



Evaluating the effectiveness of domestic abuse prevention education: Are certain children more or less receptive to the messages conveyed?

Claire L. Fox^{1*}, Mary-Louise Corr², David Gadd³ and Julius Sim⁴

¹Centre for Psychological Research, Keele University, Keele, UK

²School of Life, Sport and Social Sciences, Edinburgh Napier University, Edinburgh, UK

³School of Law, University of Manchester, UK

⁴Centre for Social Policy, Keele University, Keele, UK

Purpose. A number of school-based domestic abuse prevention programmes have been developed in the United Kingdom, but evidence as to the effectiveness of such programmes is limited. The aim of the research was to evaluate the effectiveness of one such programme and to see whether the outcomes differ by gender and experiences of domestic abuse.

Method. Pupils aged 13–14 years, across seven schools, receiving a 6-week education programme completed a questionnaire to measure their attitudes towards domestic violence at pre-, post-test, and 3-month follow-up, and also responded to questions about experiences of abuse (as victims, perpetrators, and witnesses) and help seeking. Children in another six schools not yet receiving the intervention responded to the same questions at pre- and post-test. In total, 1,203 children took part in the research.

Results. Boys and girls who had received the intervention became less accepting of domestic violence and more likely to seek help from pre- to post-test compared with those in the control group; outcomes did not vary by experiences of abuse. There was evidence that the change in attitudes for those in the intervention group was maintained at 3-month follow-up.

Conclusions. These findings suggest that such a programme shows great promise, with both boys and girls benefiting from the intervention, and those who have experienced abuse and those who have not (yet) experienced abuse showing a similar degree of attitude change.

In the United Kingdom, high rates of abuse in teenage dating relationships have been found (Barter, McCarry, Berridge, & Evans, 2009), highlighting the significance of the issue in the lives of many young people. Through a survey involving 1,353 young people aged 13–17 years, Barter *et al.* (2009) found that 22% had experienced moderate physical violence and 8% had experienced more severe physical violence. High rates of emotional abuse among teenagers were also exposed by Barter *et al.* (2009) – three quarters of girls and 50% of boys had experienced this form of abuse. A sizeable minority – 31% of girls

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*Correspondence should be addressed to Claire L. Fox, School of Psychology, Keele University, Keele, Staffordshire ST5 5BG, UK (email: c.fox@keele.ac.uk).

compared to 16% of boys – reported having been pressured or forced to do something sexual such as ‘kissing, touching or something else’, and 18% of girls and 11% of boys reported having been pressured or forced to have sex.

Similar rates of victimization have been reported across Europe and North America. A recent review by O’Leary and Smith Slep (2012) reported rates in the low 20% range for middle-school students and between 32% and 38% in high-school students. Studies that have sampled a wide age range suggest that the peak age for perpetrating domestic abuse is between 16 and 18 years of age (Foshee, Reyes, & Wyckoff, 2009; Nocentini, Menesini, & Pastorelli, 2010). There is, therefore, good reason to target preventative interventions at teenagers in early adolescence.

Over the past 10 years, a number of domestic abuse prevention education programmes have emerged in the United Kingdom. However, few have been formally evaluated. Furthermore, the evaluations that do exist have been small scale and methodologically limited. Rarely are experimental methods used to assess attitudinal or behavioural change. Often, qualitative methods are used to explore the perceived benefits of the programme, including young people’s perceptions of *what* they are taught and *how* it has been delivered (e.g., Bell & Stanley, 2005; Hester & Westmarland, 2005; Scottish Executive, 2002), but with little account taken of whether the intended messages of the programme have actually been learnt. This is true of many school-based domestic abuse prevention programmes that have been developed in the United Kingdom. Hester and Westmarland (2005) reported on five such small-scale UK-based projects. In two of the projects, pre- and post-test questionnaires were used to assess knowledge of and attitudes towards domestic abuse. With all these evaluations, analyses involved comparing the percentage of responses to individual questions at pre- and post-test with no attempt to match respondents at the two points of testing; the failure to use inferential statistics means that it is not known whether the changes were statistically significant. Furthermore, the absence of a control group makes it difficult to rule out alternative explanations of the positive changes, such as a local history effect.

Stanley, Ellis, and Bell (2011) reported on an evaluation of a Domestic Violence Awareness Raising Programme, delivered by an external agency. The programme was delivered as planned (over six sessions) in only two of the four schools originally targeted. In total, 74 young people completed measures at pre- and post-test, with analyses involving the comparison of average responses to 12 individual items tapping into their knowledge and attitudes towards domestic violence, indicating positive changes for 6 of the 12 items. However, gender differences emerged, with many boys responding to the programme with cynicism or apathy.

Some UK programmes aim to tackle dating violence specifically, whereas other programmes have a slightly wider remit of addressing the issue of domestic abuse, focusing on abuse in teenage relationships, abuse in adult relationships, and with consideration of children as witnesses. What most UK programmes have in common, however, is a commitment to raising awareness of abuse in relationships, tackling the underlying attitudes that give rise to abusive tendencies, and encouraging more young people to seek help. The recent enlargement of the UK government’s definition of domestic abuse to young people aged 16 and above renders the need to conduct research and evaluation on preventative education all the more urgent (Home Office, 2013). For consistency, the term ‘domestic abuse’ will be used in this study, except when referring to studies that have specifically used the term ‘dating violence’.

In the United States, experimental designs have become the norm rather than the exception. Evaluations in the United States have typically involved large sample sizes of

500 or greater and experimental designs (e.g., treatment and control conditions) – some with random allocation of participants, classes, or schools to conditions. Established scales are often used to measure knowledge, attitudes, and in some cases, behaviour (e.g., perpetration and victimization), with individual item analyses being the exception rather than the norm (Whitaker *et al.*, 2006). Studies classed as high in overall quality in the review by Whitaker *et al.* (2006) have also used random allocation of participants or schools to conditions (Foshee *et al.*, 1998; Wolfe *et al.*, 2003). Whitaker *et al.* (2006) describe the overall quality of the 11 evaluations they review as low due to short follow-up periods, high attrition rates, and a failure to measure perpetration behaviour. They further note that experimental designs can be practically and ethically difficult, but that these are vital to rule out alternative explanations of the findings.

The evaluation of Safe Dates by Foshee *et al.* (1998) involved 1,700 eighth and ninth graders (13- to 15-year-olds) across 14 schools in the United States, who completed measures at pre- and post-test. The Safe Dates programme includes a curriculum delivered over ten 45-min sessions by school teachers, a theatre production, a poster competition, and community activities (e.g., crisis line, support groups). The 14 schools were matched in terms of school size and then one member of each pair was randomly allocated to a treatment or control condition, with control participants exposed to the community activities only. Analyses were conducted using the full sample and separate analyses were conducted on those who had never been victimized or perpetrated abuse (primary prevention group), as well as on those who had been victimized (secondary prevention victim group) and those who had already perpetrated abuse (secondary prevention perpetrator group). For the full sample at post-test, there was less psychological abuse perpetration and less perpetration of sexual and physical violence in the treatment condition, compared with the control condition. In addition, primary and secondary prevention effects were observed. A 4-year follow-up found that these effects were maintained *and* there was also less victimization reported by those in the treatment condition (Foshee *et al.*, 2004). Such a universal preventative approach, which does address gender-based expectations, therefore shows much promise (O'Leary & Smith Slep, 2012).

A similar study by Wolfe *et al.* (2003) involved an evaluation of a programme targeted at 14–16-year-olds at risk of developing abusive relationships because of their history of maltreatment. The Youth Relationship Program involves eighteen 2-hr sessions delivered by social workers or other community professionals. The evaluation involved a comparison of 96 young people who received the intervention with 62 control participants. The findings suggested that the intervention was effective at reducing incidents of physical and emotional abuse over time. Most domestic abuse prevention programmes are typically delivered through the school system and are universal, that is, aimed at all children. The study by Wolfe *et al.* was one of the first to examine the effectiveness of a programme that took into account research on child maltreatment as a risk factor for abuse within intimate relationships. As noted by Capaldi and Langhinrichsen-Rohling (2012), previous programmes were designed 'prior to a full understanding of the etiology and complex dynamics associated with intimate partner violence' (p. 323).

The most controversial aspect in the field has been whether or not programmes should focus explicitly on wider gender power inequalities in society that are thought to foster violence (Capaldi & Langhinrichsen-Rohling, 2012). Others have commented that an approach that positions males as perpetrators and females as victims is ill-advised because it misrepresents the nature of domestic abuse at this age (Avery-Leaf & Cascardi, 2002;

O'Leary & Smith Slep, 2012). Most programmes are empirically based. For example, acceptance of dating violence has been found repeatedly to be associated with domestic violence perpetration among adults and adolescents, which explains the focus on changing the acceptance of violence as a component of most domestic abuse prevention programmes (Foshee, Linder, MacDougall, & Bangdiwala, 2001). Programmes also typically focus on teaching skills to enable young people to identify constructive means of handling conflict; this is based on research that highlights poor conflict-resolution skills as a risk factor for perpetration of dating violence (Bird, Stith, & Schladale, 1991). Finally, most programmes focus on ways to encourage young people to seek help as many studies have shown that young people typically do not seek help for dating violence (Ashley & Foshee, 2005). In sum, domestic abuse prevention education programmes typically recognize the problem as multi-determined and this is reflected in their content.

The study we report on below aimed to improve on previous UK-based studies and evaluate a school-based domestic abuse prevention education programme, utilizing a quasi-experimental design, with pre- and post-test measures administered to those in treatment *and* control conditions. As noted by Leen *et al.* (2013), 'there is a need for additional data from countries outside North America on both intervention programs and prevalence rates' (p. 171). In pilot work with $n = 213$ 13- to 14-year-olds who had received the intervention programme on which this study is based, there was preliminary evidence of changes in children's attitudes from pre- to post-test. This study provided a much more robust test of the effectiveness of the programme by utilizing a control group and a 3-month follow-up period.

A secondary aim of this study was to examine whether the outcomes differed by gender and experiences of domestic abuse. While Foshee *et al.* (1998) did examine outcomes for different sub-samples, for example, a primary prevention sub-sample with experience of abuse, no study has specifically examined whether there are certain groups of children who are *more* or *less* receptive to the messages conveyed. As recently indicated by Supplee, Kelly, Mackinnon, and Barofsky (2013), policy makers have moved on from asking, 'what works?' to asking the question, 'what works for whom?' An examination of moderated effects can help to refine theory, target interventions, and tailor interventions more appropriately to the needs of a specified group (Rothman, 2013).

Given the well-established link between witnessing domestic abuse and attitudes that are more accepting of violence in relationships (Lichter & McCloskey, 2004; Slovak, Carlson, & Helm, 2007), as well as the notion of the intergenerational transmission of violence (e.g., see Stith *et al.*, 2000), it was predicted that the intervention would have less of an impact on young people who have already witnessed domestic abuse. As a result of witnessing domestic abuse, they may be more likely to believe that such actions are acceptable, perhaps even necessary, and these attitudes may be more entrenched and resistant to change.

Furthermore, for those young people for whom domestic abuse has already become a feature of their own relationships (as victims or perpetrators), it was hypothesized that the intervention would have a reduced impact. Even though they may begin with attitudes that are more accepting of domestic abuse and so have the potential to show the most change, we may instead see patterns of behaviour that may have become established and thus more difficult to change. In addition, as boys typically display attitudes that are more accepting of violence in relationships (Burman & Cartmel, 2005; Burton, Kitzinger, Kelly, & Regan, 1998), are less likely to seek help when a victim of 'dating violence' (Ashley & Foshee, 2005), and are harder to engage than girls (Stanley *et al.*, 2011), it was predicted that the intervention would have more of an impact on girls than boys.

The programme

Relationships without Fear (RwF) is a 6-week Healthy Relationships and Domestic Abuse Prevention Programme, developed by the Arch RwF team in North Staffordshire, UK. The programme starts in year 4 (ages 8–9 years) and runs through to year 11 (15–16 years), with the programme tailored for different year groups. With the younger age groups the emphasis is on friendships and peer group relationships, building up to talking about abuse in intimate relationships with year 6 children (those aged 10–11 years).

The programme has been developed by Arch over a number of years using relevant theory and the empirical literature. It looks at how positive relationships can be formed and how children and young people can develop relationships that are free from fear and abuse. It aims to prevent further domestic abuse by giving young people the knowledge to enable them to recognize an abusive relationship. In addition, skills of conflict resolution are taught and the programme tackles the underlying attitudes that give rise to abusive tendencies. The programme addresses young people's attitudes towards abuse through challenging stereotypical views and the belief held by some that hitting a partner is justified in certain circumstances. Young people are made aware that domestic abuse happens to men as well as women, but they are also introduced to the notion of how gender inequality can foster violence in relationships. There is also an emphasis on help seeking, tackling the barriers that exist, as well as outlining the support that is available. The programme reinforces the message that the victim is never at fault and that the perpetrator is always responsible for his/her actions. In sum, RwF aims to contribute to the long-term overall reduction in domestic violence.

The programme runs for 6 weeks, 1 hr each week.¹ It is usually delivered during Personal, Social, and Health Education lessons and by trained RwF staff (either domestic abuse practitioners or trained teachers). The programme is tailored for each year so that the content is age appropriate. The current evaluation focused on the programme delivered to year 9 pupils (aged 13–14 years). The six sessions, all delivered by domestic abuse practitioners, were organized into the following topics: The difference between domestic abuse and other forms of abuse; how domestic abuse affects you; the emotional effects on victims (including a focus on male victims); the attitudes of young people towards abuse; the barriers to leaving; and how can you make a difference?

The programme is designed to be interactive to encourage young people's participation. It relies heavily on using real-life stories and requires pupils to respond to the scenarios and empathize with the different actors in that story. The programme also uses question and answer sessions, fact sheets, true/false and problem page exercises, role-play, and video clips. Using these activities, pupils are encouraged to share in discussions, are given the freedom to voice their own opinions, and are required to listen to those of others.

Method

Participants

Pupils in seven schools received the RwF programme during the school year 2010–2011. These were schools that had responded to an invitation and indicated a willingness to run

¹ While the aim is to deliver the programme consistently across all participating schools, due to timetabling constraints set by schools and RwF staffing levels, some classes of young people receive shortened versions of the programme. For the current evaluation, 13 of the 27 groups received shortened programmes of four or five sessions, some of which were pre-arranged with the schools, but others were at short notice due to staff shortage and/or illness.

the programme at some point in their school year. Each school was matched with a control group school, not yet receiving the programme, taking into account the size of the school, demographic variables (e.g., proportion of students receiving free school meals), and geographical proximity. One control group school acted as a control for two intervention schools, given the small number of classes taking part in two of the intervention schools, and there were therefore six control group schools. In total, 1,203 year 9 pupils (aged 13–14 years) participated in the study from 54 classes (27 intervention group classes and 26 control group classes): 572 males and 596 females (gender missing for 35 participants). Of those participants who provided data about their ethnicity, 89.5% were White, 1% Black, 6% Asian, 3% Mixed, 0.3% Chinese, and 0.2% 'Other' (only 11 participants failed to answer this question). Making a conservative estimate of the effect of clustering (a design effect of 2), the sample size of 1,203 was sufficient to provide 80% power to detect a standardized mean difference of 0.23 or greater, at a two-tailed 5% alpha (Cohen, 1988).

Materials

Attitudes to domestic violence

The Attitudes to Domestic Violence (ADV) questionnaire (Fox, Gadd, & Sim, 2013), used as an outcome measure in this study, is a 10-item measure that aims to capture young people's normative beliefs about how wrong it is for a man to hit a woman and also a woman to hit a man, under certain conditions. The aim was to create a tool that was easy for practitioners to use and would be sensitive enough to detect the subtle shift in attitudes to more extreme disapproval of violence. Most young people regard hitting a partner as wrong; however, many are willing to condone it under certain circumstances (Burman & Cartmel, 2005). Given that theories of interpersonal aggression highlight the importance of normative beliefs in justifying such actions, it was deemed appropriate to assess attitudes towards domestic violence (see Foshee *et al.*, 2001).

For the ADV questionnaire there are five different conditions, for example, do you think it is OK for a man to hit his partner/wife if HE says he is sorry afterwards? Each question is followed by a 4-point scale – 1 = *it's perfectly OK*, 2 = *it's sort of OK*, 3 = *it's sort of wrong*, 4 = *it's really wrong*. Depending on how the question is phrased, the response scale may be presented in reverse order (i.e., 1 = *it's really wrong*, 2 = *it's sort of wrong*, 3 = *it's sort of OK*, 4 = *it's perfectly OK*). For those questions that begin, 'Do you think it is OK...', the scale begins with 'it's perfectly OK'. The other questions that are phrased, 'Suppose [x happened] how wrong...', have the response scale appearing in reverse order, that is, 'it's really wrong' to 'it's perfectly OK'. The five situations include: saying sorry, been cheated on, been embarrassed, they deserve it, and having been hit first. For every situation where a man is being abusive to a woman, the same situation is presented with a woman being abusive to a man.

The questionnaire is scored so that a high mean score indicates beliefs that are more accepting of domestic violence (on a possible range 1–4). Over the course of three studies, the 10-item ADV questionnaire was developed. Although the measures of goodness of fit from the factor analysis are lower than the ideal benchmarks, the consistently high loadings of all items on a single factor suggest that the scale can be used as a single summative index. In addition, the scale demonstrates good internal consistency and reproducibility over time (coefficients of .93 and .72 respectively). For further details of the development of the ADV questionnaire, see Fox, Gadd, *et al.* (2013).

Experiences of abuse

At pre-test only, the children also responded to questions about their experiences of domestic abuse, as victims (VDA), perpetrators (PDA,) and as witnesses of abuse in their own homes (WDA). We asked the young people to think about ‘people you have dated, and past or current boyfriends or girlfriends’. They were then asked to consider the adults who look after them at home, ‘for example, your parents, stepparents, guardians or foster carers’, and questions that are about ‘things that can happen between two partners in a relationship’. The questions were very similar to those used in the National Society for the Prevention of Cruelty to Children (NSPCC) survey, with questions assessing physical, sexual, and emotional forms of violence (for further details of the questions asked, see Fox, Corr, Gadd, & Butler, 2014). As the data were positively skewed, binary categories to reflect victim status, perpetrator status, and being a witness were formed. For victimization and perpetration, they were asked to consider 10 different behaviours in terms of whether this had happened to them or whether they had ever done it themselves: ‘Never’, ‘Once’, or ‘More than once’. Participants’ responses were combined to yield a score representing their responses across all the questions in that scale. Thus, there were two categories: ‘Never’ (they had never experienced or perpetrated any of the forms of abuse) or ‘Once or more than once’ (they had experienced or perpetrated at least one of the forms of abuse). For witnessing abuse there were eight different behaviours – the same as for the previous sections, but we omitted the questions about sexual abuse. Again, there were two categories: ‘Never’ and ‘Once or more than once’. As very few young people reported experiences that had happened, ‘More than once’, the ‘Once’, and ‘More than once’ categories were combined. For victimization, an average of 3.4% of the sample indicated ‘More than once’ across the 10 items; for perpetration, 0.95% across 10 items; and for witnessing abuse, 5.1% across eight items.

Help seeking

There were also two questions about help seeking used as additional outcome measures: ‘Suppose a boyfriend/girlfriend ever hit you, how likely would you be to seek help from an adult?’ and ‘Suppose you found out that an adult who looks after you was being hit by their partner, how likely would you be to seek help from an adult outside of your friends and family (e.g., a teacher, school nurse, social worker)?’ For each question there were four response options: 1 = *not at all likely*, 2 = *not likely*, 3 = *somewhat likely*, or 4 = *very likely*.

Procedure

Children in the intervention group completed the questionnaires in the first and final session of RwF and at 3-month follow-up; children in the control group schools completed the questionnaires at the same time as the children in the matched intervention schools, within at most 1 week of each other (but they did not participate at the 3-month follow-up). To enable us to match up questionnaire responses, we asked the young people to answer a series of questions on the front page: (1) What are the last three digits of your home telephone number?, (2) What month were you born in?, and (3) What was your first pet’s name?

The survey questions, procedures, and ethical guidelines were developed through close consultation with user groups of young people; for example, a local Youth Parliament and a group of people known to practitioners within the local NSPCC, and also

with members of our multi-agency steering group. The research was conducted consistent with the ethical guidelines of the British Psychological Society, and clearance was gained from the University Ethical Review Panel.

All data collection was overseen by a member of the research team who read out the standardized instructions, was on hand to answer any questions, and debriefed the children. Children were encouraged to read through the questions at their own pace. The questionnaire was anonymous and the young people were reassured that their responses would remain confidential. They were also told that they did not have to take part in the research if they did not want to, and could stop taking part at any time.

Parental consent was sought using the 'opt-out' method, which meant that parents had to send a form back if they did not wish their child to take part; in total, 19 children were opted out of the research by their parents (16 males, 3 females) and 28 participants opted out themselves (17 males and 11 females). It was stressed to the children that some of the questions were quite 'personal and sensitive'. They were also reassured that if they were willing to answer the questions their responses could not be traced back to them as individuals or to their family. However, they were told that if they said something to us face-to-face to suggest that they or someone else was at significant risk of harm, then we would have to pass on our concerns to one of their teachers. They were asked to answer the questions in silence, to keep their answers to themselves, and to not look at what the person next to them was doing. After they had completed the questionnaire, they were debriefed and were pointed to appropriate sources of support.

Results

ADV group differences at pre-test

A series of unrelated ANOVAs were conducted to compare the pre-test scores of males and females based on experiences of domestic abuse: victims/non-victims of domestic abuse (VDA), perpetrators/non-perpetrators of domestic abuse (PDA), and witnesses/non-witnesses of domestic abuse (WDA). The means and standard deviations and results of the ANOVAS can be seen in Table 1. At pre-test boys scored higher on the ADV compared

Table 1. Pre-test means (SDs) and comparisons of the Attitudes to Domestic Violence questionnaire by gender and experiences of domestic abuse

	Mean (SD)			p values
	Girls	Boys	Overall	
Victimization				
Victims	1.41 (.40)	1.55 (.41)	1.48 (.41)	Gender: $F_{1,1067} = 18.91; p < .001$
Non-victims	1.39 (.37)	1.47 (.45)	1.43 (.42)	Victimization: $F_{1,1067} = 4.06; p = .044$
Overall	1.39 (.38)	1.50 (.44)		Gender × Victim: $F_{1,1067} = 1.39; p = .240$
Perpetration				
Perpetrators	1.49 (.45)	1.58 (.41)	1.53 (.44)	Gender: $F_{1,1057} = 10.32; p = .001$
Non-perpetrators	1.37 (.36)	1.48 (.44)	1.43 (.40)	Perpetration: $F_{1,1057} = 13.26; p < .001$
Overall	1.40 (.38)	1.50 (.43)		Gender × Perpet: $F_{1,1057} = 0.04; p = .848$
Witnessing				
Witnesses	1.46 (.40)	1.54 (.43)	1.49 (.41)	Gender: $F_{1,1043} = 13.53; p < .001$
Non-witnesses	1.36 (.36)	1.47 (.44)	1.42 (.41)	Witness: $F_{1,1043} = 9.18; p = .003$
Overall	1.40 (.38)	1.49 (.44)		Gender × Witness: $F_{1,1043} = 0.27; p = .603$

with girls, indicating attitudes more accepting of domestic violence. In addition, there were differences between the groups based on experiences of abuse with victims, perpetrators, and those who had witnessed abuse scoring higher than those not involved. The lack of significant interaction effects suggests that these group differences held for girls and boys.

Attrition analyses

A series of analyses were conducted to compare the pre-test scores for those who took part at pre- and post-test (i.e., had a post-test value on at least one of three outcome variables; $n = 950$) with those who provided pre-test data only (i.e., had post-test values on none of the three outcome variables; $n = 193$). For the ADV, the mean (*SD*) score for pre-test-only participants was 1.47 (.39), and for pre- and post-test participants was 1.42 (.38); these values did not differ significantly ($t_{1141} = 1.65, p = .099$). For help seeking when witnessing abuse, the median (interquartile range [IQR]) score for pre-test-only participants was 2 (1, 3), and for pre- and post-test participants was 3 (2, 3); these values differed significantly (Wilcoxon rank sum $z = 2.42, p = .016$). The corresponding median values for help seeking for abuse in one's own relationship were 3 (2, 4) for both groups; these values did not differ significantly (Wilcoxon rank sum $z = .96, p = .335$). Chi-square analyses were conducted to compare the VDA, PDA, and WDA scores of those who took part at pre- and post-test with those of participants who dropped out of the study. A higher percentage of those who had been victims of domestic abuse were represented within the pre-test-only sample (46.6%, in comparison to 35.3% in the pre- and post-test sample); these values differed significantly ($\chi^2_1 = 8.88, p = .003; \phi = .09$). However, the percentages of those who had perpetrated abuse did not differ significantly (25.9% in pre-test-only sample and 20.0% in the pre- and post-test sample; $\chi^2_1 = 3.37, p = .066; \phi = .05$), and neither did the percentages of those who had witnessed domestic abuse (36.3% in the pre-test-only sample and 34.2% in the pre- and post-test sample; $\chi^2_1 = 0.30, p = .583; \phi = .02$). Although some of these differences were significant, owing to the large sample size, they were generally of small magnitude. Nonetheless, imputation was utilized to counteract any resulting bias, as will be explained in the next section.

Comparison of the intervention and control groups from pre- to post-test

Owing to the clustered nature of the data, data were analysed using multi-level models, with two levels of clustering (within classes and within schools). Values on the ADV Scale were analysed using a multi-level linear model (Rabe-Hesketh & Skrondal, 2012a), with group as a between-subjects factor and controlling for age, gender, VDA, PDA, WDA, and baseline values of the ADV Scale. Terms were included for interactions between group and each of VDA, PDA, WDA, and gender. Residuals from the analysis were homoscedastic across groups, but were found to be positively skewed; however, this was not considered problematic in view of the large sample size. To secure the baseline comparability of the groups and counteract any bias that might be induced by attrition, missing values on the outcome variables were estimated (under a 'missing at random' assumption) using multiple imputation, through five imputed data sets. Values on the two help-seeking scales were analysed using a multi-level ordered logistic model (Rabe-Hesketh & Skrondal, 2012b), with group as a between-subjects factor and age, gender, VDA, PDA, WDA, and baseline values of the scale concerned as covariates. This model would not allow the

inclusion of interactions. A secondary sensitivity analysis was conducted using just participants with observed outcome data.

To determine whether change induced by the intervention in each of the outcomes was sustained at 3-month follow-up, a generalized estimating equations (GEE) model was fitted to the data in just the intervention group (Hardin & Hilbe, 2003). As such models accommodate missing values in repeated measures data, no imputation of missing values was performed.

Data analysis for the multi-level models was performed in Stata 12, using the GLLAMM program (www.gllamm.org) for the ordered logistic models. The GEE models were estimated in SPSS 20 (IBM, Hampshire, UK). Statistical significance was set at $p \leq .05$ (two tailed) and 95% confidence intervals (CIs) were calculated for all estimates of effect.

Thirteen schools, comprising 1,203 children, were randomized to the control group (6 schools, 584 children) and intervention group (7 schools, 619 children). The baseline characteristics of the control and intervention groups are summarized in Table 2. Missing data were imputed on the outcome variables as follows: 202 values on the ADV Scale (103 controls; 99 interventions); 208 values on the Victim Help-seeking Scale (108 controls; 100 interventions); 209 values on the Witness Help-seeking Scale (109 controls; 100 interventions).

The unadjusted mean (*SD*) ADV scores for the control and intervention group were 1.44 (.43) and 1.35 (.39) respectively. The covariate-adjusted mean difference (control minus intervention) was 0.10 (95% CI: 0.03, 0.18), indicating that at post-test those in the intervention group were significantly less accepting of domestic violence ($p = .008$). All interactions were non-significant (group VDA, $p = .603$; group PDA, $p = .917$; group

Table 2. Baseline characteristics^a

	Control group	Intervention group
No. of participants	584	619
No. of schools	6	7
No. of classes	26	27
Mean no. (range) of participants per school	97 (65–127)	88 (36–153)
Mean no. (range) of participants per class	22 (3–32)	23 (11–33)
Age; mean (<i>SD</i>)	13.4 (.50)	13.4 (.50)
Gender; count (%)		
Male	277 (49)	295 (49)
Female	287 (51)	309 (51)
Experienced dating abuse; count (%)		
Yes	199 (37)	216 (38)
No	345 (63)	350 (62)
Perpetrated domestic abuse; count (%)		
Yes	113 (21)	116 (21)
No	430 (79)	442 (79)
Witnessed domestic abuse; count (%)		
Yes	198 (37)	176 (32)
No	339 (63)	374 (68)
ADV Scale (1–4); mean (<i>SD</i>)	1.45 (.43)	1.46 (.40)
Seek help if victim Scale (1–4); median (IQR)	2 (2, 3)	3 (2, 4)
Seek help if witnessed Scale (1–4); median (IQR)	3 (3, 4)	3 (2, 4)

Note. IQR = interquartile range; ADV = Attitudes to Domestic Violence questionnaire.

^aDenominators may vary owing to missing values.

WDA, $p = .345$; group gender, $p = .862$), and the effect of the intervention did not therefore differ across the groups defined by these variables; that is, the magnitude of change on the ADV Scale did not depend upon participants' VDA, PDA, or WDA category.

Unadjusted median (IQR) values on the Victim Help-seeking Scale were 2 (2, 3) and 3 (2, 3) for the control and intervention groups respectively. The covariate-adjusted odds ratio was 1.67 (95% CI: 1.28, 2.17); this indicates that the odds of a higher point on the scale (denoting a greater readiness to seek help) were 67% greater for the intervention group than for the control group ($p < .001$). Unadjusted median (IQR) values on the Witness Help-seeking Scale were 3 (2, 4) and 3 (3, 4) for the control and intervention groups respectively. The covariate-adjusted odds ratio was 1.65 (95% CI: 1.31, 2.07); this indicates that the odds of a higher point on the scale were on average 65% greater for the intervention group than for the control group ($p < .001$).

The results of the sensitivity analysis are shown in Table 3. The estimates from the analyses on just the observed data are 5–7% higher (suggesting that the missing data had induced a small bias), but the statistical conclusions of these analyses are unchanged from those from the analyses with imputation.

Comparison of the intervention group from pre-test, post-test, to 3-month follow-up

Within the intervention group, the mean reduction on the ADV Scale between baseline and post-test (0.11) and between baseline and 3-month follow-up (0.11) was in each case significant; see Table 4. The mean score on the ADV Scale therefore remained significantly lower than baseline at both post-test and follow-up, at an equivalent level. For the Victim Help-seeking Scale and the Witness Help-seeking Scale, the odds ratios for post-test compared with baseline (1.22 and 1.31 respectively) were in both cases significant (see Table 4). However, for these two scales, the odds ratios for 3-month follow-up compared with baseline (1.08 and 1.10 respectively) were non-significant; see Table 4. For both of the help-seeking scales, therefore, the significant effect of the intervention at post-test was not sustained at follow-up.

Discussion

This is the first study in the United Kingdom to evaluate the effectiveness of a domestic abuse prevention education programme, using a pre-test, post-test, control group design.

Table 3. Sensitivity analysis

Outcome variable	Analysis with imputation			Analysis on observed data only		
	Estimate (95% CI)	p value	n_1, n_2^a	Estimate (95% CI)	p value	n_1, n_2^a
ADV Scale ^b	0.10 (0.03, 0.18)	.008	584, 619	0.11 (0.02, 0.20)	.013	481, 520
Victim Help-seeking Scale ^c	1.67 (1.28, 2.17)	<.001	584, 619	1.79 (1.36, 2.36)	<.001	476, 519
Witness Help-seeking Scale ^c	1.65 (1.31, 2.07)	<.001	584, 619	1.74 (1.37, 2.21)	<.001	475, 519

Note. CI = confidence interval; ADV = Attitudes to Domestic Violence questionnaire.

^aNumbers analysed for control and intervention groups respectively; ^bmean difference (control minus intervention); ^codds ratio (control as reference category).

Table 4. Comparison of the intervention group at post-test and three-month follow-up, with respect to baseline

Outcome variable	Post-test		Three-month follow-up	
	Estimate (95% CI)	p value	Estimate (95% CI)	p value
ADV Scale ^a	0.11 (0.07, 0.14)	<.001	0.11 (0.07, 0.14)	<.001
Victim help-seeking Scale ^b	1.22 (1.05, 1.42)	<.001	1.08 (0.92, 1.26)	.358
Witness help-seeking Scale ^b	1.31 (1.10, 1.55)	.002	1.10 (0.93, 1.31)	.263

Note. CI = confidence interval; ADV = Attitudes to Domestic Violence questionnaire.

^aMean difference (baseline minus post-test/3-month follow-up); ^bodds ratio (baseline as reference category).

Previous evaluations have been in small scale and have suffered from methodological limitations, thus limiting the conclusions that can be drawn. Using a large sample of children, with treatment and control conditions, it was found that the attitudes to domestic violence for those in the intervention condition became less accepting from pre- to post-test, in comparison to those in the control condition. In a similar way, considering just those participants in the intervention group, help-seeking scores improved from pre- to post-test, but were not maintained at 3-month follow-up. In addition, the outcomes, at least for the attitudes to domestic violence scores, did not vary by gender or experiences of abuse (as demonstrated by the non-significant interaction terms), which indicates that participants in these categories experienced similar magnitudes of change. These findings suggest that such a programme shows great promise, with both boys and girls benefiting from the intervention and those who have experienced abuse and those who have not (yet) experienced abuse showing a similar degree of attitude change. Such interventions work on the premise of changing the acceptance of violence, as acceptance of dating violence has been found repeatedly to be associated with domestic violence perpetration among adults and adolescents (Foshee *et al.*, 2001). Clearly, there is a need to address the attitudes of those at risk of becoming perpetrators or victims, exposing them to ideas about how healthy relationships can be formed and maintained (Wolfe *et al.*, 2003). At the same time there is also the need to address the wider attitudes of the peer group, as peer group attitudes have been found to be important, especially for boys (Heise, 1998). What these findings suggest is that children at risk of becoming domestic abuse perpetrators or victims can still benefit from a wider school-based prevention programme, even though they would undoubtedly benefit from additional, more specialized support, perhaps on a one-to-one or small group basis. But, identifying these young people is difficult as well as ethically problematic because such interventions can also be highly stigmatizing.

The current programme adopted a very similar model to that of the Safe Dates programme, evaluated by Foshee and colleagues (Foshee *et al.*, 1998, 2004). Both are universal programmes aimed at males and females, which incorporate notions of how gender inequalities in society can foster violence. They are both delivered over a number of sessions in schools, drawing on a range of different teaching methods. As well as seeking to tackle gender stereotypes, both programmes also aim to teach new skills in conflict resolution and challenge norms around domestic abuse. However, Safe Dates is delivered by school teachers who have undertaken extensive training and the 10 sessions are supplemented by community activities that include enhancing the range of support services that are available to young people. Programmes in the United Kingdom will need

to take note of this and consider how teachers can best be supported to incorporate such education into the curriculum. We would argue that this is the only way to ensure the long-term sustainability of such programmes.

The findings of this study support the call for young people to be exposed to domestic abuse prevention education in schools. While it can be difficult to find time within the curriculum to cover all the important issues (Maxwell, Chase, Warwick, Aggleston, & Wharf, 2010), we would argue that schools should make time and space for it, introducing this to young people *before* they start to form intimate relationships (e.g., ages 11–12 years), and on a yearly basis. Indeed, while our study showed a change in attitudes towards domestic violence that was maintained at 3-month follow-up, the changes in help-seeking scores were not. Thus, young people need more than a one-off programme to convince them that it is worthwhile to seek help from adults should domestic abuse become a feature of their lives.

Certain limitations of this study are worthy of mention. First, we assessed attitudes towards domestic violence and not actual behaviour. Although associations have been identified between attitudes towards domestic violence and perpetration of abuse in relationships (see Foshee *et al.*, 2001), further research is clearly needed to see whether such a change in attitudes does then translate into changes in behaviour. The reason for not assessing pre- and post-test changes in behaviour was because we were expecting to find a low base rate of domestic abuse at this age, which would make it difficult to detect meaningful changes, made even more difficult by assessing changes over a relatively short time frame. In future we will need to assess incidents of domestic abuse, as a victim and perpetrator, and assessment will need to take place at pre- and post-test, up to 1-year and perhaps even 4-year follow-up as in the Foshee *et al.* (2004) study.

In addition, it is important to acknowledge the limitations of the single-item help-seeking measures, which only captured intentions to seek help in the future (i.e., perceptions) and only asked if they would seek help and not specifically where or from whom they would seek such help. Subsequent studies will need to move beyond single-item help-seeking measures to take forward the issues our research has raised.

A further limitation was that fidelity to the curriculum was not assessed in detail, nor 'dosage', that is, individual student attendance at the sessions. It has been noted that some classes received less than the prescribed 6 weeks of sessions. However, we do not know the impact of all these components, separately and in combination, on the findings. Future studies must incorporate these issues into the evaluation from the outset to enable firmer conclusions about the effectiveness of such programmes.

One of the strengths of this study was the use of a control group to rule out alternative explanations of the findings. For example, it would be feasible to detect changes in the attitudes of those in the control group because both groups were exposed to a national awareness raising campaign. Despite the use of the control group, participants (or classes or schools) were not randomly allocated to treatment conditions, raising the possibility that the two groups differed at the outset in relation to one or more variables for which we did not control statistically, for example, the intervention group might have been more motivated to learn or change their attitudes. It is also possible that there was more socially desirable responding from those in the intervention group, with the change reflecting young people's awareness of what we were expecting to find, by virtue of their participation in the programme.

The findings of this study provide a useful basis on which to build, with the proposed use of a randomized control group design and the assessment of behaviour as well as

attitudes, at pre- and post-test and 1-year, and perhaps also at 4-year follow-up. However, such studies are practically very difficult to implement and thus very costly. Such an approach would also rely on a more coordinated system of delivery, whereas in the United Kingdom provision at present is somewhat *ad hoc*, delivered by external organizations to schools that can see the benefit of such education. As already suggested, a country-wide approach is needed to ensure that all school children receive this type of education. This will need government investment, and schools and teachers will need support from external organizations to implement it. Across Europe and in North America there is increasing pressure on schools to raise academic standards and student achievement and so there is a risk that schools 'may be unable or unwilling to devote time for violence prevention activities' (Whitaker *et al.*, 2006, p. 162).

Another issue that must also be considered in future research is the comparison of different *models* of domestic abuse prevention education. In the United Kingdom, for example, a number of programmes have been developed over the past few years by organizations such as Women's Aid, the Zero Tolerance Trust and Tender, and some funded by the Home Office or through the Children's Fund initiative. There are differences between programmes and greater clarity is needed in terms of *what* should be taught (i.e., programme content), *how* it should be taught (e.g., teaching methods), and *who* should deliver it (e.g., teachers or external organizations). Of course, such programmes must be theoretically informed but also evidence based.

In conclusion, we would argue that domestic abuse prevention education is a worthy investment when we consider the costs to society in terms of social care, health care, and the criminal justice system. But, establishing how best to deliver effective domestic abuse prevention education merits further research and scrutiny.

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