	1.05	0.65–1.70	0.205	ns
C19: Mediation	1.02	0.53–1.95	0.056	ns
Component cluster 1	0.91	0.63–1.31	-0.502	ns
Component cluster 2	1.32	0.93–1.87	1.554	ns
Component cluster 3 see special lessons	1.24	0.87–1.75	1.190	ns
Component cluster 4	0.74	0.53–1.04	-1.722	0.0851
Component cluster 5	0.00	–	–	ns
Component cluster 6	1.97	0.65–6.02	1.192	ns
Component cluster 7	1.16	0.81–1.67	0.801	ns

Table A.12 Changes in physical bullying over time. Individual components and component clusters.

Measures and combinations of measures	OR	CI	z	P
C1: Follow-up/evaluation	1.56	1.10–2.22	2.506	0.0122
C2: Relationship-enhancing measures teacher-pupil	1.01	0.73–1.39	0.033	ns
C3: Relationship-enhancing measures pupil–pupil	1.35	1.01–1.81	2.014	0.0440
C4: Special lessons	1.02	0.77–1.37	0.166	ns
C5: Pupils as players	0.89	0.66–1.18	-0.814	ns
C6: Pupils active in prevention	1.59	0.99–2.55	1.930	0.0536
C7: Disciplinary strategies	1.45	0.87–2.43	1.423	ns
C8: School rules	0.94	0.71–1.25	-0.397	ns
C9: School assemblies about bullying	1.06	0.65–1.74	0.234	ns
C10: Training material	1.02	0.67–1.56	0.110	ns
C12: Staff training (bullying/degrading treatment)	1.30	0.97–1.75	1.736	0.0826
C13: Parent information/training	1.50	0.65–3.44	0.956	ns
C14: Break monitoring system	1.29	0.94–1.77	1.594	ns
C15: Cooperative teams	1.18	0.93–1.51	1.349	ns
C16: Case documentation	1.21	0.91–1.60	1.297	ns
C17a: Dealing with bullies	0.96	0.69–1.32	-0.264	ns
C17b: Dealing with bullies	1.83	1.17–2.86	2.650	0.0080
C18a: Dealing with victims	0.87	0.61–1.24	-0.762	ns
C18b: Dealing with victims	1.83	1.17–2.86	2.650	0.0080
C19: Mediation	0.84	0.47–1.48	-0.620	ns
Component cluster 1	1.31	0.96–1.77	1.727	0.0842
Component cluster 2	1.37	1.03–1.83	2.156	0.0311
Component cluster 3 see special lessons	1.02	0.77–1.37	0.166	ns
Component cluster 4	0.97	0.73–1.28	-0.231	ns
Component cluster 5	0.99	0.29–3.37	-0.014	ns
Component cluster 6	1.39	0.68–2.84	0.896	ns
Component cluster 7	1.13	0.83–1.53	0.768	ns

Table A.13 Changes in physical bullying over time for girls. Individual components and component clusters.

Measures and combinations of measures	OR	CI	z	P
C1: Follow-up/evaluation	1.86	1.06–3.26	2.178	0.0294
C2: Relationship-enhancing measures teacher-pupil	0.96	0.56–1.63	-0.167	ns
C3: Relationship-enhancing measures pupil–pupil	1.05	0.65–1.70	0.208	ns
C4: Special lessons	1.53	0.92–2.53	1.655	0.0979
C5: Pupils as players	0.89	0.55–1.45	-0.473	ns
C6: Pupils active in prevention	2.91	1.25–6.75	2.489	0.0128
C7: Disciplinary strategies	1.20	0.55–2.63	0.457	ns
C8: School rules	1.12	0.69–1.82	0.472	ns
C9: School assemblies about bullying	1.45	0.69–3.07	0.978	ns
C10: Training material	0.95	0.48–1.88	-0.157	ns
C12: Staff training (bullying/degrading treatment)	2.02	1.22–3.33	2.739	0.0062
C13: Parent information/training	0.99	0.22–4.46	-0.008	ns
C14: Break monitoring system	1.58	0.91–2.73	1.638	ns
C15: Cooperative teams	0.96	0.53–1.72	-0.145	ns
C16: Case documentation	0.98	0.60–1.59	-0.085	ns
C17a: Dealing with bullies	1.05	0.62–1.80	0.197	ns
C17b: Dealing with bullies	1.24	0.49–3.12	0.456	ns
C18a: Dealing with victims	1.18	0.63–2.01	0.408	ns
C18b: Dealing with victims	1.24	0.49–3.12	0.456	ns
C19: Mediation	0.48	0.21–1.10	-1.729	0.0838
Component cluster 1	1.93	1.16–3.21	2.526	0.0115
Component cluster 2	1.09	0.68–1.76	0.356	ns
Component cluster 3 see special lessons	1.53	0.92–2.53	1.655	0.0979
Component cluster 4	1.06	0.66–1.71	0.234	ns
Component cluster 5	2.64	0.36–19.36	0.956	ns
Component cluster 6	0.81	0.31–2.15	-0.419	ns
Component cluster 7	1.08	0.64–1.82	0.279	ns

Table A.14 Changes in physical bullying over time for boys. Individual components and component clusters.

Measures and combinations of measures	OR	CI	z	P
C1: Follow-up/evaluation	1.16	0.74–1.84	0.645	ns
C2: Relationship-enhancing measures teacher-pupil	1.05	0.69–1.60	0.246	ns
C3: Relationship-enhancing measures pupil–pupil	1.56	1.08–2.27	2.354	0.0186
C4: Special lessons	0.85	0.59–1.22	-0.891	ns
C5: Pupils as players	0.90	0.63–1.29	-0.566	ns
C6: Pupils active in prevention	1.10	0.61–1.99	0.311	ns
C7: Disciplinary strategies	1.60	0.81–3.17	1.356	ns
C8: School rules	0.86	0.60–1.22	-0.845	ns
C9: School assemblies about bullying	0.75	0.38–1.46	-0.852	ns
C10: Training material	1.11	0.64–1.90	0.366	ns
C12: Staff training (bullying/degrading treatment)	1.02	0.70–1.48	0.101	ns
C13: Parent information/training	1.66	0.61–4.55	0.986	ns
C14: Break monitoring system	1.14	0.77–1.69	0.656	ns
C15: Cooperative teams	1.23	0.83–1.80	1.036	ns
C16: Case documentation	1.31	0.92–1.88	1.507	ns
C17a: Dealing with bullies	0.87	0.58–1.32	-0.637	ns
C17b: Dealing with bullies	1.98	1.17–3.34	2.555	0.0106
C18a: Dealing with victims	0.73	0.46–1.14	-1.398	ns
C18b: Dealing with victims	1.98	1.17–3.34	2.555	0.0106
C19: Mediation	1.18	0.52–2.70	0.391	ns
Component cluster 1	0.99	0.68–1.46	-0.036	ns
Component cluster 2	1.59	1.10–2.29	2.484	0.0130
Component cluster 3 see special lessons	0.85	0.59–1.22	-0.891	ns
Component cluster 4	0.93	0.65–1.33	-0.388	ns
Component cluster 5	0.34	0.05–2.48	-1.065	ns
Component cluster 6	2.25	0.74–6.81	1.438	ns
Component cluster 7	1.14	0.78–1.68	0.687	ns

Table A.15 Size of the effects for social and physical bullying in total material at individual level (n=3 456). Individual components and component clusters.

Individual components and component clusters	Subjected to social and physical bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.042	0.067	1.6340	1.1173 to 2.3898	0.3717	0.0929 to 0.6056	0.0106	
C2: Relationship-enhancing measures teacher-pupil	0.056	0.063	1.1185	0.7873 to 1.5889	0.1000	-0.2353 to 0.3793	ns	
C3: Relationship-enhancing measures pupil-pupil	0.050	0.070	1.4427	1.0787 to 1.9297	0.2916	0.0620 to 0.5152	0.0131	
C4: Special lessons	0.057	0.064	1.1291	0.8453 to 1.5081	0.1078	-0.1550 to 0.3559	ns	
C5: Pupils as players	0.063	0.060	0.9511	0.7196 to 1.2571	-0.0482	-0.3224 to 0.2182	ns	
C6: Pupils active in prevention	0.039	0.065	1.6957	1.0354 to 2.7769	0.3942	0.0323 to 0.6580	0.0339	
C7: Disciplinary strategies	0.052	0.062	1.1972	0.6980 to 2.0533	0.1560	-0.3785 to 0.5146	ns	
C8: School rules	0.057	0.068	1.1971	0.9017 to 1.5891	0.1552	-0.0864 to 0.4151	ns	
C9: School assemblies about bullying	0.051	0.062	1.2310	0.7179 to 2.1106	0.1780	-0.3441 to 0.5289	ns	
C10: Training material	0.055	0.062	1.1459	0.7401 to 1.7743	0.1204	-0.3081 to 0.4405	ns	
C12: Staff training (bully. & degrad. trtm.)	0.054	0.073	1.3667	1.0331 to 1.8081	0.2537	0.0264 to 0.4972	0.0282	
C13: Parent information/training	0.066	0.061	0.9203	0.4431 to 1.9115	-0.0809	-1.0524 to 0.4648	ns	
C14: Break monitoring system	0.050	0.065	1.3149	0.9348 to 1.8495	0.2275	-0.0611 to 0.4765	ns	
C15: Cooperative teams	0.054	0.091	1.7560	1.2935 to 2.3839	0.4074	0.1750 to 0.6800	0.0003	
C16: Case documentation	0.052	0.072	1.4056	1.0637 to 1.8574	0.2735	0.0499 to 0.5037	0.0162	
C17: Dealing with bullies	0.070	0.058	0.8259	0.6121 to 1.1143	-0.1962	-0.5361 to 0.1044	ns	
C17b: Dealing with bullies	0.058	0.098	1.7597	1.1664 to 2.6548	0.4067	0.0987 to 0.8144	0.0064	
C18: Dealing with victims	0.070	0.059	0.8255	0.5983 to 1.1390	-0.1965	-0.5728 to 0.1224	ns	
C18b: Dealing with victims	0.058	0.098	1.7597	1.1664 to 2.6548	0.4067	0.0987 to 0.8144	0.0064	
C19: Mediation	0.071	0.061	0.8518	0.4761 to 1.5241	-0.1617	-0.9360 to 0.3347	ns	
Component cluster 1	0.058	0.063	1.1051	0.8226 to 1.4845	0.0896	-0.1836 to 0.3423	ns	
Component cluster 2	0.052	0.069	1.3372	1.0037 to 1.7815	0.2390	0.0031 to 0.4692	0.0465	
Component cluster 3 (see special lessons)	0.057	0.064	1.1291	0.8453 to 1.5081	0.1078	-0.1550 to 0.3559	ns	
Component cluster 4	0.056	0.071	1.2982	0.9792 to 1.7212	0.2169	-0.0165 to 0.4687	0.0691	
Component cluster 5	0.026	0.063	2.5374	0.7995 to 8.0529	0.5904	-0.1713 to 0.8940	ns	
Component cluster 6	0.050	0.062	1.2490	0.5026 to 3.1035	0.1894	-0.8194 to 0.6716	ns	
Component cluster 7	0.059	0.067	1.1519	0.8632 to 1.5371	0.1241	-0.1242 to 0.3954	ns	

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.16 Size of the effects for social and physical bullying of girls at individual level (n=1 776). Individual components and component clusters.

Individual components and component clusters	Subjected to social and physical bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.031	0.054	1.7929	0.9835 to 3.2682	0.4286 -0.0125 to 0.7705	0.0535		
C2: Relationship-enhancing measures teacher-pupil	0.053	0.047	0.8914	0.5283 to 1.5040	-0.1154 -0.7465 to 0.3586	ns		
C3: Relationship-enhancing measures pupil-pupil	0.046	0.050	1.0790	0.6943 to 1.6768	0.0698 -0.3518 to 0.4674	ns		
C4: Special lessons	0.051	0.047	0.9222	0.5932 to 1.4335	-0.0801 -0.5484 to 0.3458	ns		
C5: Pupils as players	0.049	0.048	0.9662	0.6252 to 1.4930	-0.0333 -0.4718 to 0.3856	ns		
C6: Pupils active in prevention	0.026	0.052	2.0899	0.9011 to 4.8469	0.5082 -0.0835 to 0.8631	0.0793		
C7: Disciplinary strategies	0.060	0.048	0.7855	0.3711 to 1.6627	-0.2568 -1.4036 to 0.4019	ns		
C8: School rules	0.045	0.054	1.2203	0.7875 to 1.8910	0.1724 -0.2005 to 0.5852	ns		
C9: School assemblies about bullying	0.019	0.051	2.8334	0.8851 to 9.0702	0.6349 -0.0709 to 0.9684	0.0668		
C10: Training material	0.044	0.049	1.1137	0.5673 to 2.1865	0.0976 -0.6484 to 0.5730	ns		
C12: Staff training (bully. & degrad. trtm.)	0.048	0.049	1.0072	0.6434 to 1.5769	0.0068 -0.4027 to 0.4631	ns		
C13: Parent information/training	0.028	0.049	1.7878	0.4309 to 7.4174	0.4282 -0.9819 to 0.9020	ns		
C14: Break monitoring system	0.035	0.053	1.5308	0.8675 to 2.7012	0.3346 -0.1293 to 0.6963	ns		
C15: Cooperative teams	0.046	0.058	1.2790	0.7771 to 2.1050	0.2081 -0.1877 to 0.7237	ns		
C16: Case documentation	0.044	0.054	1.2457	0.8075 to 1.9218	0.1886 -0.1838 to 0.5772	ns		
C17: Dealing with bullies	0.052	0.047	0.9075	0.5659 to 1.4552	-0.0967 -0.6311 to 0.3445	ns		
C17b: Dealing with bullies	0.047	0.060	1.2841	0.6303 to 2.6161	0.2107 -0.2951 to 1.0598	ns		
C18: Dealing with victims	0.051	0.048	0.9282	0.5555 to 1.5509	-0.0734 -0.6686 to 0.3833	ns		
C18b: Dealing with victims	0.047	0.060	1.2841	0.6303 to 2.6161	0.2107 -0.2951 to 1.0598	ns		
C19: Mediation	0.033	0.049	1.5016	0.4652 to 4.8472	0.3229 -0.9134 to 0.8249	ns		
Component cluster 1	0.045	0.050	1.1373	0.7166 to 1.8050	0.1153 -0.3241 to 0.5049	ns		
Component cluster 2	0.051	0.047	0.9098	0.5887 to 1.4060	-0.0941 -0.5502 to 0.3356	ns		
Component cluster 3 (see special lessons)	0.051	0.047	0.9222	0.5932 to 1.4335	-0.0801 -0.5484 to 0.3458	ns		
Component cluster 4	0.044	0.056	1.2802	0.8260 to 1.9840	0.2092 -0.1559 to 0.6174	ns		
Component cluster 5	0.000	0.050	—	— to —	1.0000 -0.1426 to 1.2268	0.0660		
Component cluster 6	0.082	0.047	0.5608	0.1970 to 1.5968	-0.7193 -3.0493 to 0.3476	ns		
Component cluster 7	0.046	0.054	1.1768	0.7513 to 1.8433	0.1434 -0.2386 to 0.5833	ns		

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.17 Size of the effects for social and physical bullying of boys at individual level (n=1 671). Individual components and component clusters.

Individual components and component clusters	Subjected to social and physical bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.055	0.081	1.5011	0.9171 to 2.4569	0.3153	-0.0761 to 0.6249	ns	
C2: Relationship-enhancing measures teacher-pupil	0.060	0.080	1.3591	0.8450 to 2.1860	0.2484	-0.1544 to 0.5696	ns	
C3: Relationship-enhancing measures pupil-pupil	0.053	0.093	1.8240	1.2340 to 2.6961	0.4277	0.1561 to 0.6933	0.0023	
C4: Special lessons	0.064	0.082	1.2985	0.8822 to 1.9111	0.2150	-0.1089 to 0.5159	ns	
C5: Pupils as players	0.078	0.074	0.9437	0.6555 to 1.3586	-0.0550	-0.4114 to 0.2889	ns	
C6: Pupils active in prevention	0.054	0.079	1.5026	0.8146 to 2.7718	0.3165	-0.1913 to 0.6629	ns	
C7: Disciplinary strategies	0.046	0.078	1.7607	0.8061 to 3.8456	0.4122	-0.1956 to 0.7661	ns	
C8: School rules	0.070	0.085	1.2222	0.8415 to 1.7752	0.1690	-0.1390 to 0.5110	ns	
C9: School assemblies about bullying	0.091	0.074	0.8000	0.4289 to 1.4921	-0.2273	-1.0704 to 0.3220	ns	
C10: Training material	0.066	0.077	1.1691	0.6576 to 2.0785	0.1351	-0.4355 to 0.5298	ns	
C12: Staff training (bully. & degrad. trtm.)	0.061	0.098	1.6638	1.1561 to 2.3945	0.3745	0.1057 to 0.6664	0.0057	
C13: Parent information/training	0.120	0.074	0.5863	0.2449 to 1.4036	-0.6210	-2.2235 to 0.2610	ns	
C14: Break monitoring system	0.065	0.079	1.2365	0.8046 to 1.9004	0.1788	-0.2021 to 0.5000	ns	
C15: Cooperative teams	0.062	0.130	2.2491	1.5193 to 3.3296	0.5208	0.2489 to 0.8492	0.0000	
C16: Case documentation	0.062	0.092	1.5288	1.0608 to 2.2031	0.3245	0.0459 to 0.6138	0.0220	
C17: Dealing with bullies	0.090	0.070	0.7639	0.5176 to 1.1274	-0.2813	-0.7451 to 0.1156	ns	
C17b: Dealing with bullies	0.070	0.136	2.1067	1.2636 to 3.5122	0.4888	0.1340 to 0.9725	0.0035	
C18: Dealing with victims	0.092	0.071	0.7537	0.4974 to 1.1419	-0.2968	-0.8134 to 0.1245	ns	
C18b: Dealing with victims	0.070	0.136	2.1067	1.2636 to 3.5122	0.4888	0.1340 to 0.9725	0.0035	
C19: Mediation	0.106	0.074	0.6669	0.3371 to 1.3196	-0.4463	-1.5252 to 0.2276	ns	
Component cluster 1	0.072	0.077	1.0808	0.7355 to 1.5881	0.0693	-0.2916 to 0.3959	ns	
Component cluster 2	0.053	0.093	1.8186	1.2335 to 2.6813	0.4261	0.1555 to 0.6920	0.0022	
Component cluster 3 (see special lessons)	0.064	0.082	1.2985	0.8822 to 1.9111	0.2150	-0.1089 to 0.5159	ns	
Component cluster 4	0.068	0.089	1.3419	0.9270 to 1.9425	0.2375	-0.0580 to 0.5649	ns	
Component cluster 5	0.057	0.076	1.3712	0.4216 to 4.4601	0.2554	-1.0315 to 0.7776	ns	
Component cluster 6	0.020	0.077	4.1806	0.5727 to 30.5180	0.7459	-0.3466 to 1.0229	ns	
Component cluster 7	0.072	0.081	1.1301	0.7746 to 1.6488	0.1068	-0.2130 to 0.4634	ns	

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.18 Size of the effects for social bullying in total material at individual level (n=3 466). Individual components and component clusters.

Individual components and component clusters	Subjected to social bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.028	0.052	1.8964	1.2009 to 2.9949	0.4595	0.1499 to 0.7118	0.0053	
C2: Relationship-enhancing measures teacher-pupil	0.042	0.048	1.1453	0.7674 to 1.7094	0.1216	-0.2662 to 0.4357	ns	
C3: Relationship-enhancing measures pupil-pupil	0.039	0.052	1.3447	0.9688 to 1.8665	0.2463	-0.0272 to 0.5118	0.0757	
C4: Special lessons	0.038	0.052	1.3890	0.9876 to 1.9536	0.2695	-0.0110 to 0.5325	0.0580	
C5: Pupils as players	0.048	0.045	0.9384	0.6831 to 1.2890	-0.0625	-0.3839 to 0.2477	ns	
C6: Pupils active in prevention	0.033	0.049	1.5066	0.8773 to 2.5873	0.3252	-0.1234 to 0.6393	ns	
C7: Disciplinary strategies	0.031	0.048	1.5511	0.7830 to 3.0724	0.3441	-0.2418 to 0.6953	ns	
C8: School rules	0.044	0.051	1.1635	0.8419 to 1.6079	0.1343	-0.1475 to 0.4420	ns	
C9: School assemblies about bullying	0.038	0.047	1.2671	0.6787 to 2.3657	0.2029	-0.4177 to 0.5905	ns	
C10: Training material	0.032	0.049	1.5453	0.8848 to 2.6988	0.3416	-0.1144 to 0.6557	ns	
C12: Staff training (bully. & degrad. trtm.)	0.040	0.057	1.4257	1.0375 to 1.9591	0.2865	0.0298 to 0.5654	0.0280	
C13: Parent information/training Training = strong	0.039	0.047	1.2162	0.4904 to 3.0165	0.1709	-0.8820 to 0.6713	ns	
C14: Break monitoring system	0.038	0.049	1.3366	0.9045 to 1.9752	0.2424	-0.0929 to 0.5251	ns	
C15: Cooperative teams	0.042	0.062	1.4846	1.0390 to 2.1212	0.3125	0.0297 to 0.6572	0.0291	
C16: Case documentation	0.039	0.055	1.4147	1.0300 to 1.9432	0.2816	0.0244 to 0.5484	0.0314	
C17: Dealing with bullies	0.048	0.046	0.9586	0.6753 to 1.3607	-0.0412	-0.4139 to 0.2805	ns	
C17b: Dealing with bullies	0.044	0.074	1.7508	1.0982 to 2.7913	0.4100	0.0615 to 0.8977	0.0172	
C18: Dealing with victims	0.051	0.045	0.8888	0.6120 to 1.2907	-0.1188	-0.5492 to 0.2339	ns	
C18b: Dealing with victims	0.044	0.074	1.7508	1.0982 to 2.7913	0.4100	0.0615 to 0.8977	0.0172	
C19: Mediation	0.055	0.046	0.8341	0.4319 to 1.6106	-0.1881	-1.1343 to 0.3744	ns	
Component cluster 1	0.041	0.049	1.2054	0.8568 to 1.6958	0.1633	-0.1436 to 0.4439	ns	
Component cluster 2	0.041	0.051	1.2431	0.8992 to 1.7185	0.1875	-0.0943 to 0.4616	ns	
Component cluster 3 (see special lessons)	0.038	0.052	1.3890	0.9876 to 1.9536	0.2695	-0.0110 to 0.5325	0.0580	
Component cluster 4	0.043	0.052	1.2066	0.8737 to 1.6661	0.1638	-0.1135 to 0.4671	ns	
Component cluster 5	0.025	0.047	1.9329	0.6077 to 6.1478	0.4706	-0.5123 to 0.8556	ns	
Component cluster 6	0.020	0.047	2.4038	0.5874 to 9.8376	0.5722	-0.5062 to 0.9225	ns	
Component cluster 7	0.045	0.050	1.1150	0.8018 to 1.5506	0.0986	-0.1914 to 0.4205	ns	

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.19 Size of the effects for social bullying of girls at individual level (n=1 770).
Individual components and component clusters.

Individual components and component clusters	Subjected to social bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.023	0.045	1.9779	1.0043 to 3.8953	0.4828	0.0071 to 0.8447	0.0446	
C2: Relationship-enhancing measures teacher-pupil	0.041	0.040	0.9617	0.5374 to 1.7208	-0.0382	-0.7233 to 0.4598	ns	
C3: Relationship-enhancing measures pupil-pupil	0.039	0.041	1.0321	0.6382 to 1.6689	0.0298	-0.4478 to 0.4789	ns	
C4: Special lessons	0.036	0.043	1.1863	0.7219 to 1.9493	0.1514	-0.3113 to 0.5729	ns	
C5: Pupils as players	0.041	0.040	0.9701	0.6020 to 1.5634	-0.0296	-0.5174 to 0.4334	ns	
C6: Pupils active in prevention	0.025	0.042	1.7047	0.7303 to 3.9792	0.4029	-0.3088 to 0.8208	ns	
C7: Disciplinary strategies	0.044	0.040	0.8901	0.3784 to 2.0937	-0.1179	-1.3718 to 0.5401	ns	
C8: School rules	0.037	0.046	1.2570	0.7785 to 2.0296	0.1969	-0.2086 to 0.6522	ns	
C9: School assemblies about bullying	0.012	0.043	3.5867	0.8711 to 14.7683	0.7123	-0.0513 to 1.0436	0.0588	
C10: Training material	0.022	0.043	2.0046	0.7989 to 5.0297	0.4902	-0.2022 to 0.8831	ns	
C12: Staff training (bully. & degrad. trtm.)	0.038	0.043	1.1419	0.7023 to 1.8567	0.1195	-0.3052 to 0.6033	ns	
C13: Parent information/training Training = strong	0.029	0.041	1.4384	0.3454 to 5.9903	0.2961	-1.4348 to 0.8675	ns	
C14: Break monitoring system	0.030	0.043	1.4512	0.7873 to 2.6749	0.3015	-0.2283 to 0.7058	ns	
C15: Cooperative teams	0.039	0.046	1.1876	0.6801 to 2.0739	0.1519	-0.2964 to 0.7589	ns	
C16: Case documentation	0.035	0.046	1.3350	0.8299 to 2.1474	0.2421	-0.1563 to 0.6642	ns	
C17: Dealing with bullies	0.042	0.039	0.9348	0.5555 to 1.5732	-0.0668	-0.6592 to 0.4113	ns	
C17b: Dealing with bullies	0.040	0.040	0.9968	0.4245 to 2.3404	-0.0031	-0.6043 to 1.1299	ns	
C18: Dealing with victims	0.044	0.039	0.8935	0.5119 to 1.5597	-0.1140	-0.7956 to 0.3948	ns	
C18b: Dealing with victims	0.040	0.040	0.9968	0.4245 to 2.3404	-0.0031	-0.6043 to 1.1299	ns	
C19: Mediation	0.022	0.041	1.8620	0.4490 to 7.7210	0.4525	-0.9226 to 0.9257	ns	
Component cluster 1	0.037	0.042	1.1541	0.6952 to 1.9159	0.1286	-0.3579 to 0.5556	ns	
Component cluster 2	0.044	0.037	0.8317	0.5170 to 1.3380	-0.1934	-0.7250 to 0.3034	ns	
Component cluster 3 (see special lessons)	0.036	0.043	1.1863	0.7219 to 1.9493	0.1514	-0.3113 to 0.5729	ns	
Component cluster 4	0.037	0.045	1.2385	0.7655 to 2.0036	0.1854	-0.2231 to 0.6479	ns	
Component cluster 5	0.000	0.042	-	- to -	1.0000	-0.3166 to 1.2535	0.0880	
Component cluster 6	0.040	0.040	1.0030	0.2389 to 4.2117	0.0029	-2.3643 to 0.7695	ns	
Component cluster 7	0.036	0.048	1.3494	0.8295 to 2.1953	0.2496	-0.1458 to 0.7173	ns	

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.20 Size of the effects for social bullying of boys at individual level (n=1 687). Individual components and component clusters.

Individual components and component clusters	Subjected to social bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.034	0.059	1.7978	0.9678 to 3.3396	0.4289	-0.0262 to 0.7686	0.0600	
C2: Relationship-enhancing measures teacher-pupil	0.042	0.056	1.3508	0.7771 to 2.3482	0.2487	-0.2428 to 0.6253	ns	
C3: Relationship-enhancing measures pupil-pupil	0.039	0.065	1.7009	1.0813 to 2.6754	0.3960	0.0617 to 0.7221	0.0203	
C4: Special lessons	0.040	0.061	1.5689	0.9784 to 2.5158	0.3481	-0.0181 to 0.6829	0.0597	
C5: Pupils as players	0.056	0.051	0.9171	0.5992 to 1.4038	-0.0853	-0.5230 to 0.3329	ns	
C6: Pupils active in prevention	0.041	0.055	1.3701	0.6779 to 2.7694	0.2591	-0.4030 to 0.6785	ns	
C7: Disciplinary strategies	0.020	0.057	2.9841	0.9325 to 9.5498	0.6518	-0.0214 to 0.9726	0.0532	
C8: School rules	0.051	0.057	1.1175	0.7190 to 1.7370	0.0998	-0.2818 to 0.5347	ns	
C9: School assemblies about bullying	0.070	0.052	0.7312	0.3583 to 1.4923	-0.3419	-1.4647 to 0.3279	ns	
C10: Training material	0.043	0.055	1.2811	0.6333 to 2.5915	0.2099	-0.4906 to 0.6487	ns	
C12: Staff training (bully. & degrad. trtm.)	0.043	0.070	1.6693	1.0909 to 2.5544	0.3838	0.0654 to 0.7357	0.0172	
C13: Parent information/training Training = strong	0.051	0.053	1.0539	0.3234 to 3.4345	0.0485	-1.6145 to 0.7128	ns	
C14: Break monitoring system	0.045	0.057	1.2855	0.7726 to 2.1389	0.2122	-0.2469 to 0.5854	ns	
C15: Cooperative teams	0.047	0.080	1.7793	1.1147 to 2.8399	0.4175	0.0740 to 0.8592	0.0145	
C16: Case documentation	0.044	0.064	1.4660	0.9563 to 2.2474	0.3038	-0.0351 to 0.6574	0.0778	
C17: Dealing with bullies	0.054	0.053	0.9702	0.6038 to 1.5590	-0.0290	-0.5413 to 0.3912	ns	
C17b: Dealing with bullies	0.048	0.110	2.4399	1.3807 to 4.3117	0.5618	0.1724 to 1.1254	0.0016	
C18: Dealing with victims	0.059	0.052	0.8755	0.5294 to 1.4479	-0.1338	-0.7372 to 0.3292	ns	
C18b: Dealing with victims	0.048	0.110	2.4399	1.3807 to 4.3117	0.5618	0.1724 to 1.1254	0.0016	
C19: Mediation	0.085	0.051	0.5834	0.2734 to 1.2447	-0.6533	-2.1022 to 0.1830	ns	
Component cluster 1	0.046	0.057	1.2428	0.7826 to 1.9735	0.1863	-0.2286 to 0.5534	ns	
Component cluster 2	0.038	0.066	1.7755	1.1288 to 2.7927	0.4201	0.0935 to 0.7421	0.0119	
Component cluster 3 (see special lessons)	0.040	0.061	1.5689	0.9784 to 2.5158	0.3481	-0.0181 to 0.6829	0.0597	
Component cluster 4	0.050	0.059	1.1981	0.7746 to 1.8531	0.1570	-0.2117 to 0.5755	ns	
Component cluster 5	0.057	0.053	0.9373	0.2866 to 3.0653	-0.0631	-1.8962 to 0.6703	ns	
Component cluster 6	0.000	0.055	-	- to -	1.0000	-0.3356 to 1.2205	0.0917	
Component cluster 7	0.054	0.051	0.9413	0.6001 to 1.4766	-0.0589	-0.4739 to 0.4113	ns	

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.21 Size of the effects for physical bullying in the total material at individual level (n=3 487). Individual components and component clusters.

Individual components and component clusters	Subjected to physical bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.024	0.029	1.1903	0.7163 to 1.9780	0.1560	-0.3473 to 0.5434	ns	
C2: Relationship-enhancing measures teacher-pupil	0.029	0.028	0.9503	0.5820 to 1.5515	-0.0508	-0.6272 to 0.3862	ns	
C3: Relationship-enhancing measures pupil-pupil	0.023	0.032	1.4119	0.9253 to 2.1543	0.2851	-0.0675 to 0.6246	ns	
C4: Special lessons	0.028	0.028	0.9779	0.6467 to 1.4786	-0.0220	-0.4556 to 0.3733	ns	
C5: Pupils as players	0.030	0.026	0.8473	0.5658 to 1.2691	-0.1747	-0.6224 to 0.2502	ns	
C6: Pupils active in prevention	0.017	0.029	1.7334	0.8353 to 3.5974	0.4158	-0.1702 to 0.7813	ns	
C7: Disciplinary strategies	0.024	0.028	1.1531	0.5292 to 2.5122	0.1295	-0.7847 to 0.6298	ns	
C8: School rules	0.028	0.028	1.0246	0.6747 to 1.5560	0.0233	-0.3638 to 0.4557	ns	
C9: School assemblies about bullying	0.035	0.027	0.7711	0.3962 to 1.5008	-0.2865	-1.3405 to 0.3405	ns	
C10: Training material	0.027	0.028	1.0153	0.5501 to 1.8741	0.0147	-0.7247 to 0.4937	ns	
C12: Staff training (bully. & degrad. trtm.)	0.027	0.030	1.1225	0.7436 to 1.6944	0.1062	-0.2632 to 0.5168	ns	
C13: Parent information/training Training = strong	0.025	0.028	1.1102	0.3465 to 3.5567	0.0967	-1.5718 to 0.7307	ns	
C14: Break monitoring system	0.021	0.030	1.4826	0.8834 to 2.4881	0.3188	-0.1154 to 0.6653	ns	
C15: Cooperative teams	0.025	0.039	1.6143	1.0322 to 2.5244	0.3711	0.0251 to 0.8208	0.0342	
C16: Case documentation	0.021	0.036	1.7017	1.1295 to 2.5638	0.4036	0.0942 to 0.7316	0.0102	
C17: Dealing with bullies	0.031	0.027	0.8468	0.5470 to 1.3111	-0.1753	-0.7079 to 0.2626	ns	
C17b: Dealing with bullies	0.025	0.061	2.5707	1.5185 to 4.3522	0.5959	0.2211 to 1.1482	0.0003	
C18: Dealing with victims	0.032	0.027	0.8333	0.5216 to 1.3311	-0.1937	-0.7949 to 0.2692	ns	
C18b: Dealing with victims	0.025	0.061	2.5707	1.5185 to 4.3522	0.5959	0.2211 to 1.1482	0.0003	
C19: Mediation	0.021	0.028	1.3344	0.4851 to 3.6703	0.2453	-0.9094 to 0.7556	ns	
Component cluster 1	0.026	0.029	1.0789	0.7025 to 1.6571	0.0712	-0.3593 to 0.4513	ns	
Component cluster 2	0.024	0.031	1.3336	0.8784 to 2.0245	0.2443	-0.1152 to 0.5916	ns	
Component cluster 3 (see special lessons)	0.028	0.028	0.9779	0.6467 to 1.4786	-0.0220	-0.4556 to 0.3733	ns	
Component cluster 4	0.027	0.029	1.0997	0.7257 to 1.6664	0.0882	-0.2857 to 0.5090	ns	
Component cluster 5	0.017	0.028	1.6830	0.4098 to 6.9113	0.3989	-1.1277 to 0.8863	ns	
Component cluster 6	0.032	0.028	0.8643	0.2687 to 2.7798	-0.1520	-2.2447 to 0.6372	ns	
Component cluster 7	0.026	0.030	1.1571	0.7618 to 1.7576	0.1322	-0.2342 to 0.5527	ns	

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.22 Size of the effects for physical bullying of girls at individual level (n=1 782). Individual components and component clusters.

Individual components and component clusters	Subjected to physical bullying										
	Prop. Strong	Prop. Weak	OR	CI		RRR	CI		P		
C1: Follow-up/evaluation	0.014	0.015	1.0121	0.4038	to	2.5372	0.0118	-1.1839	to	0.7694	ns
C2: Relationship-enhancing measures teacher-pupil	0.020	0.013	0.6709	0.2798	to	1.6085	-0.4809	-2.0558	to	0.4610	ns
C3: Relationship-enhancing measures pupil-pupil	0.015	0.015	1.0049	0.4589	to	2.2003	0.0048	-0.8631	to	0.7807	ns
C4: Special lessons	0.018	0.012	0.6473	0.2983	to	1.4046	-0.5349	-1.6820	to	0.4118	ns
C5: Pupils as players	0.018	0.012	0.6803	0.3129	to	1.4792	-0.4617	-1.5247	to	0.4823	ns
C6: Pupils active in prevention	0.000	0.017	-	-	to	-	1.0000	0.0052	to	1.4585	0.0437
C7: Disciplinary strategies	0.016	0.015	0.9355	0.2186	to	4.0033	-0.0678	-2.7917	to	0.8441	ns
C8: School rules	0.016	0.013	0.8417	0.3731	to	1.8991	-0.1851	-1.0315	to	0.8058	ns
C9: School assemblies about bullying	0.020	0.014	0.6849	0.2032	to	2.3085	-0.4508	-3.1633	to	0.6252	ns
C10: Training material	0.022	0.014	0.6078	0.2269	to	1.6283	-0.6310	-2.7686	to	0.4371	ns
C12: Staff training (bully. & degrad. trtm.)	0.015	0.014	0.9369	0.4152	to	2.1141	-0.0663	-0.8556	to	0.9046	ns
C13: Parent information/training Training = strong	0.000	0.015	-	-	to	-	1.0000	-2.8129	to	1.4592	ns
C14: Break monitoring system	0.005	0.018	3.8080	0.8962	to	16.1792	0.7339	-0.0337	to	1.2516	0.0515
C15: Cooperative teams	0.015	0.013	0.9011	0.3375	to	2.4060	-0.1081	-0.9211	to	1.2582	ns
C16: Case documentation	0.013	0.016	1.1841	0.5458	to	2.5688	0.1534	-0.5702	to	0.9354	ns
C17: Dealing with bullies	0.018	0.013	0.7208	0.3191	to	1.6279	-0.3803	-1.6520	to	0.5015	ns
C17b: Dealing with bullies	0.015	0.014	0.9189	0.2150	to	3.9270	-0.0869	-0.9813	to	2.4844	ns
C18: Dealing with victims	0.018	0.014	0.7496	0.3128	to	1.7963	-0.3280	-1.7522	to	0.5516	ns
C18b: Dealing with victims	0.015	0.014	0.9189	0.2150	to	3.9270	-0.0869	-0.9813	to	2.4844	ns
C19: Mediation	0.000	0.015	-	-	to	-	1.0000	-1.6244	to	1.4591	ns
Component cluster 1	0.015	0.015	1.0080	0.4467	to	2.2747	0.0078	-0.9463	to	0.7637	ns
Component cluster 2	0.016	0.014	0.8944	0.4113	to	1.9448	-0.1163	-1.0306	to	0.7047	ns
Component cluster 3 (see special lessons)	0.018	0.012	0.6473	0.2983	to	1.4046	-0.5349	-1.6820	to	0.4118	ns
Component cluster 4	0.015	0.014	0.8986	0.3983	to	2.0276	-0.1111	-0.9217	to	0.8672	ns
Component cluster 5	0.000	0.015	-	-	to	-	1.0000	-2.6986	to	1.4592	ns
Component cluster 6	0.044	0.014	0.3012	0.0690	to	1.3152	-2.2167	-9.7385	to	0.1610	0.0907
Component cluster 7	0.013	0.018	1.4604	0.6666	to	3.1996	0.3113	-0.3123	to	1.1314	ns

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.23 Size of the effects for physical bullying of boys at individual level (n=1 696). Individual components and component clusters.

Individual components and component clusters	Subjected to physical bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.036	0.044	1.2337	0.6684 to 2.2771	0.1827	-0.4192 to 0.6229	ns	
C2: Relationship-enhancing measures teacher-pupil	0.038	0.043	1.1463	0.6314 to 2.0810	0.1228	-0.4916 to 0.5762	ns	
C3: Relationship-enhancing measures pupil-pupil	0.031	0.050	1.6603	1.0004 to 2.7555	0.3854	0.0009 to 0.7589	0.0477	
C4: Special lessons	0.039	0.044	1.1204	0.6815 to 1.8421	0.1033	-0.3773 to 0.5345	ns	
C5: Pupils as players	0.044	0.040	0.9230	0.5731 to 1.4865	-0.0798	-0.5788 to 0.3936	ns	
C6: Pupils active in prevention	0.035	0.043	1.2201	0.5767 to 2.5814	0.1740	-0.6228 to 0.6611	ns	
C7: Disciplinary strategies	0.032	0.043	1.3621	0.5405 to 3.4328	0.2574	-0.7109 to 0.7564	ns	
C8: School rules	0.040	0.046	1.1734	0.7189 to 1.9153	0.1419	-0.2780 to 0.6293	ns	
C9: School assemblies about bullying	0.051	0.041	0.8017	0.3601 to 1.7850	-0.2348	-1.4772 to 0.4514	ns	
C10: Training material	0.033	0.043	1.2979	0.5866 to 2.8713	0.2218	-0.5969 to 0.7027	ns	
C12: Staff training (bully. & degrad. trtm.)	0.040	0.045	1.1467	0.7086 to 1.8556	0.1228	-0.3004 to 0.5929	ns	
C13: Parent information/training Training = strong	0.054	0.041	0.7642	0.2329 to 2.5076	-0.2920	-2.5326 to 0.5954	ns	
C14: Break monitoring system	0.036	0.044	1.2448	0.7057 to 2.1956	0.1896	-0.3491 to 0.6145	ns	
C15: Cooperative teams	0.035	0.069	2.0165	1.2083 to 3.3652	0.4863	0.1207 to 0.9724	0.0063	
C16: Case documentation	0.030	0.056	1.9538	1.1981 to 3.1860	0.4737	0.1315 to 0.8396	0.0064	
C17: Dealing with bullies	0.045	0.041	0.8951	0.5315 to 1.5074	-0.1119	-0.7237 to 0.3776	ns	
C17b: Dealing with bullies	0.035	0.110	3.3455	1.8640 to 6.0042	0.6762	0.2902 to 1.2379	0.0000	
C18: Dealing with victims	0.047	0.041	0.8593	0.4919 to 1.5012	-0.1561	-0.8584 to 0.3651	ns	
C18b: Dealing with victims	0.035	0.110	3.3455	1.8640 to 6.0042	0.6762	0.2902 to 1.2379	0.0000	
C19: Mediation	0.042	0.042	1.0052	0.3587 to 2.8171	0.0050	-1.4576 to 0.6644	ns	
Component cluster 1	0.039	0.043	1.1034	0.6643 to 1.8327	0.0900	-0.4118 to 0.5253	ns	
Component cluster 2	0.032	0.050	1.5973	0.9675 to 2.6371	0.3620	-0.0265 to 0.7410	0.0649	
Component cluster 3 (see special lessons)	0.039	0.044	1.1204	0.6815 to 1.8421	0.1033	-0.3773 to 0.5345	ns	
Component cluster 4	0.039	0.047	1.2250	0.7529 to 1.9931	0.1765	-0.2347 to 0.6524	ns	
Component cluster 5	0.038	0.042	1.1179	0.2666 to 4.6863	0.1014	-2.0470 to 0.8012	ns	
Component cluster 6	0.020	0.043	2.1306	0.2899 to 15.6600	0.5198	-1.5264 to 0.9904	ns	
Component cluster 7	0.041	0.043	1.0449	0.6353 to 1.7188	0.0412	-0.4034 to 0.5570	ns	

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.24 Size of the effects for social and physical bullying in the total material at aggregate level (n=7 193). Individual components and component clusters.

Individual components and component clusters	Subjected to social and physical bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.061	0.078	1.3051	1.0415 to 1.6353	0.2195	0.0353 to 0.3849	0.0204	
C2: Relationship-enhancing measures teacher-pupil	0.073	0.075	1.0357	0.8376 to 1.2806	0.0319	-0.1704 to 0.2145	ns	
C3: Relationship-enhancing measures pupil-pupil	0.065	0.082	1.2864	1.0722 to 1.5433	0.2082	0.0586 to 0.3549	0.0066	
C4: Special lessons	0.077	0.073	0.9414	0.7828 to 1.1320	-0.0575	-0.2394 to 0.1150	ns	
C5: Pupils as players	0.072	0.077	1.0743	0.8996 to 1.2830	0.0642	-0.0958 to 0.2220	ns	
C6: Pupils active in prevention	0.057	0.077	1.3704	1.0204 to 1.8404	0.2548	0.0180 to 0.4498	0.0356	
C7: Disciplinary strategies	0.059	0.076	1.3087	0.9003 to 1.9023	0.2220	-0.0987 to 0.4641	ns	
C8: School rules	0.068	0.084	1.2714	1.0652 to 1.5175	0.1990	0.0520 to 0.3510	0.0077	
C9: School assemblies about bullying	0.065	0.075	1.1809	0.8462 to 1.6479	0.1433	-0.1618 to 0.3829	ns	
C10: Training material	0.080	0.074	0.9113	0.6929 to 1.1985	-0.0896	-0.3881 to 0.1586	ns	
C12: Staff training (bully. & degrad. trtm.)	0.074	0.075	1.0231	0.8545 to 1.2250	0.0209	-0.1418 to 0.1895	ns	
C13: Parent information/training Training = strong	0.082	0.074	0.9019	0.5594 to 1.4541	-0.0999	-0.6760 to 0.2970	ns	
C14: Break monitoring system	0.063	0.079	1.2866	1.0487 to 1.5786	0.2088	0.0408 to 0.3648	0.0155	
C15: Cooperative teams	0.068	0.099	1.5025	1.2328 to 1.8310	0.3117	0.1538 to 0.4860	0.0000	
C16: Case documentation	0.070	0.079	1.1422	0.9576 to 1.3623	0.1157	-0.0375 to 0.2713	ns	
C17: Dealing with bullies	0.074	0.075	1.0156	0.8288 to 1.2444	0.0142	-0.1808 to 0.1926	ns	
C17b: Dealing with bullies	0.072	0.098	1.4031	1.0739 to 1.8332	0.2666	0.0523 to 0.5230	0.0127	
C18: Dealing with victims	0.075	0.074	0.9899	0.7977 to 1.2283	-0.0095	-0.2224 to 0.1811	ns	
C18b: Dealing with victims	0.072	0.098	1.4031	1.0739 to 1.8332	0.2666	0.0523 to 0.5230	0.0127	
C19: Mediation	0.095	0.073	0.7529	0.5278 to 1.0740	-0.2971	-0.7646 to 0.0632	ns	
Component cluster 1	0.066	0.078	1.2047	0.9919 to 1.4632	0.1587	-0.0073 to 0.3152	0.0601	
Component cluster 2	0.066	0.080	1.2310	1.0276 to 1.4747	0.1752	0.0233 to 0.3244	0.0239	
Component cluster 3 (see special lessons)	0.077	0.073	0.9414	0.7828 to 1.1320	-0.0575	-0.2394 to 0.1150	ns	
Component cluster 4	0.066	0.088	1.3606	1.1395 to 1.6245	0.2475	0.1038 to 0.3971	0.0006	
Component cluster 5	0.042	0.075	1.8573	0.8668 to 3.9793	0.4422	-0.1231 to 0.7403	ns	
Component cluster 6	0.085	0.074	0.8577	0.4924 to 1.4940	-0.1517	-0.8687 to 0.3128	ns	
Component cluster 7	0.075	0.074	0.9938	0.8233 to 1.1997	-0.0058	-0.1757 to 0.1745	ns	

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.25 Size of the effects for social and physical bullying of girls at aggregate level (n=3 575). Individual components and component clusters.

Individual components and component clusters	Subjected to social and physical bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.051	0.069	1.3607	0.9707 to 1.9075	0.2515	-0.0267 to 0.4901	0.0729	
C2: Relationship-enhancing measures teacher-pupil	0.070	0.063	0.8890	0.6496 to 1.2165	-0.1161	-0.4620 to 0.1788	ns	
C3: Relationship-enhancing measures pupil-pupil	0.064	0.065	1.0047	0.7668 to 1.3163	0.0044	-0.2541 to 0.2530	ns	
C4: Special lessons	0.065	0.028	0.4153	0.3143 to 0.5486	-1.3161	-1.8759 to -0.8408	0.0001	
C5: Pupils as players	0.062	0.067	1.0901	0.8334 to 1.4257	0.0775	-0.1664 to 0.3174	ns	
C6: Pupils active in prevention	0.045	0.068	1.5390	0.9720 to 2.4367	0.3345	-0.0246 to 0.6009	0.0640	
C7: Disciplinary strategies	0.073	0.064	0.8740	0.5304 to 1.4401	-0.1337	-0.7584 to 0.2979	ns	
C8: School rules	0.060	0.071	1.2052	0.9219 to 1.5756	0.1601	-0.0685 to 0.3996	ns	
C9: School assemblies about bullying	0.048	0.066	1.3974	0.8300 to 2.3528	0.2707	-0.1796 to 0.5798	ns	
C10: Training material	0.075	0.063	0.8386	0.5630 to 1.2492	-0.1781	-0.6666 to 0.1951	ns	
C12: Staff training (bully. & degrad. trtm.)	0.064	0.066	1.0363	0.7887 to 1.3615	0.0328	-0.2133 to 0.2934	ns	
C13: Parent information/training Training = strong	0.081	0.064	0.7729	0.3991 to 1.4967	-0.2699	-1.2443 to 0.3167	ns	
C14: Break monitoring system	0.050	0.071	1.4547	1.0566 to 2.0027	0.2970	0.0465 to 0.5205	0.0209	
C15: Cooperative teams	0.061	0.079	1.3218	0.9720 to 1.7974	0.2286	-0.0204 to 0.5210	0.0744	
C16: Case documentation	0.064	0.065	1.0188	0.7796 to 1.3314	0.0173	-0.2296 to 0.2698	0.0682	
C17: Dealing with bullies	0.060	0.066	1.1114	0.8131 to 1.5191	0.0942	-0.1990 to 0.3501	ns	
C17b: Dealing with bullies	0.064	0.073	1.1470	0.7397 to 1.7785	0.1200	-0.2242 to 0.5894	ns	
C18: Dealing with victims	0.058	0.067	1.1682	0.8327 to 1.6390	0.1357	-0.1754 to 0.3976	ns	
C18b: Dealing with victims	0.064	0.073	1.1470	0.7397 to 1.7785	0.1200	-0.2242 to 0.5894	ns	
C19: Mediation	0.103	0.063	0.5828	0.3554 to 0.9558	-0.6423	-1.4848 to -0.0508	0.0305	
Component cluster 1	0.053	0.070	1.3411	0.9952 to 1.8073	0.2408	-0.0044 to 0.4661	0.0531	
Component cluster 2	0.065	0.065	1.0004	0.7639 to 1.3102	0.0004	-0.2581 to 0.2494	ns	
Component cluster 3 (see special lessons)	0.065	0.028	0.4153	0.3143 to 0.5486	-1.3161	-1.8759 to -0.8408	0.0001	
Component cluster 4	0.057	0.077	1.3818	1.0567 to 1.8070	0.2606	0.0441 to 0.4913	0.0177	
Component cluster 5	0.011	0.066	6.3614	0.8824 to 45.8604	0.8335	0.0871 to 1.0240	0.0350	
Component cluster 6	0.122	0.063	0.4863	0.2475 to 0.9554	-0.9275	-2.3264 to -0.0580	0.0326	
Component cluster 7	0.065	0.063	0.9584	0.7188 to 1.2779	-0.0406	-0.3024 to 0.2468	ns	

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.26 Size of the effects for social and physical bullying of boys at aggregate level (n=3 600). Individual components and component clusters.

Individual components and component clusters	Subjected to social and physical bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.072	0.087	1.2353	0.9117 to 1.6737	0.1768	-0.0838 to 0.4011	ns	
C2: Relationship-enhancing measures teacher-pupil	0.074	0.087	1.2005	0.8979 to 1.6052	0.1547	-0.0980 to 0.3760	ns	
C3: Relationship-enhancing measures pupil-pupil	0.064	0.099	1.5956	1.2438 to 2.0470	0.3492	0.1669 to 0.5277	0.0002	
C4: Special lessons	0.089	0.082	0.9139	0.7146 to 1.1687	-0.0858	-0.3324 to 0.1440	ns	
C5: Pupils as players	0.081	0.086	1.0668	0.8414 to 1.3527	0.0576	-0.1560 to 0.2667	ns	
C6: Pupils active in prevention	0.070	0.086	1.2426	0.8449 to 1.8274	0.1815	-0.1592 to 0.4467	ns	
C7: Disciplinary strategies	0.047	0.087	1.9577	1.1076 to 3.4604	0.4664	0.0910 to 0.7144	0.0186	
C8: School rules	0.075	0.098	1.3473	1.0637 to 1.7064	0.2385	0.0491 to 0.4366	0.0132	
C9: School assemblies about bullying	0.083	0.084	1.0119	0.6546 to 1.5641	0.0108	-0.4489 to 0.3489	ns	
C10: Training material	0.084	0.084	0.9962	0.6793 to 1.4609	-0.0035	-0.4027 to 0.3058	ns	
C12: Staff training (bully. & degrad. trtm.)	0.084	0.085	1.0110	0.7951 to 1.2855	0.0099	-0.2052 to 0.2347	ns	
C13: Parent information/training Training = strong	0.083	0.084	1.0218	0.5112 to 2.0422	0.0196	-0.7821 to 0.4912	ns	
C14: Break monitoring system	0.076	0.088	1.1768	0.9008 to 1.5372	0.1389	-0.0941 to 0.3506	ns	
C15: Cooperative teams	0.075	0.118	1.6612	1.2812 to 2.1539	0.3682	0.1711 to 0.5911	0.0001	
C16: Case documentation	0.076	0.093	1.2498	0.9876 to 1.5816	0.1846	-0.0102 to 0.3830	0.0631	
C17: Dealing with bullies	0.088	0.083	0.9371	0.7166 to 1.2256	-0.0612	-0.3334 to 0.1812	ns	
C17a: Dealing with bullies	0.080	0.122	1.6026	1.1407 to 2.2515	0.3460	0.0884 to 0.6642	0.0061	
C18: Dealing with victims	0.093	0.082	0.8633	0.6514 to 1.1441	-0.1435	-0.4496 to 0.1221	ns	
C18a: Dealing with victims	0.080	0.122	1.6026	1.1407 to 2.2515	0.3460	0.0884 to 0.6642	0.0061	
C19: Mediation	0.088	0.084	0.9487	0.5684 to 1.5835	-0.0493	-0.6359 to 0.3535	ns	
Component cluster 1	0.080	0.086	1.0921	0.8445 to 1.4123	0.0776	-0.1560 to 0.2927	ns	
Component cluster 2	0.068	0.097	1.4815	1.1597 to 1.8926	0.3030	0.1165 to 0.4862	0.0016	
Component cluster 3 (see special lessons)	0.089	0.082	0.9139	0.7146 to 1.1687	-0.0858	-0.3324 to 0.1440	ns	
Component cluster 4	0.075	0.099	1.3568	1.0705 to 1.7195	0.2432	0.0538 to 0.4425	0.0114	
Component cluster 5	0.080	0.084	1.0581	0.4556 to 2.4574	0.0505	-0.9489 to 0.5714	ns	
Component cluster 6	0.049	0.085	1.8113	0.6585 to 4.9818	0.4261	-0.4044 to 0.7930	ns	
Component cluster 7	0.084	0.085	1.0194	0.7941 to 1.3084	0.0174	-0.2022 to 0.2540	ns	

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.27 Size of the effects for social bullying at aggregate level (n=7 116).
Individual components and component clusters.

Individual components and component clusters	Subjected to social bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.059	0.050	0.8515	0.6631 to 1.0935	-0.1642	-0.3955 to 0.0978	ns	
C2: Relationship-enhancing measures teacher-pupil	0.052	0.058	1.1200	0.8749 to 1.4338	0.1016	-0.1280 to 0.3045	ns	
C3: Relationship-enhancing measures pupil-pupil	0.049	0.063	1.2988	1.0551 to 1.5988	0.2188	0.0457 to 0.3881	0.0134	
C4: Special lessons	0.056	0.057	1.0198	0.8246 to 1.2612	0.0183	-0.1866 to 0.2109	ns	
C5: Pupils as players	0.057	0.057	0.9988	0.8165 to 1.2219	-0.0011	-0.1936 to 0.1882	ns	
C6: Pupils active in prevention	0.044	0.059	1.3409	0.9599 to 1.8730	0.2430	-0.0379 to 0.4670	0.0843	
C7: Disciplinary strategies	0.042	0.058	1.3915	0.8968 to 2.1592	0.2695	-0.1035 to 0.5351	ns	
C8: School rules	0.052	0.063	1.2258	1.0016 to 1.5001	0.1746	0.0016 to 0.3545	0.0479	
C9: School assemblies about bullying	0.055	0.057	1.0351	0.7212 to 1.4857	0.0321	-0.3472 to 0.3219	ns	
C10: Training material	0.058	0.057	0.9795	0.7118 to 1.3480	-0.0197	-0.3627 to 0.2541	ns	
C12: Staff training (bully. & degrad. trtm.)	0.056	0.059	1.0603	0.8640 to 1.3012	0.0537	-0.1317 to 0.2473	ns	
C13: Parent information/training Training = strong	0.073	0.056	0.7533	0.4549 to 1.2474	-0.3034	-1.0373 to 0.1878	ns	
C14: Break monitoring system	0.047	0.061	1.2960	1.0253 to 1.6382	0.2176	0.0218 to 0.3970	0.0297	
C15: Cooperative teams	0.053	0.073	1.4109	1.1238 to 1.7712	0.2759	0.0894 to 0.4864	0.0029	
C16: Case documentation	0.052	0.062	1.1953	0.9778 to 1.4611	0.1548	-0.0194 to 0.3322	0.0814	
C17: Dealing with bullies	0.057	0.057	0.9987	0.7926 to 1.2584	-0.0012	-0.2319 to 0.2063	ns	
C17b: Dealing with bullies	0.055	0.077	1.4476	1.0722 to 1.9544	0.2923	0.0510 to 0.5905	0.0152	
C18: Dealing with victims	0.058	0.056	0.9745	0.7625 to 1.2456	-0.0246	-0.2770 to 0.1967	ns	
C18b: Dealing with victims	0.055	0.077	1.4476	1.0722 to 1.9544	0.2923	0.0510 to 0.5905	0.0152	
C19: Mediation	0.079	0.056	0.6900	0.4657 to 1.0224	-0.4140	-0.9973 to 0.0180	0.0629	
Component cluster 1	0.052	0.059	1.1489	0.9221 to 1.4315	0.1229	-0.0749 to 0.3073	ns	
Component cluster 2	0.050	0.062	1.2536	1.0200 to 1.5408	0.1922	0.0171 to 0.3638	0.0314	
Component cluster 3 (see special lessons)	0.056	0.057	1.0198	0.8246 to 1.2612	0.0183	-0.1866 to 0.2109	ns	
Component cluster 4	0.052	0.065	1.2832	1.0478 to 1.5714	0.2093	0.0389 to 0.3882	0.0157	
Component cluster 5	0.030	0.057	1.9862	0.8111 to 4.8637	0.4817	-0.1863 to 0.7938	ns	
Component cluster 6	0.068	0.057	0.8223	0.4421 to 1.5293	-0.2015	-1.0837 to 0.3312	ns	
Component cluster 7	0.057	0.057	1.0055	0.8117 to 1.2455	0.0051	-0.1902 to 0.2145	ns	

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.28 Size of the effects for social bullying of girls at aggregate level (n=3 524). Individual components and component clusters.

Individual components and component clusters	Subjected to social bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.042	0.058	1.3891	0.9584 to 2.0133	0.2682	-0.0384 to 0.5273	0.0814	
C2: Relationship-enhancing measures teacher-pupil	0.060	0.053	0.8794	0.6248 to 1.2376	-0.1290	-0.5175 to 0.1963	ns	
C3: Relationship-enhancing measures pupil-pupil	0.054	0.055	1.0199	0.7589 to 1.3705	0.0184	-0.2660 to 0.2913	ns	
C4: Special lessons	0.054	0.054	1.0144	0.7457 to 1.3799	0.0134	-0.2904 to 0.2913	ns	
C5: Pupils as players	0.052	0.056	1.0802	0.8055 to 1.4485	0.0704	-0.2009 to 0.3368	ns	
C6: Pupils active in prevention	0.037	0.057	1.5812	0.9515 to 2.6277	0.3541	-0.0440 to 0.6398	0.0746	
C7: Disciplinary strategies	0.062	0.054	0.8575	0.4977 to 1.4776	-0.1559	-0.8725 to 0.3185	ns	
C8: School rules	0.051	0.059	1.1633	0.8673 to 1.5603	0.1332	-0.1231 to 0.4036	ns	
C9: School assemblies about bullying	0.039	0.056	1.4391	0.8099 to 2.5572	0.2931	-0.2065 to 0.6219	ns	
C10: Training material	0.060	0.053	0.8848	0.5692 to 1.3754	-0.1224	-0.6589 to 0.2726	ns	
C12: Staff training (bully. & degrad. trtm.)	0.053	0.056	1.0613	0.7878 to 1.4298	0.0547	-0.2139 to 0.3415	ns	
C13: Parent information/training Training = strong	0.074	0.053	0.7097	0.3541 to 1.4221	-0.3789	-1.5175 to 0.2830	ns	
C14: Break monitoring system	0.041	0.060	1.4931	1.0486 to 2.1260	0.3168	0.0404 to 0.5601	0.0253	
C15: Cooperative teams	0.051	0.068	1.3633	0.9768 to 1.9026	0.2530	-0.0162 to 0.5748	0.0675	
C16: Case documentation	0.053	0.056	1.0654	0.7955 to 1.4270	0.0582	-0.2091 to 0.3324	ns	
C17: Dealing with bullies	0.052	0.055	1.0588	0.7549 to 1.4850	0.0526	-0.2815 to 0.3399	ns	
C17b: Dealing with bullies	0.053	0.061	1.1570	0.7174 to 1.8658	0.1284	-0.2443 to 0.6555	ns	
C18: Dealing with victims	0.052	0.055	1.0644	0.7416 to 1.5278	0.0574	-0.3041 to 0.3566	ns	
C18b: Dealing with victims	0.053	0.061	1.1570	0.7174 to 1.8658	0.1284	-0.2443 to 0.6555	ns	
C19: Mediation	0.080	0.053	0.6459	0.3665 to 1.1382	-0.5046	-1.4511 to 0.1119	ns	
Component cluster 1	0.047	0.058	1.2397	0.8990 to 1.7096	0.1843	-0.0971 to 0.4403	ns	
Component cluster 2	0.054	0.054	0.9903	0.7376 to 1.3296	-0.0092	-0.2971 to 0.2673	ns	
Component cluster 3 (see special lessons)	0.054	0.054	1.0144	0.7457 to 1.3799	0.0134	-0.2904 to 0.2913	ns	
Component cluster 4	0.048	0.064	1.3614	1.0151 to 1.8258	0.2527	0.0126 to 0.5109	0.0388	
Component cluster 5	0.000	0.056	-	- to -	1.0000	0.2606 to 1.1470	0.0207	
Component cluster 6	0.099	0.053	0.5122	0.2432 to 1.0789	-0.8582	-2.4478 to 0.0549	0.0731	
Component cluster 7	0.054	0.054	0.9910	0.7249 to 1.3549	-0.0086	-0.2921 to 0.3060	ns	

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.29 Size of the effects for social bullying of younger girls (school years 4–6) aggregate level (n=1 264). Individual components and component clusters.

Individual components and component clusters	Subjected to social bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.039	0.060	1.5535	0.8925 to 2.7042	0.3423	-0.0971 to 0.7347		ns
C2: Relationship-enhancing measures teacher-pupil	0.052	0.052	1.0181	0.5837 to 1.7757	0.0168	-0.5772 to 0.4912		ns
C3: Relationship-enhancing measures pupil-pupil	0.055	0.050	0.9076	0.5529 to 1.4900	-0.0962	-0.6057 to 0.4005		ns
C4: Special lessons	0.054	0.051	0.9556	0.5772 to 1.5821	-0.0440	-0.5684 to 0.4328		ns
C5: Pupils as players	0.052	0.053	1.0171	0.6144 to 1.6836	0.0159	-0.4868 to 0.4802		ns
C6: Pupils active in prevention	0.031	0.056	1.8731	0.7978 to 4.3977	0.4518	-0.2044 to 0.8558		ns
C7: Disciplinary strategies	0.077	0.050	0.6316	0.2930 to 1.3614	-0.5385	-1.9081 to 0.2615		ns
C8: School rules	0.054	0.050	0.9350	0.5664 to 1.5436	-0.0658	-0.5522 to 0.4466		ns
C9: School assemblies about bullying	0.031	0.055	1.7735	0.6343 to 4.9586	0.4224	-0.4606 to 0.8663		ns
C10: Training material	0.063	0.048	0.7644	0.4483 to 1.3035	-0.2889	-0.9777 to 0.2571		ns
C12: Staff training (bully. & degrad. trtm.)	0.054	0.048	0.8864	0.5033 to 1.5609	-0.1213	-0.6289 to 0.5116		ns
C13: Parent information/training Training = strong	0.118	0.050	0.3981	0.1360 to 1.1654	-1.3340	-4.2891 to 0.0992	0.0821	
C14: Break monitoring system	0.041	0.060	1.4678	0.8634 to 2.4952	0.3055	-0.1259 to 0.7061		ns
C15: Cooperative teams	0.051	0.059	1.1557	0.5602 to 2.3844	0.1278	-0.4025 to 0.9864		ns
C16: Case documentation	0.053	0.051	0.9617	0.5610 to 1.6486	-0.0378	-0.5190 to 0.5404		ns
C17: Dealing with bullies	0.030	0.059	2.0690	1.0120 to 4.2303	0.5014	0.0144 to 0.8689	0.0420	
C18: Dealing with victims	0.030	0.059	2.0044	0.9802 to 4.0990	0.4859	-0.0127 to 0.8582	0.0523	
C19: Mediation	0.057	0.052	0.9107	0.3839 to 2.1605	-0.0925	-1.2979 to 0.5562		ns
Component cluster 1	0.034	0.064	1.9069	1.0852 to 3.3507	0.4592	0.0647 to 0.8259	0.0227	
Component cluster 2	0.052	0.052	0.9948	0.6048 to 1.6364	-0.0049	-0.4983 to 0.4677		ns
Component cluster 3 (see special lessons)	0.054	0.051	0.9556	0.5772 to 1.5821	-0.0440	-0.5684 to 0.4328		ns
Component cluster 4	0.056	0.050	0.8866	0.5337 to 1.4729	-0.1207	-0.6814 to 0.3726		ns
Component cluster 5	0.000	0.054	-	- to -	1.0000	-0.4377 to 1.2615		ns
Component cluster 6	0.185	0.049	0.2282	0.0836 to 0.6232	-2.7553	-6.4484 to -0.6411	0.0017	
Component cluster 7	0.055	0.044	0.7967	0.4281 to 1.4827	-0.2412	-0.7923 to 0.4946		ns

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.30 Size of the effects for social bullying of older girls (school years 7–9) aggregate level (n=2 260). Individual components and component clusters.

Individual components and component clusters	Subjected to social bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.046	0.057	1.2543	0.7519 to 2.0923	0.1934	-0.2850 to 0.5483	ns	
C2: Relationship-enhancing measures teacher-pupil	0.066	0.053	0.7889	0.5109 to 1.2181	-0.2500	-0.8041 to 0.1832	ns	
C3: Relationship-enhancing measures pupil-pupil	0.053	0.057	1.0807	0.7449 to 1.5680	0.0707	-0.2818 to 0.3993	ns	
C4: Special lessons	0.054	0.056	1.0425	0.7045 to 1.5428	0.0386	-0.3511 to 0.3794	ns	
C5: Pupils as players	0.052	0.058	1.1221	0.7816 to 1.6109	0.1031	-0.2240 to 0.4297	ns	
C6: Pupils active in prevention	0.041	0.057	1.4182	0.7535 to 2.6693	0.2828	-0.2822 to 0.6517	ns	
C7: Disciplinary strategies	0.051	0.056	1.1019	0.5038 to 2.4103	0.0878	-0.8306 to 0.5916	ns	
C8: School rules	0.050	0.064	1.3128	0.9135 to 1.8865	0.2264	-0.0730 to 0.5505	ns	
C9: School assemblies about bullying	0.044	0.056	1.2882	0.6435 to 2.5788	0.2138	-0.4753 to 0.6302	ns	
C10: Training material	0.057	0.055	0.9666	0.5454 to 1.7132	-0.0326	-0.7125 to 0.4240	ns	
C12: Staff training (bully. & degrad. trtm.)	0.052	0.059	1.1321	0.7888 to 1.6250	0.1106	-0.2099 to 0.4449	ns	
C13: Parent information/training Training = strong	0.057	0.055	0.9708	0.3864 to 2.4386	-0.0284	-1.2944 to 0.5860	ns	
C14: Break monitoring system	0.040	0.060	1.5186	0.9314 to 2.4760	0.3278	-0.0635 to 0.6374	0.0918	
C15: Cooperative teams	0.050	0.070	1.4275	0.9705 to 2.0997	0.2845	-0.0205 to 0.6474	0.0694	
C16: Case documentation	0.053	0.058	1.1004	0.7652 to 1.5824	0.0865	-0.2478 to 0.4135	ns	
C17: Dealing with bullies	0.063	0.052	0.8160	0.5508 to 1.2090	-0.2112	-0.6780 to 0.1818	ns	
C18: Dealing with victims	0.066	0.053	0.7917	0.5181 to 1.2097	-0.2459	-0.7799 to 0.1782	ns	
C19: Mediation	0.114	0.053	0.4374	0.2047 to 0.9348	-1.1392	-2.9314 to -0.0879	0.0283	
Component cluster 1	0.056	0.055	0.9714	0.6562 to 1.4379	-0.0278	-0.4378 to 0.3265	ns	
Component cluster 2	0.056	0.055	0.9844	0.6827 to 1.4194	-0.0150	-0.3781 to 0.3271	ns	
Component cluster 3 (see special lessons)	0.054	0.056	1.0425	0.7045 to 1.5428	0.0386	-0.3511 to 0.3794	ns	
Component cluster 4	0.047	0.069	1.4980	1.0435 to 2.1506	0.3169	0.0336 to 0.6256	0.0276	
Component cluster 5	0.000	0.056	-	- to -	1.0000	-0.4025 to 1.1843	ns	
Component cluster 6	0.056	0.055	0.9952	0.3062 to 3.2343	-0.0046	-1.7390 to 0.6811	ns	
Component cluster 7	0.054	0.057	1.0635	0.7338 to 1.5411	0.0564	-0.2745 to 0.4187	ns	

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.31 Size of the effects for social bullying of boys at aggregate level (n=3 573).
Individual components and component clusters.

Individual components and component clusters	Subjected to social bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.059	0.060	1.0038	0.7150 to 1.4092	0.0036	-0.3457 to 0.2961	ns	
C2: Relationship-enhancing measures teacher-pupil	0.046	0.064	1.4227	0.9929 to 2.0385	0.2835	-0.0065 to 0.5288	0.0536	
C3: Relationship-enhancing measures pupil-pupil	0.045	0.071	1.6330	1.2159 to 2.1932	0.3703	0.1522 to 0.5836	0.0010	
C4: Special lessons	0.059	0.060	1.0189	0.7596 to 1.3667	0.0174	-0.2696 to 0.2804	ns	
C5: Pupils as players	0.062	0.058	0.9320	0.7060 to 1.2303	-0.0685	-0.3448 to 0.2002	ns	
C6: Pupils active in prevention	0.053	0.061	1.1641	0.7462 to 1.8161	0.1336	-0.2995 to 0.4541	ns	
C7: Disciplinary strategies	0.025	0.063	2.5818	1.2033 to 5.5396	0.5972	0.1651 to 0.8473	0.0116	
C8: School rules	0.054	0.068	1.2923	0.9783 to 1.7072	0.2140	-0.0176 to 0.4596	0.0704	
C9: School assemblies about bullying	0.073	0.058	0.7828	0.4904 to 1.2495	-0.2570	-0.8902 to 0.1937	ns	
C10: Training material	0.056	0.060	1.0767	0.6772 to 1.7120	0.0673	-0.4179 to 0.4171	ns	
C12: Staff training (bully. & degrad. trtm.)	0.058	0.061	1.0539	0.7951 to 1.3970	0.0481	-0.2061 to 0.3167	ns	
C13: Parent information/training Training = strong	0.073	0.059	0.7941	0.3813 to 1.6538	-0.2402	-1.3419 to 0.3800	ns	
C14: Break monitoring system	0.054	0.062	1.1561	0.8445 to 1.5825	0.1277	-0.1593 to 0.3829	ns	
C15: Cooperative teams	0.055	0.078	1.4558	1.0663 to 1.9878	0.2960	0.0484 to 0.5872	0.0175	
C16: Case documentation	0.052	0.068	1.3211	1.0010 to 1.7437	0.2304	0.0011 to 0.4654	0.0486	
C17: Dealing with bullies	0.062	0.059	0.9439	0.6877 to 1.2957	-0.0557	-0.3904 to 0.2335	ns	
C17b: Dealing with bullies	0.056	0.092	1.7121	1.1610 to 2.5246	0.3926	0.0981 to 0.7749	0.0061	
C18: Dealing with victims	0.065	0.058	0.8962	0.6413 to 1.2523	-0.1084	-0.4821 to 0.2036	ns	
C18b: Dealing with victims	0.056	0.092	1.7121	1.1610 to 2.5246	0.3926	0.0981 to 0.7749	0.0061	
C19: Mediation	0.078	0.059	0.7340	0.4251 to 1.2675	-0.3340	-1.1425 to 0.2015	ns	
Component cluster 1	0.057	0.061	1.0671	0.7890 to 1.4430	0.0593	-0.2293 to 0.3198	ns	
Component cluster 2	0.046	0.070	1.5672	1.1715 to 2.0966	0.3453	0.1250 to 0.5617	0.0023	
Component cluster 3 (see special lessons)	0.059	0.060	1.0189	0.7596 to 1.3667	0.0174	-0.2696 to 0.2804	ns	
Component cluster 4	0.055	0.067	1.2213	0.9228 to 1.6164	0.1712	-0.0669 to 0.4253	ns	
Component cluster 5	0.066	0.059	0.8980	0.3587 to 2.2481	-0.1061	-1.4425 to 0.5375	ns	
Component cluster 6	0.037	0.060	1.6636	0.5207 to 5.3151	0.3841	-0.7250 to 0.8125	ns	
Component cluster 7	0.059	0.060	1.0135	0.7555 to 1.3597	0.0125	-0.2517 to 0.3022	ns	

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.32 Size of the effects for social bullying of younger boys (school years 4–6) at aggregate level (n=1 301). Individual components and component clusters.

Individual components and component clusters	Subjected to social bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.060	0.061	1.0146	0.6187 to 1.6639	0.0135	-0.4955 to 0.4426		ns
C2: Relationship-enhancing measures teacher-pupil	0.044	0.067	1.5552	0.8860 to 2.7299	0.3412	-0.1061 to 0.7065		ns
C3: Relationship-enhancing measures pupil-pupil	0.051	0.069	1.4000	0.8767 to 2.2357	0.2713	-0.1103 to 0.6445		ns
C4: Special lessons	0.063	0.059	0.9236	0.5822 to 1.4653	-0.0775	-0.5578 to 0.3631		ns
C5: Pupils as players	0.065	0.058	0.8951	0.5652 to 1.4176	-0.1097	-0.5954 to 0.3374		ns
C6: Pupils active in prevention	0.061	0.061	0.9961	0.5284 to 1.8777	-0.0037	-0.7346 to 0.4926		ns
C7: Disciplinary strategies	0.027	0.064	2.4810	0.7697 to 7.9965	0.5809	-0.2107 to 0.9468		ns
C8: School rules	0.052	0.072	1.3939	0.8840 to 2.1980	0.2678	-0.0978 to 0.6599		ns
C9: School assemblies about bullying	0.048	0.062	1.3047	0.5155 to 3.3024	0.2223	-0.7615 to 0.7279		ns
C10: Training material	0.049	0.062	1.2987	0.5859 to 2.8791	0.2188	-0.5834 to 0.6890		ns
C12: Staff training (bully. & degrad. trtm.)	0.065	0.051	0.7716	0.4580 to 1.2998	-0.2768	-0.7721 to 0.3129		ns
C13: Parent information/training Training = strong	0.063	0.061	0.9690	0.2273 to 4.1299	-0.0300	-2.3287 to 0.7522		ns
C14: Break monitoring system	0.058	0.063	1.0771	0.6777 to 1.7118	0.0674	-0.3713 to 0.4797		ns
C15: Cooperative teams	0.061	0.059	0.9678	0.5018 to 1.8665	-0.0312	-0.5411 to 0.7368		ns
C16: Case documentation	0.061	0.060	0.9933	0.6173 to 1.5982	-0.0064	-0.4341 to 0.4774		ns
C17: Dealing with bullies	0.066	0.059	0.8891	0.5263 to 1.5018	-0.1165	-0.7282 to 0.3595		ns
C18: Dealing with victims	0.068	0.059	0.8493	0.4980 to 1.4485	-0.1653	-0.8156 to 0.3299		ns
C19: Mediation	0.074	0.059	0.7925	0.3855 to 1.6290	-0.2425	-1.2817 to 0.3906		ns
Component cluster 1	0.059	0.061	1.0358	0.6438 to 1.6665	0.0325	-0.4389 to 0.4520		ns
Component cluster 2	0.057	0.064	1.1222	0.7076 to 1.7796	0.1026	-0.3212 to 0.5092		ns
Component cluster 3 (see special lessons)	0.063	0.059	0.9236	0.5822 to 1.4653	-0.0775	-0.5578 to 0.3631		ns
Component cluster 4	0.058	0.065	1.1357	0.7142 to 1.8061	0.1126	-0.2873 to 0.5578		ns
Component cluster 5	0.029	0.062	2.2323	0.3016 to 16.5233	0.5363	-1.3688 to 0.9856		ns
Component cluster 6	0.083	0.060	0.7058	0.1630 to 3.0568	-0.3820	-3.2934 to 0.6442		ns
Component cluster 7	0.063	0.055	0.8757	0.5096 to 1.5047	-0.1331	-0.6084 to 0.4692		ns

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.33 Size of the effects for social bullying of older boys (school years 7–9) aggregate level (n=2 272). Individual components and component clusters.

Individual components and component clusters	Subjected to social bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.059	0.059	1.0069	0.6230 to 1.6273	0.0064	-0.5171 to 0.3966		ns
C2: Relationship-enhancing measures teacher-pupil	0.047	0.062	1.3457	0.8421 to 2.1506	0.2449	-0.1618 to 0.5643		ns
C3: Relationship-enhancing measures pupil-pupil	0.041	0.072	1.8086	1.2338 to 2.6512	0.4287	0.1596 to 0.6888		0.0021
C4: Special lessons	0.055	0.060	1.0963	0.7446 to 1.6140	0.0829	-0.2884 to 0.4066		ns
C5: Pupils as players	0.060	0.058	0.9505	0.6703 to 1.3478	-0.0489	-0.3925 to 0.2882		ns
C6: Pupils active in prevention	0.046	0.061	1.3479	0.7166 to 2.5354	0.2463	-0.3405 to 0.6246		ns
C7: Disciplinary strategies	0.024	0.062	2.6645	0.9726 to 7.2992	0.6096	0.0031 to 0.9079		0.0475
C8: School rules	0.054	0.066	1.2332	0.8660 to 1.7560	0.1788	-0.1189 to 0.5026		ns
C9: School assemblies about bullying	0.088	0.056	0.6208	0.3597 to 1.0714	-0.5571	-1.4592 to 0.0588		0.0841
C10: Training material	0.061	0.059	0.9682	0.5470 to 1.7139	-0.0308	-0.7055 to 0.4212		ns
C12: Staff training (bully. & degrad. trtm.)	0.054	0.065	1.2341	0.8703 to 1.7498	0.1795	-0.1178 to 0.4884		ns
C13: Parent information/training Training = strong	0.078	0.058	0.7328	0.3125 to 1.7182	-0.3362	-1.7481 to 0.4019		ns
C14: Break monitoring system	0.049	0.062	1.2704	0.8073 to 1.9992	0.2024	-0.2053 to 0.5269		ns
C15: Cooperative teams	0.051	0.084	1.7148	1.1885 to 2.4742	0.3957	0.1204 to 0.7209		0.0036
C16: Case documentation	0.046	0.071	1.5945	1.1106 to 2.2893	0.3558	0.0824 to 0.6286		0.0108
C17: Dealing with bullies	0.060	0.059	0.9749	0.6551 to 1.4507	-0.0242	-0.4430 to 0.3270		ns
C18: Dealing with victims	0.045	0.058	1.3242	0.8118 to 2.1602	0.2339	-0.2003 to 0.5683		ns
C19: Mediation	0.086	0.058	0.6583	0.2798 to 1.5489	-0.4746	-2.0125 to 0.3347		ns
Component cluster 1	0.055	0.060	1.0942	0.7384 to 1.6215	0.0813	-0.2988 to 0.4081		ns
Component cluster 2	0.040	0.074	1.9369	1.3250 to 2.8315	0.4645	0.2061 to 0.7191		0.0005
Component cluster 3 (see special lessons)	0.055	0.060	1.0963	0.7446 to 1.6140	0.0829	-0.2884 to 0.4066		ns
Component cluster 4	0.054	0.067	1.2745	0.8963 to 1.8123	0.2038	-0.0892 to 0.5213		ns
Component cluster 5	0.098	0.058	0.5723	0.2009 to 1.6302	-0.6743	-2.8749 to 0.3535		ns
Component cluster 6	0.018	0.060	3.5773	0.4914 to 26.0432	0.7078	-0.5565 to 1.0069		ns
Component cluster 7	0.057	0.062	1.0900	0.7626 to 1.5579	0.0778	-0.2373 to 0.4204		ns

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.34 Size of the effects for physical bullying at aggregate level (n=7 250).
Individual components and component clusters.

Individual components and component clusters	Subjected to physical bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.029	0.040	1.3986	1.0193 to 1.9191	0.2767	0.0170 to 0.4987	0.0368	
C2: Relationship-enhancing measures teacher-pupil	0.041	0.037	0.8995	0.6792 to 1.1914	-0.1071	-0.4229 to 0.1649	ns	
C3: Relationship-enhancing measures pupil-pupil	0.032	0.043	1.3567	1.0553 to 1.7444	0.2546	0.0460 to 0.4578	0.0169	
C4: Special lessons	0.041	0.036	0.8690	0.6770 to 1.1154	-0.1445	-0.4187 to 0.1085	ns	
C5: Pupils as players	0.035	0.040	1.1459	0.8979 to 1.4625	0.1228	-0.0989 to 0.3407	ns	
C6: Pupils active in prevention	0.026	0.040	1.5336	1.0030 to 2.3449	0.3388	0.0035 to 0.5895	0.0468	
C7: Disciplinary strategies	0.034	0.038	1.1311	0.6955 to 1.8394	0.1120	-0.3996 to 0.4595	ns	
C8: School rules	0.034	0.043	1.2704	0.9975 to 1.6180	0.2055	-0.0018 to 0.4236	0.0520	
C9: School assemblies about bullying	0.037	0.038	1.0425	0.6748 to 1.6106	0.0393	-0.4397 to 0.3816	ns	
C10: Training material	0.042	0.037	0.8888	0.6130 to 1.2887	-0.1198	-0.5723 to 0.2245	ns	
C12: Staff training (bully. & degrad. trtm.)	0.038	0.038	0.9921	0.7749 to 1.2703	-0.0076	-0.2413 to 0.2385	ns	
C13: Parent information/training Training = strong	0.026	0.038	1.5150	0.6675 to 3.4389	0.3312	-0.4374 to 0.7128	ns	
C14: Break monitoring system	0.034	0.040	1.1922	0.9045 to 1.5715	0.1558	-0.0950 to 0.3809	ns	
C15: Cooperative teams	0.035	0.048	1.3907	1.0588 to 1.8266	0.2711	0.0450 to 0.5345	0.0173	
C16: Case documentation	0.035	0.042	1.2099	0.9507 to 1.5397	0.1675	-0.0441 to 0.3843	ns	
C17: Dealing with bullies	0.038	0.038	0.9861	0.7478 to 1.3004	-0.0136	-0.3021 to 0.2393	ns	
C17b: Dealing with bullies	0.036	0.060	1.7334	1.2360 to 2.4311	0.4081	0.1409 to 0.7505	0.0013	
C18: Dealing with victims	0.040	0.037	0.9437	0.7048 to 1.2636	-0.0573	-0.3767 to 0.2140	ns	
C18b: Dealing with victims	0.036	0.060	1.7334	1.2360 to 2.4311	0.4081	0.1409 to 0.7505	0.0013	
C19: Mediation	0.050	0.037	0.7419	0.4600 to 1.1963	-0.3307	-1.0523 to 0.1588	ns	
Component cluster 1	0.034	0.040	1.1853	0.9085 to 1.5465	0.1511	-0.0901 to 0.3721	ns	
Component cluster 2	0.033	0.042	1.2695	0.9904 to 1.6273	0.2053	-0.0086 to 0.4139	0.0590	
Component cluster 3 (see special lessons)	0.041	0.036	0.8690	0.6770 to 1.1154	-0.1445	-0.4187 to 0.1085	ns	
Component cluster 4	0.033	0.046	1.4177	1.1131 to 1.8055	0.2849	0.0864 to 0.4962	0.0045	
Component cluster 5	0.024	0.038	1.6313	0.6006 to 4.4312	0.3778	-0.5643 to 0.7766	ns	
Component cluster 6	0.048	0.038	0.7786	0.3787 to 1.6005	-0.2708	-1.4371 to 0.3632	ns	
Component cluster 7	0.038	0.037	0.9754	0.7534 to 1.2628	-0.0243	-0.2655 to 0.2387	ns	

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.35 Size of the effects for physical bullying of girls at aggregate level (n=3 653). Individual components and component clusters.

Individual components and component clusters	Subjected to physical bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.020	0.026	1.2584	0.7460 to 2.1227	0.2011	-0.2979 to 0.5898	ns	
C2: Relationship-enhancing measures teacher-pupil	0.030	0.023	0.7427	0.4619 to 1.1941	-0.3360	-1.0054 to 0.1756	ns	
C3: Relationship-enhancing measures pupil-pupil	0.025	0.024	0.9296	0.6084 to 1.4204	-0.0738	-0.5282 to 0.3498	ns	
C4: Special lessons	0.022	0.026	1.1982	0.7585 to 1.8926	0.1618	-0.2713 to 0.5417	ns	
C5: Pupils as players	0.023	0.026	1.1570	0.7563 to 1.7700	0.1326	-0.2636 to 0.5198	ns	
C6: Pupils active in prevention	0.013	0.026	2.1168	0.9192 to 4.8750	0.5210	-0.0667 to 0.8709	0.0714	
C7: Disciplinary strategies	0.032	0.024	0.7376	0.3526 to 1.5428	-0.3444	-1.6138 to 0.3570	ns	
C8: School rules	0.023	0.027	1.1669	0.7644 to 1.7812	0.1398	-0.2390 to 0.5504	ns	
C9: School assemblies about bullying	0.026	0.024	0.9161	0.4557 to 1.8416	-0.0891	-1.0581 to 0.4780	ns	
C10: Training material	0.030	0.024	0.7975	0.4302 to 1.4784	-0.2464	-1.1698 to 0.3378	ns	
C12: Staff training (bully. & degrad. trtm.)	0.022	0.028	1.3104	0.8584 to 2.0005	0.2317	-0.1267 to 0.6311	ns	
C13: Parent information/training Training = strong	0.016	0.025	1.5549	0.3784 to 6.3895	0.3512	-1.3003 to 0.8746	ns	
C14: Break monitoring system	0.019	0.026	1.3852	0.8376 to 2.2906	0.2727	-0.1683 to 0.6374	ns	
C15: Cooperative teams	0.025	0.022	0.8934	0.5234 to 1.5249	-0.1163	-0.5858 to 0.5146	ns	
C16: Case documentation	0.026	0.022	0.8490	0.5541 to 1.3008	-0.1732	-0.6231 to 0.2897	ns	
C17: Dealing with bullies	0.026	0.024	0.9232	0.5746 to 1.4832	-0.0811	-0.6391 to 0.3624	ns	
C17b: Dealing with bullies	0.025	0.021	0.8366	0.3835 to 1.8251	-0.1905	-0.7768 to 0.8685	ns	
C18: Dealing with victims	0.024	0.024	0.9952	0.5957 to 1.6629	-0.0047	-0.5936 to 0.4381	ns	
C18b: Dealing with victims	0.025	0.021	0.8366	0.3835 to 1.8251	-0.1905	-0.7768 to 0.8685	ns	
C19: Mediation	0.058	0.023	0.3750	0.1960 to 0.7175	-1.5704	-3.4802 to -0.4225	0.0021	
Component cluster 1	0.021	0.026	1.2639	0.7919 to 2.0172	0.2045	-0.2251 to 0.5772	ns	
Component cluster 2	0.025	0.024	0.9436	0.6175 to 1.4418	-0.0583	-0.5080 to 0.3626	ns	
Component cluster 3 (see special lessons)	0.022	0.026	1.1982	0.7585 to 1.8926	0.1618	-0.2713 to 0.5417	ns	
Component cluster 4	0.021	0.029	1.3942	0.9140 to 2.1267	0.2767	-0.0719 to 0.6672	ns	
Component cluster 5	0.011	0.025	2.3058	0.3177 to 16.7341	0.5602	-1.3975 to 0.9880	ns	
Component cluster 6	0.060	0.024	0.3808	0.1504 to 0.9646	-1.5291	-4.6093 to -0.0726	0.0345	
Component cluster 7	0.025	0.023	0.9177	0.5808 to 1.4498	-0.0875	-0.5200 to 0.4176	ns	

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.36 Size of the effects for physical bullying of younger girls (school years 4–6) at aggregate level (n=1 310). Individual components and component clusters.

Individual components and component clusters	Subjected to physical bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.019	0.030	1.5927	0.7372 to 3.4411	0.3651	-0.2786 to 0.9173	ns	
C2: Relationship-enhancing measures teacher-pupil	0.025	0.026	1.0417	0.4814 to 2.2538	0.0390	-0.8587 to 0.6886	ns	
C3: Relationship-enhancing measures pupil-pupil	0.026	0.026	0.9954	0.5031 to 1.9694	-0.0045	-0.7163 to 0.6796	ns	
C4: Special lessons	0.025	0.027	1.0685	0.5302 to 2.1532	0.0625	-0.6716 to 0.7077	ns	
C5: Pupils as players	0.024	0.027	1.1293	0.5604 to 2.2754	0.1117	-0.5929 to 0.7447	ns	
C6: Pupils active in prevention	0.010	0.029	2.9564	0.7029 to 12.4348	0.6552	-0.2779 to 1.1285	ns	
C7: Disciplinary strategies	0.038	0.025	0.6447	0.2227 to 1.8662	-0.5302	-2.7906 to 0.4908	ns	
C8: School rules	0.026	0.026	0.9903	0.4988 to 1.9664	-0.0095	-0.6873 to 0.7190	ns	
C9: School assemblies about bullying	0.031	0.025	0.8290	0.2874 to 2.3909	-0.2000	-2.0067 to 0.6422	ns	
C10: Training material	0.026	0.026	1.0142	0.3525 to 2.9185	0.0137	-1.4940 to 0.7459	ns	
C12: Staff training (bully. & degrad. trtm.)	0.023	0.032	1.3933	0.6823 to 2.8449	0.2756	-0.2843 to 1.0373	ns	
C13: Parent information/training Training = strong	0.029	0.026	0.8761	0.1163 to 6.5994	-0.1373	-4.7762 to 0.8788	ns	
C14: Break monitoring system	0.025	0.027	1.0720	0.5320 to 2.1603	0.0655	-0.6668 to 0.7099	ns	
C15: Cooperative teams	0.025	0.031	1.2562	0.4791 to 3.2936	0.1988	-0.4664 to 1.4950	ns	
C16: Case documentation	0.024	0.030	1.2255	0.6005 to 2.5011	0.1796	-0.4129 to 0.9543	ns	
C17: Dealing with bullies	0.019	0.028	1.4595	0.5987 to 3.5580	0.3088	-0.5417 to 0.8818	ns	
C18: Dealing with victims	0.016	0.029	1.7828	0.6841 to 4.6461	0.4319	-0.3686 to 0.9672	ns	
C19: Mediation	0.026	0.026	0.9943	0.2992 to 3.3039	-0.0056	-1.8719 to 0.7733	ns	
Component cluster 1	0.016	0.032	2.0599	0.9252 to 4.5860	0.5063	-0.0598 to 1.0197	0.0709	
Component cluster 2	0.026	0.026	1.0194	0.5134 to 2.0241	0.0186	-0.6981 to 0.6879	ns	
Component cluster 3 (see special lessons)	0.025	0.027	1.0685	0.5302 to 2.1532	0.0625	-0.6716 to 0.7077	ns	
Component cluster 4	0.025	0.027	1.0509	0.5214 to 2.1183	0.0472	-0.5952 to 0.8115	ns	
Component cluster 5	0.022	0.026	1.2063	0.1614 to 9.0173	0.1673	-3.3534 to 0.9586	ns	
Component cluster 6	0.074	0.025	0.3197	0.0726 to 1.4080	-1.9699	-8.3763 to 0.2134	ns	
Component cluster 7	0.026	0.026	1.0098	0.4524 to 2.2540	0.0095	-0.6569 to 1.0004	ns	

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.37 Size of the effects for physical bullying of older girls (school years 7–9) at aggregate level (n=2 343). Individual components and component clusters.

Individual components and component clusters	Subjected to physical bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.022	0.024	1.0730	0.5210 to 2.2101	0.0666	-0.7880 to 0.6156	ns	
C2: Relationship-enhancing measures teacher-pupil	0.035	0.021	0.5978	0.3272 to 1.0924	-0.6495	-1.7170 to 0.0867	0.0910	
C3: Relationship-enhancing measures pupil-pupil	0.025	0.023	0.9005	0.5235 to 1.5488	-0.1077	-0.7224 to 0.4381	ns	
C4: Special lessons	0.019	0.025	1.3285	0.7196 to 2.4526	0.2425	-0.3247 to 0.7063	ns	
C5: Pupils as players	0.022	0.025	1.1608	0.6784 to 1.9861	0.1355	-0.3660 to 0.6375	ns	
C6: Pupils active in prevention	0.014	0.025	1.7346	0.6221 to 4.8369	0.4174	-0.5051 to 0.8883	ns	
C7: Disciplinary strategies	0.028	0.023	0.8373	0.2984 to 2.3498	-0.1889	-1.9800 to 0.5987	ns	
C8: School rules	0.021	0.027	1.2828	0.7496 to 2.1955	0.2158	-0.2435 to 0.7361	ns	
C9: School assemblies about bullying	0.024	0.023	0.9894	0.3902 to 2.5087	-0.0104	-1.3356 to 0.6459	ns	
C10: Training material	0.032	0.022	0.6949	0.3245 to 1.4879	-0.4250	-1.7774 to 0.3455	ns	
C12: Staff training (bully. & degrad. trtm.)	0.021	0.027	1.3145	0.7698 to 2.2446	0.2343	-0.2245 to 0.7302	ns	
C13: Parent information/training Training = strong	0.011	0.024	2.2111	0.3025 to 16.1629	0.5417	-1.5008 to 1.0233	ns	
C14: Break monitoring system	0.013	0.026	1.9768	0.8891 to 4.3953	0.4875	-0.1007 to 0.9015	0.0885	
C15: Cooperative teams	0.025	0.020	0.8013	0.4197 to 1.5299	-0.2418	-0.8419 to 0.5556	ns	
C16: Case documentation	0.028	0.020	0.7143	0.4175 to 1.2222	-0.3890	-1.0518 to 0.2349	ns	
C17: Dealing with bullies	0.029	0.021	0.7340	0.4147 to 1.2990	-0.3520	-1.1625 to 0.2657	ns	
C18: Dealing with victims	0.030	0.022	0.7329	0.3961 to 1.3561	-0.3536	-1.2812 to 0.2932	ns	
C19: Mediation	0.107	0.021	0.1772	0.0806 to 0.3897	-4.1472	-8.4946 to -1.6354	0.0000	
Component cluster 1	0.024	0.023	0.9512	0.5332 to 1.6970	-0.0500	-0.7230 to 0.4861	ns	
Component cluster 2	0.025	0.023	0.9040	0.5271 to 1.5502	-0.1036	-0.7065 to 0.4428	ns	
Component cluster 3 (see special lessons)	0.019	0.025	1.3285	0.7196 to 2.4526	0.2425	-0.3247 to 0.7063	ns	
Component cluster 4	0.019	0.031	1.6562	0.9697 to 2.8288	0.3887	-0.0213 to 0.8622	0.0621	
Component cluster 5	0.000	0.024	-	- to -	1.0000	-2.2271 to 1.2962	ns	
Component cluster 6	0.053	0.023	0.4190	0.1269 to 1.3837	-1.3138	-5.3240 to 0.2365	ns	
Component cluster 7	0.024	0.022	0.8945	0.5098 to 1.5695	-0.1150	-0.6668 to 0.5152	ns	

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.38 Size of the effects for physical bullying of boys at aggregate level (n=3 579). Individual components and component clusters.

Individual components and component clusters	Subjected to physical bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.040	0.055	1.4109	0.9463 to 2.1036	0.2797	-0.0503 to 0.5489	0.0898	
C2: Relationship-enhancing measures teacher-pupil	0.050	0.052	1.0432	0.7329 to 1.4848	0.0393	-0.3174 to 0.3394	ns	
C3: Relationship-enhancing measures pupil-pupil	0.038	0.062	1.7074	1.2424 to 2.3464	0.3988	0.1675 to 0.6250	0.0009	
C4: Special lessons	0.061	0.047	0.7507	0.5546 to 1.0160	-0.3118 to -0.6729	to 0.0156	0.0625	
C5: Pupils as players	0.048	0.055	1.1404	0.8448 to 1.5394	0.1172	-0.1542 to 0.3816	ns	
C6: Pupils active in prevention	0.041	0.053	1.3031	0.7929 to 2.1418	0.2230	-0.2317 to 0.5468	ns	
C7: Disciplinary strategies	0.036	0.053	1.5125	0.7902 to 2.8951	0.3267	-0.2321 to 0.6689	ns	
C8: School rules	0.045	0.061	1.3675	1.0163 to 1.8401	0.2565	0.0136 to 0.5157	0.0381	
C9: School assemblies about bullying	0.049	0.052	1.0642	0.6086 to 1.8607	0.0573	-0.5649 to 0.4653	ns	
C10: Training material	0.053	0.052	0.9698	0.6020 to 1.5623	-0.0295 to -0.5802	to 0.3624	ns	
C12: Staff training (bully. & degrad. trtm.)	0.055	0.047	0.8555	0.6290 to 1.1636	-0.1597 to -0.4637	to 0.1613	ns	
C13: Parent information/training Training = strong	0.037	0.052	1.4304	0.5211 to 3.9265	0.2897	-0.7608 to 0.7478	ns	
C14: Break monitoring system	0.048	0.053	1.1183	0.8017 to 1.5598	0.1007	-0.2142 to 0.3782	ns	
C15: Cooperative teams	0.046	0.074	1.6834	1.2189 to 2.3249	0.3875	0.1385 to 0.6827	0.0014	
C16: Case documentation	0.043	0.061	1.4413	1.0705 to 1.9407	0.2929	0.0550 to 0.5381	0.0155	
C17: Dealing with bullies	0.052	0.052	1.0017	0.7113 to 1.4107	0.0016	-0.3518 to 0.3030	ns	
C17b: Dealing with bullies	0.047	0.097	2.2109	1.5039 to 3.2502	0.5222	0.2382 to 0.8886	0.0000	
C18: Dealing with victims	0.056	0.051	0.8979	0.6284 to 1.2829	-0.1074 to -0.5127	to 0.2259	ns	
C18b: Dealing with victims	0.047	0.097	2.2109	1.5039 to 3.2502	0.5222	0.2382 to 0.8886	0.0000	
C19: Mediation	0.042	0.052	1.2682	0.6149 to 2.6155	0.2027	-0.5440 to 0.6222	ns	
Component cluster 1	0.048	0.053	1.1169	0.8069 to 1.5461	0.0997	-0.2064 to 0.3739	ns	
Component cluster 2	0.040	0.061	1.5371	1.1270 to 2.0966	0.3353	0.0961 to 0.5702	0.0063	
Component cluster 3 (see special lessons)	0.061	0.047	0.7507	0.5546 to 1.0160	-0.3118 to -0.6729	to 0.0156	0.0625	
Component cluster 4	0.045	0.063	1.4479	1.0760 to 1.9485	0.2956	0.0580 to 0.5511	0.0141	
Component cluster 5	0.040	0.052	1.3149	0.4103 to 4.2133	0.2299	-1.1459 to 0.7584	ns	
Component cluster 6	0.036	0.052	1.4645	0.4581 to 4.6821	0.3057	-0.9463 to 0.7868	ns	
Component cluster 7	0.052	0.052	1.0001	0.7301 to 1.3701	0.0001	-0.2858 to 0.3162	ns	

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.39 Size of the effects for physical bullying of younger boys (school years 4–6) at aggregate level (n=1 294). Individual components and component clusters.

Individual components and component clusters	Subjected to physical bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.035	0.056	1.6211	0.8854 to 2.9680	0.3696	-0.1057 to 0.7657	ns	
C2: Relationship-enhancing measures teacher-pupil	0.055	0.047	0.8507	0.4943 to 1.4643	-0.1658	-0.8184 to 0.3567	ns	
C3: Relationship-enhancing measures pupil-pupil	0.036	0.061	1.7569	1.0303 to 2.9958	0.4154	0.0241 to 0.8019	0.0363	
C4: Special lessons	0.066	0.039	0.5744	0.3470 to 0.9509	-0.6924	-1.3944 to -0.0651	0.0293	
C5: Pupils as players	0.042	0.054	1.3076	0.7710 to 2.2176	0.2253	-0.2352 to 0.6508	ns	
C6: Pupils active in prevention	0.026	0.054	2.1424	0.8487 to 5.4080	0.5195	-0.1364 to 0.9104	0.0989	
C7: Disciplinary strategies	0.027	0.052	1.9970	0.6164 to 6.4699	0.4860	-0.4799 to 0.9213	ns	
C8: School rules	0.042	0.059	1.4248	0.8615 to 2.3563	0.2855	-0.1189 to 0.7231	ns	
C9: School assemblies about bullying	0.040	0.050	1.2842	0.4570 to 3.6085	0.2125	-0.9581 to 0.7658	ns	
C10: Training material	0.049	0.050	1.0207	0.4564 to 2.2825	0.0192	-0.9812 to 0.5961	ns	
C12: Staff training (bully. & degrad. trtm.)	0.036	0.055	1.5604	0.8521 to 2.8574	0.3462	-0.1422 to 0.7484	ns	
C13: Parent information/training Training = strong	0.030	0.050	1.6828	0.2263 to 12.5143	0.3935	-2.0755 to 0.9605	ns	
C14: Break monitoring system	0.042	0.055	1.3497	0.8001 to 2.2769	0.2483	-0.1965 to 0.6700	ns	
C15: Cooperative teams	0.042	0.091	2.2708	1.2740 to 4.0475	0.5359	0.1401 to 1.0955	0.0044	
C16: Case documentation	0.037	0.072	2.0163	1.2179 to 3.3381	0.4854	0.1346 to 0.8944	0.0055	
C17: Dealing with bullies	0.053	0.048	0.9172	0.5130 to 1.6398	-0.0855	-0.7719 to 0.4324	ns	
C18: Dealing with victims	0.054	0.048	0.8885	0.4904 to 1.6095	-0.1188	-0.8467 to 0.4157	ns	
C19: Mediation	0.033	0.051	1.5768	0.5630 to 4.4163	0.3537	-0.6264 to 0.8346	ns	
Component cluster 1	0.043	0.053	1.2692	0.7388 to 2.1805	0.2031	-0.2833 to 0.6332	ns	
Component cluster 2	0.044	0.054	1.2453	0.7443 to 2.0833	0.1883	-0.2675 to 0.6246	ns	
Component cluster 3 (see special lessons)	0.066	0.039	0.5744	0.3470 to 0.9509	-0.6924	-1.3944 to -0.0651	0.0293	
Component cluster 4	0.037	0.069	1.9037	1.1496 to 3.1524	0.4569	0.0991 to 0.8650	0.0111	
Component cluster 5	0.000	0.051	-	- to -	1.0000	-1.0655 to 1.2667	ns	
Component cluster 6	0.080	0.049	0.5907	0.1362 to 2.5622	-0.6374	-4.1167 to 0.5760	ns	
Component cluster 7	0.044	0.066	1.5342	0.8959 to 2.6271	0.3328	-0.0739 to 0.8577	ns	

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.40 Size of the effects for physical bullying of older boys (school years 7–9) at aggregate level (n=2 285). Individual components and component clusters.

Individual components and component clusters	Subjected to physical bullying							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.044	0.055	1.2404	0.7239 to 2.1253	0.1852	-0.3300 to 0.5555		ns
C2: Relationship-enhancing measures teacher-pupil	0.046	0.055	1.1914	0.7421 to 1.9128	0.1532	-0.2990 to 0.5060		ns
C3: Relationship-enhancing measures pupil-pupil	0.039	0.063	1.6758	1.1278 to 2.4900	0.3877	0.0950 to 0.6694		0.0099
C4: Special lessons	0.058	0.051	0.8637	0.5849 to 1.2753	-0.1487	-0.5890 to 0.2315		ns
C5: Pupils as players	0.051	0.055	1.0739	0.7435 to 1.5511	0.0653	-0.2775 to 0.4024		ns
C6: Pupils active in prevention	0.054	0.053	0.9832	0.5442 to 1.7762	-0.0162	-0.7178 to 0.4465		ns
C7: Disciplinary strategies	0.042	0.054	1.3003	0.5960 to 2.8365	0.2212	-0.5773 to 0.6648		ns
C8: School rules	0.047	0.063	1.3473	0.9317 to 1.9482	0.2456	-0.0559 to 0.5761		ns
C9: School assemblies about bullying	0.054	0.053	0.9766	0.5021 to 1.8996	-0.0226	-0.8451 to 0.4798		ns
C10: Training material	0.056	0.053	0.9402	0.5201 to 1.6995	-0.0601	-0.7887 to 0.4188		ns
C12: Staff training (bully. & degrad. trtm.)	0.054	0.051	0.9417	0.6511 to 1.3619	-0.0586	-0.4159 to 0.3098		ns
C13: Parent information/training Training = strong	0.040	0.053	1.3537	0.4203 to 4.3605	0.2508	-1.0911 to 0.7790		ns
C14: Break monitoring system	0.055	0.052	0.9502	0.6119 to 1.4756	-0.0495	-0.5384 to 0.3389		ns
C15: Cooperative teams	0.048	0.069	1.4815	1.0020 to 2.1904	0.3096	0.0034 to 0.6763		0.0476
C16: Case documentation	0.048	0.057	1.1985	0.8281 to 1.7346	0.1577	-0.1680 to 0.4794		ns
C17: Dealing with bullies	0.051	0.054	1.0514	0.6882 to 1.6061	0.0464	-0.3841 to 0.4031		ns
C18: Dealing with victims	0.057	0.052	0.9008	0.5764 to 1.4079	-0.1038	-0.6234 to 0.3023		ns
C19: Mediation	0.056	0.053	0.9345	0.3350 to 2.6069	-0.0661	-1.5840 to 0.6091		ns
Component cluster 1	0.052	0.053	1.0275	0.6838 to 1.5440	0.0254	-0.3893 to 0.3789		ns
Component cluster 2	0.038	0.065	1.7274	1.1689 to 2.5526	0.4049	0.1206 to 0.6841		0.0056
Component cluster 3 (see special lessons)	0.058	0.051	0.8637	0.5849 to 1.2753	-0.1487	-0.5890 to 0.2315		ns
Component cluster 4	0.049	0.060	1.2502	0.8641 to 1.8090	0.1904	-0.1209 to 0.5292		ns
Component cluster 5	0.071	0.053	0.7219	0.2199 to 2.3701	-0.3577	-2.6192 to 0.5527		ns
Component cluster 6	0.017	0.054	3.2463	0.4457 to 23.6448	0.6800	-0.7057 to 1.0040		ns
Component cluster 7	0.057	0.046	0.8062	0.5466 to 1.1891	-0.2267	-0.6144 to 0.1934		ns

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.41 Changes in social and physical bullying and/or degrading treatment over time.
Individual components and component clusters.

Measures and combinations of measures	OR	CI	z	P
C1: Follow-up/evaluation	1.15	0.96–1.37	1.514	ns
C2: Relationship-enhancing measures teacher-pupil	1.10	0.92–1.31	1.060	ns
C3: Relationship-enhancing measures pupil–pupil	1.26	1.08–1.46	3.027	0.0025
C4: Special lessons	0.96	0.83–1.12	-0.521	ns
C5: Pupils as players	0.88	0.76–1.02	-1.670	0.0949
C6: Pupils active in prevention	1.36	1.08–1.71	2.598	0.0094
C7: Disciplinary strategies	1.58	1.19–2.09	3.182	0.0015
C8: School rules	1.06	0.92–1.23	0.835	ns
C9: School assemblies about bullying	1.02	0.79–1.31	0.152	ns
C10: Training material	1.05	0.84–1.33	0.454	ns
C12: Staff training (bullying/degrading treatment)	1.04	0.90–1.21	0.563	ns
C13: Parent information/training	0.97	0.68–1.40	-0.146	ns
C14: Break monitoring system	1.25	1.06–1.47	2.715	0.0066
C15: Cooperative teams	1.28	1.08–1.52	2.884	0.0039
C16: Case documentation	1.11	0.96–1.29	1.428	ns
C17a: Dealing with bullies	0.96	0.81–1.13	-0.514	ns
C17b: Dealing with bullies	1.46	1.14–1.88	2.977	0.0029
C18a: Dealing with victims	0.98	0.82–1.18	-0.177	ns
C18b: Dealing with victims	1.46	1.14–1.88	2.977	0.0029
C19: Mediation	1.09	0.81–1.46	0.549	ns
Component cluster 1	1.17	1.00–1.37	1.994	0.0462
Component cluster 2	1.25	1.07–1.44	2.909	0.0036
Component cluster 3 see special lessons	0.96	0.83–1.12	-0.521	ns
Component cluster 4	1.01	0.87–1.17	0.150	ns
Component cluster 5	0.86	0.47–1.58	-0.482	ns
Component cluster 6	1.18	0.78–1.78	0.778	ns
Component cluster 7	0.95	0.81–1.11	-0.629	ns

Table A.42 Changes in victimising others, social and physical bullying and/or degrading treatment over time.
Individual components and component clusters.

Measures and combinations of measures	OR	CI	z	P
C1: Follow-up/evaluation	1.46	1.00–2.12	1.954	0.0507
C2: Relationship-enhancing measures teacher-pupil	1.18	0.84–1.65	0.965	ns
C3: Relationship-enhancing measures pupil–pupil	1.14	0.85–1.54	0.891	ns
C4: Special lessons	1.33	0.98–1.80	1.809	0.0705
C5: Pupils as players	0.71	0.53–0.96	-2.257	0.0240
C6: Pupils active in prevention	1.26	0.75–2.11	0.863	ns
C7: Disciplinary strategies	1.40	0.84–2.32	1.288	ns
C8: School rules	0.97	0.72–1.30	-0.219	ns
C9: School assemblies about bullying	1.30	0.79–2.14	1.032	ns
C10: Training material	1.20	0.77–1.87	0.790	ns
C12: Staff training (bullying/degrading treatment)	1.26	0.94–1.69	1.553	ns
C13: Parent information/training	0.72	0.40–1.31	-1.075	ns
C14: Break monitoring system	1.31	0.94–1.82	1.608	ns
C15: Cooperative teams	1.01	0.73–1.39	0.047	ns
C16: Case documentation	0.86	0.64–1.14	-1.058	ns
C17a: Dealing with bullies	0.99	0.72–1.35	-0.091	ns
C17b: Dealing with bullies	1.02	0.61–1.72	0.091	ns
C18a: Dealing with victims	1.09	0.77–1.54	0.465	ns
C18b: Dealing with victims	1.02	0.61–1.72	0.091	ns
C19: Mediation	0.37	0.20–0.68	-3.235	0.0012
Component cluster 1	1.53	1.11–2.09	2.621	0.0088
Component cluster 2	1.09	0.81–1.46	0.586	ns
Component cluster 3 see special lessons	1.33	0.98–1.80	1.809	0.0705
Component cluster 4	0.93	0.70–1.25	-0.467	ns
Component cluster 5	3.41	0.87–13.33	1.759	0.0786
Component cluster 6	1.13	0.53–2.43	0.312	ns
Component cluster 7	0.87	0.65–1.20	-0.779	ns

Table A.43 Size of the effects for social and physical bullying and/or degrading treatment at aggregate level (n=7 193). Individual components and component clusters.

Individual components and component clusters	Subjected to social and physical bullying/degrading treatment							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.144	0.164	1.1674	0.9989 to 1.3642	0.1228	-0.0010 to 0.2390	0.0514	
C2: Relationship-enhancing measures teacher-pupil	0.154	0.161	1.0568	0.9073 to 1.2309	0.0455	-0.0826 to 0.1661	ns	
C3: Relationship-enhancing measures pupil-pupil	0.142	0.172	1.2572	1.1043 to 1.4313	0.1755	0.0767 to 0.2730	0.0005	
C4: Special lessons	0.163	0.157	0.9565	0.8377 to 1.0922	-0.0380	-0.1538 to 0.0743	ns	
C5: Pupils as players	0.156	0.162	1.0429	0.9185 to 1.1842	0.0347	-0.0706 to 0.1391	ns	
C6: Pupils active in prevention	0.132	0.163	1.2811	1.0454 to 1.5701	0.1904	0.0359 to 0.3284	0.0167	
C7: Disciplinary strategies	0.121	0.162	1.4018	1.0708 to 1.8351	0.2518	0.0555 to 0.4167	0.0136	
C8: School rules	0.147	0.178	1.2604	1.1099 to 1.4314	0.1763	0.0790 to 0.2753	0.0004	
C9: School assemblies about bullying	0.158	0.159	1.0104	0.8063 to 1.2661	0.0086	-0.1921 to 0.1848	ns	
C10: Training material	0.148	0.161	1.1045	0.8970 to 1.3601	0.0807	-0.0933 to 0.2354	ns	
C12: Staff training (bully. & degrad. trtm.)	0.162	0.156	0.9558	0.8394 to 1.0884	-0.0387	-0.1486 to 0.0734	ns	
C13: Parent information/training Training = strong	0.176	0.159	0.8838	0.6270 to 1.2458	-0.1083	-0.4528 to 0.1713	ns	
C14: Break monitoring system	0.142	0.166	1.2043	1.0433 to 1.3902	0.1456	0.0339 to 0.2524	0.0110	
C15: Cooperative teams	0.152	0.187	1.2811	1.1049 to 1.4854	0.1861	0.0731 to 0.3056	0.0010	
C16: Case documentation	0.159	0.159	0.9997	0.8807 to 1.1347	-0.0003	-0.1065 to 0.1067	ns	
C17a: Dealing with bullies	0.160	0.159	0.9952	0.8608 to 1.1506	-0.0040	-0.1295 to 0.1152	ns	
C17b: Dealing with bullies	0.157	0.180	1.1787	0.9604 to 1.4466	0.1278	-0.0293 to 0.3029	ns	
C18a: Dealing with victims	0.160	0.159	0.9954	0.8525 to 1.1622	-0.0039	-0.1388 to 0.1226	ns	
C18b: Dealing with victims	0.157	0.180	1.1787	0.9604 to 1.4466	0.1278	-0.0293 to 0.3029	ns	
C19: Mediation	0.195	0.157	0.7695	0.5920 to 1.0002	-0.2411	-0.5189 to -0.0007	0.0496	
Component cluster 1	0.141	0.168	1.2251	1.0663 to 1.4076	0.1578	0.0507 to 0.2610	0.0041	
Component cluster 2	0.148	0.168	1.1596	1.0198 to 1.3186	0.1173	0.0156 to 0.2176	0.0238	
Component cluster 3 (see special lessons)	0.163	0.157	0.9565	0.8377 to 1.0922	-0.0380	-0.1538 to 0.0743	ns	
Component cluster 4	0.146	0.181	1.2887	1.1340 to 1.4645	0.1913	0.0941 to 0.2905	0.0001	
Component cluster 5	0.108	0.161	1.5831	0.9668 to 2.5925	0.3286	-0.0250 to 0.5747	0.0656	
Component cluster 6	0.171	0.159	0.9187	0.6086 to 1.3867	-0.0734	-0.4852 to 0.2450	ns	
Component cluster 7	0.162	0.153	0.9308	0.8124 to 1.0665	-0.0623	-0.1774 to 0.0569	ns	

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.44 Size of the effects of victimising others, social and physical bullying and/or degrading treatment at aggregate level (n=6 386). Individual components and component clusters.

Individual components and component clusters	Subjected to social and physical bullying/degrading treatment							
	Prop. Strong	Prop. Weak	OR	CI	RRR	CI	P	
C1: Follow-up/evaluation	0.026	0.041	1.6012	1.1270 to 2.2751	0.3656	0.1023 to 0.5882	0.0081	
C2: Relationship-enhancing measures teacher-pupil	0.040	0.038	0.9468	0.6982 to 1.2839	-0.0540	-0.3864 to 0.2284	ns	
C3: Relationship-enhancing measures pupil-pupil	0.033	0.041	1.2480	0.9578 to 1.6261	0.1921	-0.0385 to 0.4156	ns	
C4: Special lessons	0.035	0.040	1.1588	0.8791 to 1.5275	0.1323	-0.1217 to 0.3670	ns	
C5: Pupils as players	0.041	0.036	0.8844	0.6842 to 1.1431	-0.1254	-0.3940 to 0.1358	ns	
C6: Pupils active in prevention	0.025	0.040	1.6145	1.0155 to 2.5668	0.3711	0.0154 to 0.6304	0.0410	
C7: Disciplinary strategies	0.039	0.038	0.9715	0.5953 to 1.5853	-0.0282	-0.6154 to 0.3700	ns	
C8: School rules	0.037	0.039	1.0606	0.8176 to 1.3757	0.0550	-0.1849 to 0.3074	ns	
C9: School assemblies about bullying	0.035	0.038	1.1140	0.6993 to 1.7747	0.0988	-0.3914 to 0.4422	ns	
C10: Training material	0.037	0.038	1.0389	0.6864 to 1.5724	0.0360	-0.4151 to 0.3693	ns	
C12: Staff training (bully. & degrad. trtm.)	0.033	0.046	1.3974	1.0807 to 1.8068	0.2750	0.0632 to 0.5000	0.0104	
C13: Parent information/training Training = strong	0.072	0.037	0.4930	0.2868 to 0.8475	-0.9541	-2.1374 to -0.1853	0.0090	
C14: Break monitoring system	0.032	0.040	1.2573	0.9329 to 1.6944	0.1980	-0.0646 to 0.4318	ns	
C15: Cooperative teams	0.036	0.046	1.3140	0.9813 to 1.7594	0.2304	-0.0136 to 0.5172	0.0660	
C16: Case documentation	0.038	0.039	1.0300	0.7967 to 1.3315	0.0280	-0.2151 to 0.2755	ns	
C17a: Dealing with bullies	0.046	0.035	0.7670	0.5795 to 1.0152	-0.2899	-0.6391 to 0.0142	0.0629	
C17b: Dealing with bullies	0.038	0.034	0.8886	0.5636 to 1.4013	-0.1205	-0.4962 to 0.4093	ns	
C18a: Dealing with victims	0.039	0.038	0.9658	0.7065 to 1.3204	-0.0340	-0.3724 to 0.2502	ns	
C18b: Dealing with victims	0.038	0.034	0.8886	0.5636 to 1.4013	-0.1205	-0.4962 to 0.4093	ns	
C19: Mediation	0.070	0.036	0.4995	0.3173 to 0.7863	-0.9315	-1.8692 to -0.2735	0.0022	
Component cluster 1	0.031	0.041	1.3542	1.0129 to 1.8105	0.2534	0.0111 to 0.4753	0.0400	
Component cluster 2	0.036	0.040	1.1057	0.8519 to 1.4352	0.0922	-0.1508 to 0.3275	ns	
Component cluster 3 (see special lessons)	0.035	0.040	1.1588	0.8791 to 1.5275	0.1323	-0.1217 to 0.3670	ns	
Component cluster 4	0.036	0.041	1.1523	0.8879 to 1.4955	0.1274	-0.1041 to 0.3745	ns	
Component cluster 5	0.013	0.039	3.1192	0.7686 to 12.6583	0.6707	-0.1777 to 0.9433	0.0932	
Component cluster 6	0.050	0.038	0.7404	0.3424 to 1.6010	-0.3330	-1.6602 to 0.3615	ns	
Component cluster 7	0.038	0.039	1.0418	0.7950 to 1.3653	0.0386	-0.2083 to 0.3084	ns	

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.45 Social and physical bullying, social bullying compared to physical bullying in school clusters at individual level.

Social and physical bullying	Proportion improved	Prop. improved/continued	OR	CI	RRR	CI	P
School cluster 1 (n=702)	0.043	0.068	0.6083	0.3807 to 0.9719	-0.6000	-1.1759 to -0.0365	0.0360
School cluster 2 (n=453)	0.062	0.044	1.4264	0.7913 to 2.5711	0.2857	-0.1946 to 0.7755	ns
School cluster 3 (n=188)	0.032	0.090	0.3316	0.1278 to 0.8607	-1.8333	-3.4785 to -0.2999	0.0179
School cluster 4 (n=426)	0.038	0.042	0.8846	0.4449 to 1.7587	-0.1250	-0.8585 to 0.6020	ns
School cluster 5 (n=496)	0.050	0.052	0.9595	0.5461 to 1.6860	-0.0400	-0.6008 to 0.5195	ns
School cluster 6 (n=392)	0.059	0.061	0.9557	0.5299 to 1.7239	-0.0435	-0.6263 to 0.5380	ns
School cluster 7 (n=311)	0.042	0.061	0.6704	0.3251 to 1.3825	-0.4615	-1.3381 to 0.3925	ns
School cluster 8 (n=424)	0.054	0.090	0.5826	0.3408 to 0.9961	-0.6522	-1.3114 to -0.0067	0.0462
School cluster 9 (n=64)	0.016	0.031	0.4921	0.0435 to 5.5666	-1.0000	-5.9157 to 3.5696	ns
Social bullying							
School cluster 1 (n=705)	0.033	0.060	0.5324	0.3166 to 0.8950	-0.8261	-1.5219 to -0.1529	0.0158
School cluster 2 (n=452)	0.049	0.033	1.4905	0.7630 to 2.9119	0.3182	-0.2256 to 0.8773	ns
School cluster 3 (n=194)	0.026	0.072	0.3401	0.1201 to 0.9636	-1.8000	-3.6484 to -0.0994	0.0342
School cluster 4 (n=431)	0.023	0.028	0.8294	0.3545 to 1.9405	-0.2000	-1.1817 to 0.7641	ns
School cluster 5 (n=504)	0.040	0.044	0.9053	0.4877 to 1.6805	-0.1000	-0.7456 to 0.5414	ns
School cluster 6 (n=392)	0.059	0.041	1.4648	0.7616 to 2.8171	0.3043	-0.2262 to 0.8476	ns
School cluster 7 (n=303)	0.046	0.043	1.0806	0.4992 to 2.3393	0.0714	-0.6748 to 0.8220	ns
School cluster 8 (n=424)	0.047	0.059	0.7901	0.4319 to 1.4455	-0.2500	-0.9133 to 0.4046	ns
School cluster 9 (n=61)	0.000	0.033	0.0000	- to -	-	- to -	ns
Physical bullying							
School cluster 1 (n=711)	0.024	0.030	0.8049	0.4210 to 1.5388	-0.2353	-0.9724 to 0.4892	ns
School cluster 2 (n=463)	0.028	0.024	1.1871	0.5262 to 2.6777	0.1538	-0.6171 to 0.9374	ns
School cluster 3 (n=181)	0.017	0.039	0.4189	0.1066 to 1.6463	-1.3333	-3.7764 to 0.8873	ns
School cluster 4 (n=429)	0.016	0.021	0.7741	0.2856 to 2.0977	-0.2857	-1.5254 to 0.9188	ns
School cluster 5 (n=499)	0.026	0.025	1.0512	0.4561 to 2.4230	0.0475	-0.8329 to 0.8631	ns
School cluster 6 (n=394)	0.025	0.023	1.1140	0.4477 to 2.7719	0.1000	-0.8095 to 1.0196	ns
School cluster 7 (n=311)	0.016	0.035	0.4456	0.1530 to 1.2980	-1.2000	-2.9649 to 0.4237	ns
School cluster 8 (n=436)	0.018	0.036	0.5047	0.2188 to 1.1643	-0.9464	-2.1120 to 0.2302	ns
School cluster 9 (n=63)	0.016	0.000	-	- to -	1.0000	-2.7131 to 5.3289	ns

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.46 Social and physical bullying in school clusters totally and by gender at aggregate level.

	Prop. Victimised T3 Total	(n=7 193)	Prop. Victimised T1 (n=7 999)	OR	CI	RRR	CI	P
School cluster 1	0.073	0.055	0.7308	0.5424 to 0.9845	-0.3414 to -0.6674	-0.0175 to 0.0385		
School cluster 2	0.072	0.072	0.9950	0.6944 to 1.4257	-0.0047 to -0.3435	0.3322 to ns		
School cluster 3	0.092	0.067	0.6997	0.4198 to 1.1662	-0.3895 to -0.9840	0.1655 to ns		
School cluster 4	0.058	0.083	1.4683	1.0076 to 2.1396	0.3003 to 0.0063	0.5861 to 0.0445		
School cluster 5	0.071	0.091	1.3124	0.9726 to 1.7710	0.2212 to -0.0227	0.4651 to 0.0746		
School cluster 6	0.080	0.091	1.1560	0.8151 to 1.6395	0.1241 to -0.1811	0.4156 to ns		
School cluster 7	0.055	0.089	1.6793	1.1173 to 2.5241	0.3823 to 0.0838	0.6885 to 0.0119		
School cluster 8	0.101	0.103	1.0194	0.7737 to 1.3432	0.0171 to -0.2315	0.2611 to ns		
School cluster 9	0.043	0.043	1.0112	0.2453 to 4.1691	0.0106 to -1.5497	1.5816 to ns		
Girls	(n=3 575)	(n=3 978)						
School cluster 1	0.058	0.051	0.8692	0.5531 to 1.3660	-0.1416 to -0.6063	0.3219 to ns		
School cluster 2	0.074	0.079	1.0622	0.6445 to 1.7507	0.0542 to -0.4060	0.5062 to ns		
School cluster 3	0.099	0.068	0.6631	0.3250 to 1.3527	-0.4578 to -1.3361	0.3323 to ns		
School cluster 4	0.060	0.094	1.6288	0.9650 to 2.7492	0.3629 to -0.0271	0.7430 to 0.0656		
School cluster 5	0.071	0.077	1.0893	0.7049 to 1.6834	0.0762 to -0.3176	0.4668 to ns		
School cluster 6	0.058	0.103	1.8858	1.1130 to 3.1954	0.4427 to 0.0804	0.7895 to 0.0169		
School cluster 7	0.039	0.108	2.9542	1.5949 to 5.4721	0.6354 to 0.2884	1.0043 to 0.0003		
School cluster 8	0.076	0.090	1.2011	0.7775 to 1.8555	0.1546 to -0.2189	0.5187 to ns		
School cluster 9	0.042	0.058	1.4082	0.2250 to 8.8125	0.2778 to -1.5448	2.0672 to ns		
Boys	(n=3 600)	(n=4 004)						
School cluster 1	0.088	0.058	0.6403	0.4299 to 0.9536	-0.5124 to -0.9733	-0.0564 to 0.0272		
School cluster 2	0.068	0.065	0.9535	0.5645 to 1.6104	-0.0455 to -0.5552	0.4658 to ns		
School cluster 3	0.087	0.065	0.7282	0.3499 to 1.5154	-0.3406 to -1.1980	0.4486 to ns		
School cluster 4	0.057	0.074	1.3181	0.7662 to 2.2675	0.2276 to -0.2330	0.6630 to ns		
School cluster 5	0.070	0.103	1.5221	1.0035 to 2.3087	0.3189 to 0.0032	0.6358 to 0.0469		
School cluster 6	0.106	0.080	0.7337	0.4530 to 1.1885	-0.3245 to -0.8666	0.1766 to ns		
School cluster 7	0.071	0.070	0.9877	0.5588 to 1.7456	-0.0116 to -0.5548	0.5350 to ns		
School cluster 8	0.126	0.116	0.9086	0.6346 to 1.3009	-0.0879 to -0.4240	0.2398 to ns		
School cluster 9	0.043	0.024	0.5500	0.0480 to 6.2997	-0.7826 to -5.0385	3.5767 to ns		

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.47 Social bullying in school clusters totally and by gender at aggregate level.

	Prop. Victimised T3 Total	(n=7 116)	Prop. Victimised T1 (n=7 881)	OR	CI	RRR	CI	P
School cluster 1	0.059	0.044	0.7378	0.5297 to 1.0275	-0.3345 to 0.1799	-0.7017 to 0.0300	0.0710 ns	
School cluster 2	0.051	0.059	1.1859	0.7861 to 1.7889	0.1488 to 0.2140	-0.2140 to 0.5124	ns	
School cluster 3	0.074	0.050	0.6564	0.3678 to 1.1713	-0.4847 to -1.2100	0.1799 to 0.1799	ns	
School cluster 4	0.042	0.064	1.5685	1.0125 to 2.4296	0.3472 to 0.0104	0.6752 to 0.6752	0.0423	
School cluster 5	0.055	0.067	1.2309	0.8535 to 1.7754	0.1773 to -0.1342	0.5031 to 0.5031	ns	
School cluster 6	0.058	0.075	1.2996	0.8715 to 1.9379	0.2170 to -0.1192	0.5363 to 0.5363	ns	
School cluster 7	0.047	0.076	1.6676	1.0739 to 2.5895	0.3815 to 0.0550	0.7186 to 0.7186	0.0215	
School cluster 8	0.074	0.083	1.1347	0.8397 to 1.5334	0.1100 to -0.1570	0.3649 to 0.3649	ns	
School cluster 9	0.043	0.022	0.5000	0.0893 to 2.7996	-0.9570 to -3.8879	1.7999 to 1.7999	ns	
Girls	(n=3 524)	(n=3 918)						
School cluster 1	0.050	0.049	0.9836	0.6104 to 1.5851	-0.0158 to -0.4817	0.4510 to 0.4510	ns	
School cluster 2	0.060	0.072	1.2085	0.7034 to 2.0764	0.1621 to -0.3113	0.6317 to 0.6317	ns	
School cluster 3	0.095	0.064	0.6580	0.3158 to 1.3710	-0.4706 to -1.3888	0.3504 to 0.3504	ns	
School cluster 4	0.048	0.080	1.7494	0.9790 to 3.1261	0.4080 to -0.0154	0.8221 to 0.8221	0.0563	
School cluster 5	0.059	0.066	1.1453	0.7116 to 1.8433	0.1194 to -0.3077	0.5430 to 0.5430	ns	
School cluster 6	0.050	0.096	2.0204	1.1525 to 3.5416	0.4798 to 0.1052	0.8389 to 0.8389	0.0125	
School cluster 7	0.035	0.102	3.1628	1.6438 to 6.0853	0.6602 to 0.3022	1.0451 to 1.0451	0.0003	
School cluster 8	0.061	0.081	1.3576	0.8445 to 2.1823	0.2473 to -0.1418	0.6276 to 0.6276	ns	
School cluster 9	0.043	0.020	0.4500	0.0395 to 5.1320	-1.1702 to -6.3328	3.3659 to 3.3659	ns	
Boys	(n=3 873)	(n=3 946)						
School cluster 1	0.068	0.040	0.5662	0.3547 to 0.9039	-0.7139 to -1.3073	-0.1323 to 0.0159		
School cluster 2	0.042	0.047	1.1341	0.6011 to 2.1398	0.1133 to -0.4746	0.7094 to 0.7094	ns	
School cluster 3	0.021	0.035	1.7091	0.6654 to 4.3900	0.4063 to -0.2848	1.3741 to 1.3741	ns	
School cluster 4	0.036	0.050	1.3765	0.7057 to 2.6850	0.2635 to -0.3130	0.8064 to 0.8064	ns	
School cluster 5	0.051	0.069	1.3640	0.8334 to 2.2326	0.2532 to -0.1525	0.6617 to 0.6617	ns	
School cluster 6	0.069	0.053	0.7601	0.4208 to 1.3731	-0.2940 to -0.9942	0.3323 to 0.3323	ns	
School cluster 7	0.060	0.052	0.8478	0.4466 to 1.6095	-0.1686 to -0.8426	0.5075 to 0.5075	ns	
School cluster 8	0.086	0.089	1.0344	0.6807 to 1.5717	0.0304 to -0.3545	0.4051 to 0.4051	ns	
School cluster 9	0.043	0.025	0.5641	0.0492 to 6.4645	-0.7391 to -4.8952	3.6001 to 3.6001	ns	

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.48 Physical bullying in school clusters totally and by gender at aggregate level.

	Prop. Victimised T3 Total (n=7 250)	Prop. Victimised T1 (n=8 034)	OR	CI	RRR	CI	P
School cluster 1	0.038	0.026	0.6890	0.4555 to 1.0421	-0.4343 -0.9248 to 0.0488	0.0761	
School cluster 2	0.035	0.035	0.9926	0.6004 to 1.6411	-0.0072 -0.5086 to 0.4894	ns	
School cluster 3	0.045	0.044	0.9851	0.5065 to 1.9161	-0.0145 -0.7097 to 0.6230	ns	
School cluster 4	0.034	0.044	1.3403	0.8176 to 2.1969	0.2454 -0.1782 to 0.6524	ns	
School cluster 5	0.035	0.054	1.5447	1.0106 to 2.3609	0.3401 0.0092 to 0.6934	0.0431	
School cluster 6	0.039	0.046	1.2121	0.7445 to 1.9733	0.1682 -0.2742 to 0.5834	ns	
School cluster 7	0.032	0.037	1.1848	0.6771 to 2.0733	0.1510 -0.3568 to 0.6707	ns	
School cluster 8	0.052	0.047	0.9124	0.6327 to 1.3158	-0.0910 -0.4735 to 0.2674	ns	
School cluster 9	0.000	0.022	-	- to -	1.0000 -0.9818 to 3.4900	ns	
Girls	(n=3 653)	(n=4 060)					
School cluster 1	0.023	0.013	0.5874	0.2672 to 1.2915	-0.6864 -1.7778 to 0.3536	ns	
School cluster 2	0.026	0.034	1.3365	0.6133 to 2.9128	0.2453 -0.4483 to 0.9338	ns	
School cluster 3	0.040	0.033	0.8019	0.2853 to 2.2541	-0.2371 -1.5747 to 0.8904	ns	
School cluster 4	0.028	0.042	1.5065	0.7128 to 3.1838	0.3267 -0.2955 to 0.9277	ns	
School cluster 5	0.034	0.034	1.0147	0.5442 to 1.8919	0.0140 -0.6090 to 0.6314	ns	
School cluster 6	0.016	0.040	2.5121	0.9987 to 6.3187	0.5922 0.0064 to 1.1611	0.0431	
School cluster 7	0.018	0.036	2.0540	0.8103 to 5.2069	0.5040 -0.1557 to 1.2337	ns	
School cluster 8	0.020	0.027	1.3833	0.6221 to 3.0760	0.2717 -0.4381 to 0.9638	ns	
School cluster 9	0.000	0.038	-	- to -	1.0000 -1.0937 to 3.3751	ns	
Boys	(n=3 579)	(n=3 957)					
School cluster 1	0.053	0.040	0.7375	0.4521 to 1.2029	-0.3370 -0.8890 to 0.2102	ns	
School cluster 2	0.042	0.036	0.8520	0.4323 to 1.6791	-0.1663 -0.9019 to 0.5648	ns	
School cluster 3	0.049	0.056	1.1476	0.4794 to 2.7473	0.1223 -0.7265 to 0.9077	ns	
School cluster 4	0.039	0.047	1.2098	0.6259 to 2.3383	0.1667 -0.4461 to 0.7365	ns	
School cluster 5	0.037	0.067	1.8469	1.0723 to 3.1810	0.4414 0.0536 to 0.8381	0.0250	
School cluster 6	0.064	0.054	0.8290	0.4557 to 1.5079	-0.1930 -0.8662 to 0.4156	ns	
School cluster 7	0.047	0.039	0.8259	0.4008 to 1.7017	-0.2009 -0.9982 to 0.5882	ns	
School cluster 8	0.084	0.070	0.8304	0.5334 to 1.2927	-0.1871 -0.6485 to 0.2588	ns	
School cluster 9	0.000	0.000	-	- to -	- - to -	-	-

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

Table A.49 Bullying and/or degrading treatment as worst form in school clusters at aggregate level.

	Prop. Victimised T3 (n=7 193)	Prop. Victimised T1 (n=7 999)	OR	CI	RRR	CI	CI	P
Social and/or physical B/DT								
School cluster 1	0.151	0.153	1.0185	0.8330 to 1.2454	0.0155	-0.1539 to 0.1850	ns	
School cluster 2	0.171	0.205	1.2469	0.9823 to 1.5827	0.1641	-0.0132 to 0.3405	0.0695	
School cluster 3	0.176	0.152	0.8388	0.5786 to 1.2160	-0.1582	-0.5011 to 0.1736	ns	
School cluster 4	0.123	0.191	1.6827	1.2882 to 2.1981	0.3557	0.1765 to 0.5307	0.0001	
School cluster 5	0.161	0.225	1.5064	1.2240 to 1.8540	0.2820	0.1400 to 0.4230	0.0001	
School cluster 6	0.190	0.186	0.9726	0.7586 to 1.2469	-0.0228	-0.2300 to 0.1789	ns	
School cluster 7	0.127	0.199	1.7037	1.2832 to 2.2620	0.3605	0.1700 to 0.5515	0.0002	
School cluster 8	0.190	0.216	1.1768	0.9554 to 1.4495	0.1217	-0.0343 to 0.2757	ns	
School cluster 9	0.085	0.140	1.7469	0.6880 to 4.4357	0.3912	-0.2734 to 1.0662	ns	
Social B/DT	(n=7 116)	(n=7 881)						
School cluster 1	0.107	0.102	0.9418	0.7429 to 1.1941	-0.0552	-0.2740 to 0.1639	ns	
School cluster 2	0.127	0.141	1.1365	0.8634 to 1.4958	0.1049	-0.1210 to 0.3302	ns	
School cluster 3	0.140	0.102	0.6997	0.4566 to 1.0721	-0.3693	-0.8304 to 0.0703	0.0998	
School cluster 4	0.094	0.131	1.4413	1.0608 to 1.9584	0.2773	0.0459 to 0.5030	0.0190	
School cluster 5	0.109	0.148	1.4309	1.1185 to 1.8305	0.2684	0.0847 to 0.4516	0.0042	
School cluster 6	0.139	0.132	0.9407	0.7067 to 1.2522	-0.0542	-0.3146 to 0.1966	ns	
School cluster 7	0.101	0.141	1.4599	1.0597 to 2.0111	0.2832	0.0440 to 0.5250	0.0201	
School cluster 8	0.127	0.149	1.2024	0.9411 to 1.5363	0.1469	-0.0489 to 0.3399	ns	
School cluster 9	0.065	0.044	0.6667	0.1818 to 2.4452	-0.4677	-2.1547 to 1.1811	ns	
Physical B/DT	(n=7 250)	(n=8 034)						
School cluster 1	0.090	0.088	0.9712	0.7543 to 1.2506	-0.0270	-0.2611 to 0.2076	ns	
School cluster 2	0.095	0.121	1.3083	0.9694 to 1.7658	0.2132	-0.0248 to 0.4508	0.0784	
School cluster 3	0.089	0.100	1.1407	0.7130 to 1.8248	0.1123	-0.3011 to 0.5047	ns	
School cluster 4	0.061	0.118	2.0764	1.4596 to 2.9538	0.4870	0.2613 to 0.7082	0.0000	
School cluster 5	0.111	0.156	1.4739	1.1589 to 1.8747	0.2858	0.1096 to 0.4616	0.0015	
School cluster 6	0.106	0.127	1.2280	0.9040 to 1.6681	0.1660	-0.0838 to 0.4065	ns	
School cluster 7	0.077	0.108	1.4574	1.0206 to 2.0812	0.2898	0.0162 to 0.5673	0.0374	
School cluster 8	0.135	0.145	1.0923	0.8583 to 1.3902	0.0731	-0.1278 to 0.2714	ns	
School cluster 9	0.043	0.118	2.9848	0.9144 to 9.7431	0.6364	-0.0447 to 1.3578	0.0594	
Subject others to social and physical B/DT	(n=6 386)	(n=6 555)						
School cluster 1	0.036	0.042	1.1648	0.7806 to 1.7380	0.1363	-0.2237 to 0.5035	ns	
School cluster 2	0.049	0.043	0.8777	0.5423 to 1.4204	-0.1326	-0.6298 to 0.3667	ns	
School cluster 3	0.050	0.064	1.2932	0.6814 to 2.4543	0.2154	-0.3449 to 0.7464	ns	
School cluster 4	0.029	0.068	2.4110	1.4281 to 4.0703	0.5680	0.2449 to 0.8943	0.0007	
School cluster 5	0.034	0.045	1.3401	0.8471 to 2.1202	0.2453	-0.1414 to 0.6419	ns	
School cluster 6	0.039	0.050	1.2850	0.7607 to 2.1707	0.2132	-0.2482 to 0.6470	ns	
School cluster 7	0.027	0.059	2.2402	1.2635 to 3.9718	0.5385	0.1619 to 0.9510	0.0047	
School cluster 8	0.048	0.074	1.5810	1.0731 to 2.3292	0.3498	0.0556 to 0.6464	0.0196	
School cluster 9	0.013	0.014	1.0857	0.0666 to 17.6900	0.0779	-4.0502 to 4.5082	ns	

OR = Odds Ratio; RRR = Relative Risk Reduction; CI = 95% Confidence Interval; P = p-value (2-tailed)

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