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School-based primary prevention programmes Outcomes and the factors that affect their success

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School-based primary prevention programmes: Outcomes and the factors that affect their success.

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School-based primary prevention programmes: Outcomes and the factors that affect their success

Abstract

This thesis explores the use of universal, prevention programmes in primary schools. A systematic literature review examined the effectiveness of universally targeted, school-based body-image programmes in children under 12. The review highlighted that approximately half of programmes were successful in reducing body dissatisfaction or improving body satisfaction. Improvements in other associated risk factors were also found. Not all results were maintained at follow-up and the longer-term impact of such programmes was not clear. There were also several methodological concerns that must be considered.

An empirical study investigated the use of a bullying programme, KiVa, in Welsh primary schools and the school-level factors that predict outcomes. A mixed-methods approach was used with analysis of pupil survey data and interviews with school staff. KiVa was found to have a positive impact on bullying behaviour which continued as years progressed. School level free-school meal percentage as a proxy for socio-economic deprivation and additional learning needs were found to be predictive of KiVa outcome. Teachers also discussed several within school-factors that they felt affected implementation.

The final chapter discusses the implication of the findings for future research and clinical application in relation to other research. Recommendations are made for how school-based programmes may be successful implemented within primary schools. Finally, a personal reflection of the research process is considered.

Chapter 1 –Systematic Literature Review

**The effectiveness of universal body-image programmes in primary schools:
A systematic review**

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Abstract

Low body-satisfaction is commonly reported amongst children and is a risk factor for future difficulties including eating disorders. We reviewed universal, prevention programmes conducted in primary schools with under 12s since 1998. 18 different eligible programmes were identified from 20 different studies. Nine of these were successful in improving body image post-intervention and a further two at follow-up. Seven studies which did not find changes to body-image did report successful outcomes on other associated measures. Programmes were effective with both genders, however more success with girls was found. The length of programme did not appear to influence the impact. Comparisons are made with programmes conducted in secondary schools, with similarities in success levels reported. The implications and methodological quality of reviewed articles are also discussed.

Key Words: Body Image; Schools; Children; Prevention; Intervention

Body-image promotion programmes in primary-schools: A systematic review

Introduction

Low body satisfaction is a common problem for children and adolescents in the Western world. Figures vary, however approximately 40 to 50% of six to twelve year olds report unhappiness about the way they look (Smolak, 2011). In adolescence the numbers are similarly high. In a large UK sample, nearly 18% of 14-year olds had shape and weight concerns and 40% of 16-year olds had some form of disordered eating behaviour (Bould, De Stavola, Lewis, & Micali, 2018). Specifically, it is suggested pre-adolescent girls often desire a thinner body and boys want more muscle (Dion et al., 2016). These feelings are not limited to children with unhealthy body sizes, a systematic review of young children demonstrated that even those with healthy body sizes disliked their bodies (Rees, Oliver, Woodman, & Thomas, 2011).

Several factors associated with the development of poor body-image have now been established including exposure to idealized media images (Levine & Murnen, 2009); exposure to appearance related conversations (Clark & Tiggemann, 2008; Jones & Crawford, 2005); weight related teasing (Menzel et al., 2010) and exposure to images of physical fitness and athleticism (Tatangelo & Ricciardelli, 2013). Body dissatisfaction has been linked to the development of several health outcomes including depression (Xie et al., 2010), low self-esteem (Paxton, Neumark-Sztainer, Hannan, & Eisenberg, 2006) and eating disorders (Jacobi, Hayward, de Zwaan, Kraemer, & Agras, 2004).

Given the scale of the issue, the risk of further health difficulties and the relevance to children of all ages, effective intervention is required. As body dissatisfaction has been noted in young children, these interventions should be implemented early in order to prevent attitudes and behaviours becoming entrenched (McCabe, Ricciardelli, & Salmon, 2006).

Furthermore, given that large numbers experience dissatisfaction we could expect that a universally targeted programme may be useful.

Body image is difficult to define and is widely regarded to be a multidimensional concept with perceptual, affective, cognitive, evaluative and behavioural components (Muth & Cash, 1997; Tylka & Wood-Barcalow, 2015). Smolak (2004) suggests that while different aspects of body-image have been measured in children, the most common is ‘body-image evaluation’ which refers to personal satisfaction with your body (Muth & Cash, 1997). For the purposes of this review, body-image is used as a broad term to include feelings, thoughts and behaviours relating to a person’s physical appearance and the subjective sense of satisfaction or dissatisfaction with one’s body (Alsaker, 1992; Cash, 2004).

Over the past twenty years there have been several reviews of body-image and eating disorder interventions (Holt & Ricciardelli, 2008; Levine & Smolak, 2006; Littleton & Ollendick, 2003; Neumark-Sztainer et al., 2006; O’Dea, 2005; Stice, Shaw, & Marti, 2007; Yager, Diedrichs, Ricciardelli, & Halliwell, 2013). A significant number of reviews have focused on eating disorders specifically and, a very few, on the school environment. Of the most relevant reviews, Holt and Ricciardelli (2008) reviewed 13 universal and primary prevention programmes for elementary schools. They concluded that there was no overall evidence that programmes reduced body-image concerns or eating problems post intervention or at follow-up. Programmes were however effective at improving children’s knowledge. This review was conducted ten years ago and the age was set at over eight, excluding studies with younger children. O’Dea (2005) reviewed 21 body image and obesity programmes in schools. They found that most programmes reported some positive improvement and the most effective interventions were those that were interactive; included parents; built self-esteem and included media-literacy. Most recently, Yager et al. (2013) conducted a systematic review of secondary-school, classroom based body image programmes. They

evaluated 15 different programmes and found that 43% led to a significant improvement on body-image measures, although effect sizes were small. They reported the biggest effect sizes were in knowledge improvement.

As shown there have been several reviews **to date**, however they do not provide an up-to-date picture of the programmes available to improve body-image within school settings; many either not focusing on the school as a setting for intervention or not on the younger age group. The age of some reviews and the lack of systematic methods also make some reviews outdated. As described, there has been an up-to-date review of school based programmes, however these only included secondary schools, although they noted the need to evaluate studies with younger pupils (Yager et al., 2013)

Objectives

The objective of this paper is to systematically review the evidence for the use of universal body-image prevention programmes in primary schools. The aim is to assess the effectiveness of such interventions in improving measures of body image with children and young adolescents at post-test and follow-up where available. An additional aim is to compare the effectiveness of these programmes to those used in secondary schools as reviewed by Yager et al. (2013).

Methods

Inclusion and exclusion criteria

The inclusion criteria were adapted from those used in previous reviews to allow for comparison of results. Studies were eligible for inclusion if they met the following criteria:

1) The purpose of the intervention was to promote positive body-image or reduce body dissatisfaction or associated risk factors. This could include eating disorder prevention programmes. Any programmes that had multiple aims were included if body-esteem was judged to be a significant component. Programmes that were solely physical interventions

were excluded. The paper had to include a description of the programme that was sufficient to determine its quality and purpose.

(2) The intervention was delivered within school-time and on school grounds, although there could be a homework component. For multi-component interventions that had both school and non-school based elements, data from non-school based elements were excluded. If this was not possible the full study was excluded.

(3) The intervention had to be a universal, non-targeted programme. According to the definition provided by Stice & Shaw (2004), universal was taken to mean interventions delivered to all consenting pupils, offered to full classes, that did not recruit based on a particular risk factor. Interventions that include participants with certain risk factors are referred to as selected or targeted programmes. Those programmes with additional targeted components were only included if data was provided for the universal component in isolation.

(4) At least one body-image related measure was used pre and post intervention. Measures designed purposefully by authors were included if they described their development in depth.

(5) Participants were children from primary / elementary schools. As this varies internationally, the inclusion criterion was set at a mean age of between five and twelve years old. Where the mean age was not given the school grade year was used to determine the age of pupils relevant to their country. Studies that also included older children met inclusion criteria if they reported separate data for under 12s.

(6) The population were not high-risk students. The sample could be mixed or single gender.

(7) Studies were restricted to those published from 1998 to 2018 in the English Language to provide an up-to-date review.

8) Quantitative studies of any design; this included uncontrolled cohort designs.

Qualitative studies were excluded.

9) Published in any peer-reviewed journal. Thesis and dissertations were excluded from this review. Book chapters were not included in this review due to not being readily available.

Identification of studies

Studies were identified through searching the following data bases: MEDLINE, PUBMED, psyINFO and ERIC. The following search was run and adapted for each database using abstract as the search field: ((body image) OR (body dissatisfaction) OR (eating disorder) OR (disordered eating)) AND ((intervention) OR (prevention) OR (program*)) AND (school*). In addition, previous review papers (Holt and Ricciardi (2008), O'Dea (2005) and Stice, Shaw and Marti (2007) were searched and the journal 'Body Image' (2004 to 2018) scanned for relevant articles. The references of identified papers were checked for additional articles and forward citations searched. The last search was conducted on 5th May 2018.

Study Selection

Duplicate articles were first removed and then the first author screened remaining articles' titles and abstracts for relevance. The full-text articles of all potentially relevant citations were obtained and saved in Mendeley desktop (V1.18). The full text of relevant articles was then assessed according to the inclusion criteria. Those meeting the inclusion criteria were included in the review.

Data extraction

Data referring to participant demographics, methodology, measures, intervention type and results were extracted from reports using a purposefully designed form (see Table 1). For each study, one measure of body-satisfaction/dissatisfaction was selected as the primary

measure outcome. This was typically the measure highlighted by the author as their selected measure of body image. Where more than one measure was used, the one which had been validated for use with the population was chosen (Dohnt & Tiggemann, 2008). The aims, focus and method employed in the programme were also extracted. Studies were arranged in the table firstly according to their outcomes, and then by study design. The aim of the programme was classified into five types: Body image/satisfaction promotion (BI/BS); eating disorder prevention (ED); self-acceptance/self-esteem (SA) and healthy living (HL) or a combination. The mean age of participants was obtained from each paper; if this was not available the range or target age group was used instead. Total number of participants was also included, combining control and intervention groups. Where given, separate numbers of boys and girls are reported. The name of the programme and facilitator profession were also extracted and **are** labelled 'untitled' or 'unknown' where this was not possible. For programmes that included both girls and boys, results are presented separately for each gender where possible. When analyses were conducted on at-risk sub-samples, these have not been included.

Assessment of risk of bias in included studies

The methodological quality and risk of bias for all included studies was assessed using the Effective Public Health Practice Project (EPHPP) Quality Assessment Tool for Quantitative studies (1998; see appendix 12). This tool was developed for use in public health research and has been assessed for content validity (Thomas, Ciliska, Dobbins, & Micucci, 2004). Studies were rated across six component rates on selection bias, study design, cofounders, blinding, data collection methods and withdrawals. An overall grade of either 'strong', 'moderate' or 'weak' was given. **Overall quality ratings for each study results are reported in Table 1 and the full breakdown of rating provided in appendix 13.**

Synthesis of results

The results are presented in Table 1. Studies were classified into three categories based on their outcomes. The first group consisted of studies with significant improvement on body-image measures. This was defined as when the intervention group improved on scores pre- to post intervention or follow-up in comparison to control groups or, in uncontrolled trials, where there was a pre-to post significant improvement ($p < .05$). The second category consisted of those studies who reported significant improvement on other measures ($p < .05$), whilst the third category included those studies reporting no significant improvement on any measure.

Results

Included Studies

996 articles were screened via their title and abstract, 938 of which were excluded as not considered relevant to the topic. The remaining 58 full text articles were assessed according to the inclusion criteria and 20 were identified as meeting the criteria. One of the 20 articles was a follow-up of an early paper also included in the review and as such they were combined and will be considered as one study for the rest of the review. **There are therefore 19 studies included in the review.** Figure 1 illustrates the flow of studies through the systematic review.

Overview of findings

Study and intervention characteristics are shown in Table 1. The interventions included a total of 5,082 participants, with an average of 267 per study (range: 29 to 982). Studies came from eight different countries; Australia (n=4), Canada (n=4), USA (n=4), United Kingdom (n=3), Germany (n=1), Italy (n=1) Mexico (n=1) and Sweden (n=1).

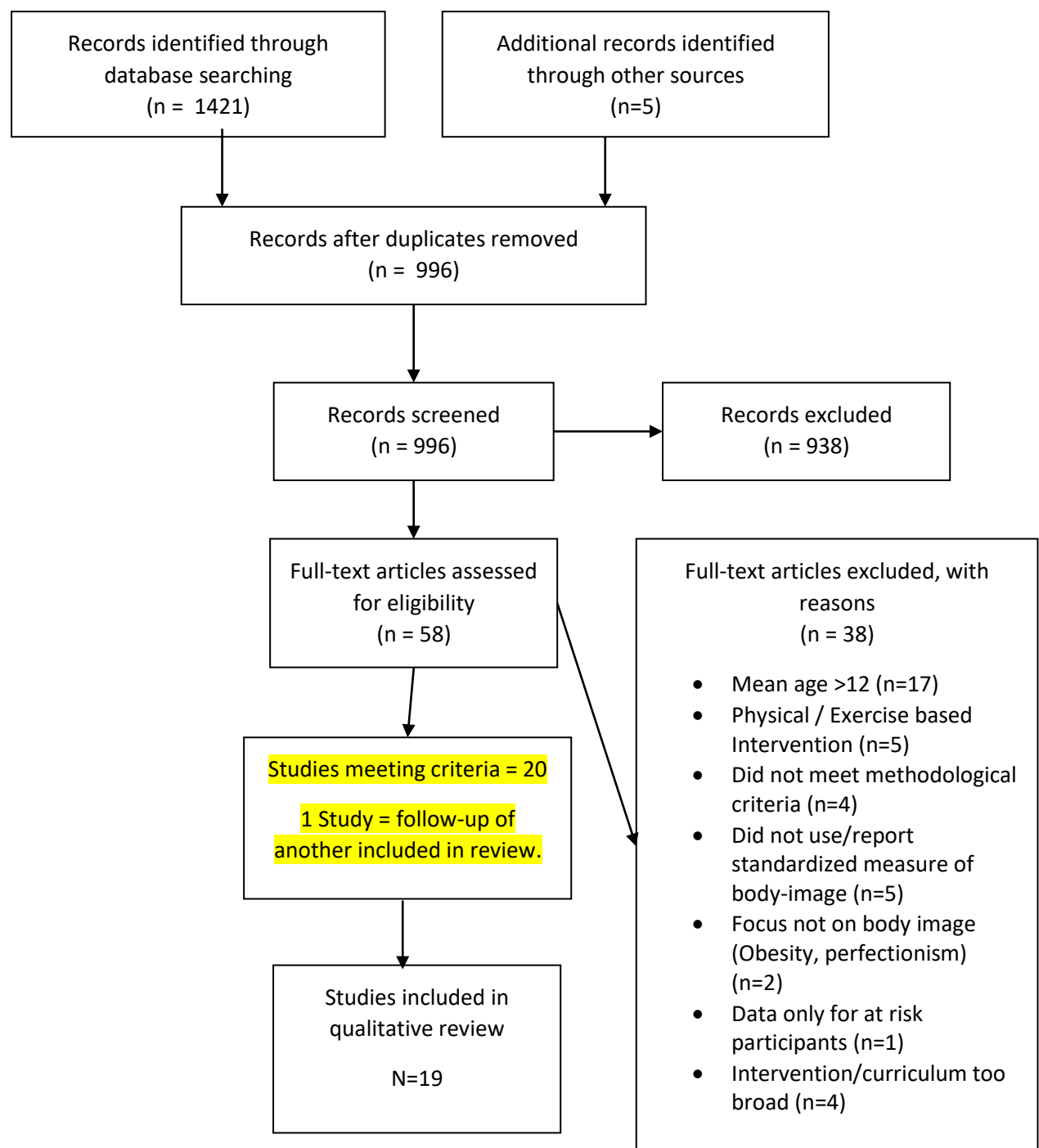


Figure 1: Flow-diagram of included and excluded studies

47% of studies (n=9) showed a significant improvement on at least one measure of body image from pre-to post and an additional one study found a significant improvement at follow-up following a booster session, meaning that 53% saw a positive impact on body-image. An additional seven studies reported at least one significant change on another measure. Only one study did not report any statistically significant change on any measure; '*Every Body is somebody*' (McVey & Davis, 2002). This was a six-session life skills programme to promote body image satisfaction and prevent eating disorders for girls in grade six. Instead of a programme effect they found both an increase in body satisfaction and a decrease in eating problems over time for both intervention and control groups across six and twelve-month follow-up. However, this study was later replicated and a significant improvement in body-image was found post intervention, although not maintained at follow-up (McVey, Davis, Tweed, & Shaw, 2004).

Follow-up

Follow-up measures were only conducted in 58% of the studies (n=11). Follow-up times varied from four weeks to twelve months post intervention, the most common being six months (n=7) whilst three studies had follow-ups at both six and twelve months. Of the papers reviewed, only three of those which initially found a positive change on a body-image measure demonstrated that these were maintained at follow-up (Bird, Halliwell, Diedrichs, & Harcourt, 2013; Escoto Ponce de Leon, Mancilla Diaz, & Camacho Ruiz, 2008; Halliwell et al., 2016) whilst an additional two reported a positive effect at follow-up that had not been detected at post-intervention (Dowdy et al., 2013; McCabe, Connaughton, Tatangelo, Mellor, & Busija, 2017).

Running Head: Effectiveness of universal body-image programmes in primary schools.

Table 1 Summary of Included Studies (n=20)

Study	Design	Country	Participants	Dose	Aim	Fac	Control	Measures	Findings	Follow-up	EPHP Quality Rating
1) Significant improvements on measures of body image and body dissatisfaction found.											
Bird, Halliwell, Diedrichs & Harcourt (2013) "Happy Being Me" (Adapted)	CT (class level)	UK	88 (46b, 42g); 2 schools; I=43; C=45; $m=10.7(g)$; 10.5(b)	3 x 60 mins	Aim: BI/BS. Focus: media literacy and cultural appearance ideals; reducing 'fat talk' and teasing and reducing body comparisons. Methods: interactive	R	Standard PHSE lessons	Body Satisfaction Visual Analogue Scale	Girls: ↑Body satisfaction at T2 & follow-up ↑ Appearance related-conversations; appearance comparisons; problematic eating behaviours & knowledge Boys: ↔ Body satisfaction ↑ Internalisation of ideals and appearance comparisons.	3 months	3
Escoto Ponce de Leon, Mancilla Diaz & Camacho Ruiz (2008) Untitled	RCT (class level)	Mexico	120 (59b,61g); 3 schools; ($m=9.93$)	8 x 90 mins	Aim: ED; Focus: coping skills, self-esteem, health eating and body dissatisfaction. Methods: interactive	R	3 conditions Interactive; Didactic and Control	BSQ (Spanish)	Boys & Girls: ↑ Body dissatisfaction at T2 & follow-up Girls: ↑ Influence of body aesthetic Boys: ↑ Overeating & self-esteem	6 months	2
Halliwell et al., (2016) "Body Image in the Primary School" (Key stage 2 lessons)	RCT (school level)	UK	134; 4 schools; $m=9.46(g)$; 9.49(b); I=79; C=55;	6 x 60 mins	Aim: BI/BS. Focus: valuing diversity, celebrating uniqueness, managing teasing and developing resilience to media and peer pressure. Methods: interactive	R	N/I	BES-C	Girls: ↑Body esteem at T2 & follow up Boys: ↔ Body Satisfaction. Girls with lower body-esteem made most improvement.	3 months	3
Hinz (2017) "My Body and I"	RCT (class level)	Germany and France	972 (485 g, 484b); 22 schools; $m = 10.5$	6 x 45 mins	Aim: BI/BS. Focus: understanding bodily changes, mindfulness, acceptance of self, media literacy. Methods: interactive	T	N/I	Body Dissatisfaction subscale - EDI-2	Boys and Girls: ↑ Body dissatisfaction ↑Shape concerns, knowledge and thin ideal.	N	2
McCabe, Connaughton, Tantangelo, Mellor & Busija (2017). "Healthy Me" (adapted for each gender)	RCT (School level)	Australia	652; 8 schools; I=335 ($m=8.8$; 172b, 163g;) C=317 ($m=8.77$, 149 b, 168 g)	4 + 1 re-cap	Aim: BI/BS. Focus: peer relationships, media awareness, healthy diet and exercise and challenging stereotypes (adapted for girls and boys) Methods: interactive	P	N/I	BES	Boys and Girls (no gender difference): ↔ Body esteem at T2 ↑ Body Esteem at follow-up ↑ Muscle esteem; fruit and veg intake Boys: ↑Less investment in masculine norms.	3 months	2
McVey, Davis, Tweed & Shaw (2004) "Every body is somebody"	RCT (school level)	Canada	258g; 4 schools; $m=11.18$; I=182; C=76	6 x 50 mins	Aim: HL/ ED / BI/BS. Focus: media, self-esteem, shape and weight acceptance, healthy eating, stress management. Methods: interactive	R	N/I	Body image subscale - SIQYA	↑ Body satisfaction ↔ Not maintained ↑ Self-esteem; negative eating attitudes and behaviours.	6 and 12 months follow up	2

Running Head: Effectiveness of universal body-image programmes in primary schools.

Ross, Paxton & Rodgers, (2013) "Y's Girls" .	CT (class level)	Australia	60g; 5 schools; $m=11.25$; $I=37$, $C=23$.	6 x 60 mins	Aim: BI/BS. Methods: interactive. Focus: Diversity, friendships, beauty practises, communication, media images, positive attitudes and resilience.	R	N/I	BES-AA	↑ Body satisfaction ↑ Self-esteem; decrease in ideal-perceived body size discrepancy, thin-ideal internalization and body comparisons.	N	2
Damiano, Yager, McLean and Paxton (2018) "Achieving Body Confidence for Young Children" (ABC-4-YC)	UCT	Australia	51 (49%g); 2 schools; $m=6.6$	3 x 60 mins	Aim: BI/BS. Focus: boosting body confidence, celebrating diversity and recognising the functional qualities of our bodies. Methods: interactive	T	-	BES	↑ Body esteem ↔ No other statistically significant changes.	N	3
Niide, Davis, Tse, Harrigan (2013) Healthy Body Image curriculum	UCT	Hawaii - USA	297(145b; 152g); 8 schools;	10 x 40 mins	AIM: BI/BS & ED. Methods: interactive. Focus: nature of body size, shape and composition, healthy eating, exercise, and realistic role models and sociocultural life skills and media literacy.	T	-	Children's FRS	↑ Body dissatisfaction ↑ Reduced risk for eating disorders and drive for muscularity.	N	3
Norwood, Murray, Nolan & Bowker (2011) "Beautiful for the Inside Out"	UCT	Canada	77 (36b 41g); $m=10.86$	5 x 80 mins	Aim: BI/BS Methods: interactive over one week. Focus: media Literacy, individuality, communication skills and beauty images.	R	-	BES-AA	Boys and girls: ↑ Body image satisfaction (no significant gender differences) ↑ Internalisation and awareness of the thin ideal (girls) & muscular ideal (boys).	N	3
2) Evidence of significant improvement on other measures relating to body-image											
Baranowski & Hetherington (2001) Untitled	CT (school level)	UK	29g; 2 schools 11-12; $I=16$, $C=13$	5 x 90 mins	Aim: ED. Focus: causes and consequence of dieting, appraisal of shape, stereotypes, self-esteem, body esteem and energy regulation. Methods: Unknown	-	Fruit and veg education	BES	↔ Body-image measures ↑ Self-esteem Both groups (control and intervention) scored less on dietary restraint.	6 months	3
Dalle Grave, De Luca & Campello (2001) Untitled	RCT (class level)	Italy	106; 1 school (61g 45b); $m=11.26$; $I=55$; $C=51$	6 x 120 mins	Aim: ED. Focus: increasing knowledge regarding sociocultural pressures; cognitive distortions; effects of dieting and eating disorders; self-acceptance and healthy eating. Methods: interactive	R	N/I	EDE-Q (shape and weight concern subscale)	↔ Body dissatisfaction ↔ Dieting, negative affect or eating ↑ Knowledge.	6 and 12 months	3

Running Head: Effectiveness of universal body-image programmes in primary schools.

Dohnt & Tiggemann (2008) "Shapesville"	RCT (class level)	Australia	84 g ; 4 schools; age 5-9 (<i>m</i> =6.56); <i>I</i> =42; <i>C</i> =42,	1 lesson	Aim: BI/BS. Children's picture book that celebrates positive body image, self-acceptance and diversity. Throughout the story discussions are initiated.	R	Picture book	Children's Figure Eating Scale (girls version)	↔ Desire for thinness at T2 or follow-up ↑ Appearance satisfaction (not maintained) ↑ Stereotyping base on weight & internalisation of media ideals.	6 week	3
Ghaderi, Martensson & Schwan (2005) "Everybody's different"	CT (class-level)	Sweden	164 (87g, 77b); 2 schools; age=11	9 x 50/80 mins	Aim: SA. Focus: relaxation and stress management, building positive self-image; positive attitudes; stereotypes; role of others. Methods: Interactive	T	N/I	KWC	↔ Body-image, self-esteem or eating attitudes ↑ Reduced risk for eating disorders Girls: higher levels of weight concern, anxiety, dieting & depression than boys.	N	1
Kater, Rohwer & Londre (2002) "Healthy Body Image: Teaching Kids to Eat and Love their bodies too!" (HBI)	RCT, class level	USA	415; 5 schools; age 9-13; <i>I</i> =357; <i>C</i> =58	11 lessons	Prevent: BI/BS & ED. Methods: Interactive. Focus: nature of body size, shape and composition, healthy eating, exercise, and realistic role models and sociocultural life skills and media literacy.	T	N/I	Body Image and Health Eating Survey (designed by authors)	↔ Body-image for boys or girls ↑ Knowledge, media and lifestyle behaviours.	N	3
McVey, Tweed & Blackmore (2007) 'Healthy Schools-Healthy Kids'	RCT (school level)	Canada	982; 4 school; <i>m</i> =11.27;	8 months	Aim: BI/BS. Multi-level intervention. Topics: media literacy, self-esteem, body image promotion, variability in size and shape, active living, stress management and non-dieting.	T	N/I	Six-item version of Body satisfaction scale.	↔ . Body satisfaction ↑ Disordered eating (girls) & internalised media ideals. Not maintained.	6 months	3
Smolak, Levine & Schermer (1998); Smolak & Levine (2001) "Eating Smart, Eating for Me" (adapted)	CT - class level	USA	253 (115b; 138g); 6 schools; <i>I</i> =8 classes; <i>C</i> =3 classes.	10 lessons	Aim: ED. Topics: food nutrition information, exercise encouragement, body shape education, healthy eating and media literacy. Methods: interactive	T	N/I	BES-C (8 questions)	↔ Body Esteem ↑ Knowledge about nutrition, dieting and body fat improved. ↑ 2 year follow-up: Girls: higher body-esteem and fewer unhealthy weight-management techniques.	N	3
Dowdy et al., (2013). "Empower U"	UC	USA	58 (33b, 25g); <i>m</i> =11.6	4 X 45 mins	Aim: HL (inc. BI/BS) One of four sessions focused on body-image. Methods: interactive.	S	-	BIS	↔ Body-image ↑ Body image t2 to follow-up ↑ Exercise and nutrition knowledge and beliefs. Maintained at follow-up.	4 weeks	2
3. No evidence of significant improvements on any measure.											
McVey & Davis (2002). 'Every Body is somebody'	RCT (school level)	Canada	282g; 4 schools; <i>m</i> =10.88	6 weeks	Aim: HL/ BI/BS / ED. Focus: media, promoting self-esteem, shape and weight acceptance, healthy eating and stress management skills. Methods: interactive	R	N/I	Body image subscale of SIQYA.	No significant effect of group was found for measure. Both groups improved their body image satisfaction and reduced eating problems.	6 and 12 month follow up	2

Running Head: Effectiveness of universal body-image programmes in primary schools.

Notes:

- Class or school level refers to the method which children were allocated to intervention or control.

Key:

- 1) Design: RCT: Randomised Control Trial; CT = non-randomised controlled trial; NCT = non-controlled trial.
- 2) Participants: b = boys; g = girls; I = intervention arm; C = control arm *m* = mean age.
- 3) Programme Aim: BI/BS = Body image/body-satisfaction promotion; ED = Eating disorder prevention; HL: Healthy living skills promotion; SA: Self-acceptance/ self-esteem promotion.
- 4) Fac (Facilitator): T = Teacher; R = Researcher; P = Psychologist; S= Student Nurses. - = details not provided.
- 5) Control Intervention: N/I = no intervention.
- 6) Findings: ↑ = significant improvement ↔ = no significant change.
- 7) EPHPP Quality rating: 1 = Strong; 2 = Moderate; 3 = Weak.

The full breakdown of quality ratings for all studies is provided in appendix 13.

Programme Characteristics

Facilitator: The programmes were delivered by either an external psychologist/researcher 52% (n=10); teachers 37% (n=7) or student nurses 0.5% (n=1). One study (Baranowski & Hetherington, 2001) did not report who delivered the programme. Most of the successful interventions were delivered by an external psychologist/researcher (70%, n=7).

Programme Length: The length of interventions in the review varied considerably. The intervention, '*Shapesville*', was single session (Dohnt & Tiggemann, 2008) and the rest were multi-session (between three and eleven sessions; $M=6$ sessions). The length of session varied between 40 and 90 minutes. The 'Healthy Schools-Healthy Kids' (HS-HK) programme did not provide session number information, the in-class curriculum, which was part of a multi-component programme, was described as a 'daily in class curriculum' across one academic school year (McVey, Tweed, & Blackmore, 2007). Two interventions, provided an additional re-cap session at follow-up (Dalle Grave, De Luca, & Campello, 2001; McCabe et al., 2017). Effective programmes ranged from three to ten sessions and longer programmes were not more likely to produce positive results.

Programme Content: Of the ten successful interventions, their aims were to: improve body satisfaction/decrease dissatisfaction or related risk factor (n=7); reduce risk factors for eating disorders (n=1) or a combination of aims (n=1). Of those programmes that were not successful, the majority were aimed at reducing the risk of eating disorders (n=3); one aimed to improve self-acceptance / esteem and one aimed to improving healthy living. These studies found positive changes on other measures, which may be appropriate given their aims.

All studies used a combination of approaches and content. Topics covered in the effective programmes included media literacy, self-esteem, coping skills, healthy eating,

exercise, puberty development, acceptance, relationship, reducing fat talk and teasing, and body dissatisfaction. All but two successful programmes contained some education on media literacy and this was the most common element of programmes. '*Empower-U*' presented a broader curriculum tackling areas of health behaviours including exercise and smoking prevention alongside body-image (Dowdy et al., 2013). Although no significant effects were reported for body-image, positive changes were reported for nutrition and exercise. The 'HS-HK' curriculum (McVey et al., 2007) was the only whole-school ecological approach reviewed. Although no changes to body-image were reported, **disordered** eating reduced. Programmes utilised interactive methods of delivery. Methods included a combination of presentation, discussions, films, role-plays, homework, meditates, quizzes, team-building, games, posters, worksheets and stories.

Study Characteristics

Design: Study designs included ten randomized control trials, five non-randomized control trials and four non-controlled trials. Of the controlled trials, the majority were compared to no intervention controls (80%). One study compared the intervention to a fruit and vegetable education programme that was matched for time and activity type (Dohnt & Tiggemann, 2008) and another against a picture book, matched for length and level of understanding (Baranowski & Hetherington, 2001). In these studies, neither intervention condition outperformed the control on the body-image measure. Escoto Ponce de Leon et al. (2008) study was the only one to compare three groups, one control, one didactic programme and one interactive programme. The didactic programme preformed similarly to the control condition, with the interactive programme found to be effective in improving body-satisfaction.

Gender: Fourteen studies had both boy and girl participants with the remaining five studies being girl only. Of the mixed gender studies nine presented results separately for each

gender. On measures of body image the majority (78%) reported no gender differences (Escoto Ponce de Leon et al., 2008; Hinz, 2017; Kater, Rohwer, & Londre, 2002; McCabe et al., 2017; McVey et al., 2007; Norwood, Murray, Nolan, & Bowker, 2011; Smolak, Levine, & Schermer, 1998). The two that found a gender difference found a significant improvement in body image for girls but not for boys (Bird et al., 2013; Halliwell et al., 2016). In total, only three interventions were shown to be successful for boys, all from mixed gender cohorts.

Age: Studies were conducted with participants age from five to thirteen, $M=10.8$. Although the age limit was set to twelve, those studies with an overall mean of less than twelve were included meaning some thirteen-year olds were included in the sample (Dowdy et al., 2013; Kater et al., 2002; G. McVey et al., 2007). The highest grade was equivalent to USA grade six where pupils are typically expected to turn 12, however sometimes individuals may be held back. None of the studies that included 13-year olds were successful at improving body-image post-intervention, although ‘Empower U’ was at follow-up (Dowdy et al., 2013). The mean age range of the effective programmes was 6.6 to 11.25. The overall mean age for effective interventions was 9.9 years old. All interventions with a mean age of ten or below were successful, except one (Dohnt & Tiggemann, 2008) however, a positive improvement in another measure of body-image was noted.

Outcome Measures: All studies used a measure of body-image or body dissatisfaction, some of which were primarily eating disorder measures with sub-scales measuring body-image. The most commonly used measures were the Body Esteem Scale for children (BES; Mendelson & White, 1993; Beverley K Mendelson, White, & Mendelson, 1996) and the Body Esteem Scale for Adolescents and Adults (BESAA; Cecil & Stanley, 1997; Mendelson, Mendelson, & White, 2001). Other measures included Body Satisfaction Visual Analogue Scale (adapted; Durkin & Paxton, 2002); the Body Shape Questionnaire (BSQ; Cooper, Taylor, Cooper, & Fairbum, 1987) adapted for a Spanish group (Raich et al.,

1996); Eating Disorders Inventory – Body Dissatisfaction subscale, German version (EDI-2; Garner, 1991; Paul & Thiel, 2005); Self-image Questionnaire for Young Adolescents (SIQYA) body image subscale (Petersen, Schulenberg, Abramowitz, Offer, & Jarcho, 1984); Children's Body Figure Rating Scale (FRS; Sherman, Iacono, & Donnelly, 1995); Eating Disorder Examination – (shape & weight concern subscale) (EDE-Q; Fairburn & Beglin, 1994); Body Satisfaction Scale (six-item version; Slade, Dewey, Newton, Brodie, & Kiemle, 1990); Body-Image and Healthy Eating Survey – Body image composite scale (Kater et al., 2002); Children's Figure Rating Scale (girls' version; Tiggemann & Wilson-Barrett, 1998); Body Investment Scale (BIS; Orbach & Mikulincer, 1998); Killen Measure of Weight Concern (KWC; Killen et al., 1994).

Not all measures had been validated for use with under 12s. The BESAA for example has been validated for children aged 12-25 but not for under 12s (Bowker, Gadbois, & Cornock, 2003; Norwood et al., 2011), whilst the Body Satisfaction Visual Analogue scale which was adapted for the sample, it did not report validity or reliability for a pre-adolescent sample (Bird et al., 2013). The BSQ, was designed for adults, although has been used in a sample of 12-year olds (Beato-Fernández, Rodríguez-Cano, Belmonte-Llario, & Martínez-Delgado, 2004; Escoto Ponce de Leon et al., 2008). One study had a purposefully designed survey measure as their primary outcome, however reliability and development were discussed (Kater et al., 2002). The most commonly used measure, the BES was adapted for children and has been shown to have good internal consistency and validity with boys and girls (Mendelson et al., 1996).

Aside from a body-image measure, a wide variety of additional measures were used for concepts relating to body image. These included internalisation of social attitudes, eating behaviour and attitudes, self-esteem and self-concept; as well as measures of healthy eating, physical exercise, affect, attachment, risky behaviours and knowledge.

Quality: Overall the methodological quality according to the EPHPP was poor, suggesting a high risk of internal bias. Eleven studies were rated to be poor, seven studies were moderate and only one scored as strong. The breakdown of individual ratings are shown in appendix 13. ‘Blinding’ was most commonly measured as ‘poor’ across studies. This meant that in the majority of studies researchers knew the intervention status of participants, and studies failed to describe if participants were aware of the research question. Blinding and random allocation can be problematic within school-based research due to organisational and delivery factors. Studies varied on their reporting of drop-outs and withdrawals, therefore in some studies the percentage of participants completing the intervention and final measures is not clear. Studies also varied on the quality of data collection methods, this was due to either the lack of reporting of the validity and reliability of research measures or difficulties with the quality of measures as previously explained. Most studies scored well in relation to research design due to their controlled design, however of the studies adopting a controlled design, nine were allocated at class level and six at school level, with none at an individual level; this was due to convenience and timetabling difficulties. This opens the possibility of contextual, class or school effects influencing findings. Children allocated on a class-level may be subjected to contamination effects as they may have talked with peers within their school who were participating in the intervention.

Comparison to secondary-school based programmes.

The results found are comparable to those found within secondary schools. 47% of primary school programmes were successful in improving body satisfaction in the current study and 43% of secondary school interventions according to Yager et al. (2013). However, they did report the programmes they evaluated were successful with younger adolescents (12 and 13 year olds). This suggest that children and young adolescents may be the best groups at which to target programmes. Two programmes that have been used in secondary schools and

reviewed by Yager et al. (2013) were also in the current review. 'Happy Being Me' was found to have a significant improvement on body satisfaction both in girls in secondary schools ($M=12.33$ years; Richardson & Paxton, 2010) and primary-school aged girls ($M=10.7$ years; Bird et al., 2013). Although, there was not a big difference between the age of the samples, it demonstrates that this programme may be beneficial for children and adolescents. Another programme: 'Everybody's Different' was also used in two studies with secondary school pupils (O'Dea & Abraham, 2000; Wade, Davidson, & O'Dea, 2003). The former finding a significant change in body satisfaction for girls and the latter reporting no evidence of significant improvements. The less positive results were replicated in a sample of 11-year olds, where no significant changes to body satisfaction were reported in the current review (Ghaderi, Martensson, & Schwan, 2005). Of the secondary school studies reviewed by Yager et al. (2013), they found studies conducted in mixed-gender settings only resulted in an improvement among boys. In contrast, the current review found more programmes having better success with girls than boys in mixed gender settings. This is in line with Stice et al. (2007) who found eating disorder prevention programmes were most effective to female-only populations. It may be that there is an age difference for genders which would require further exploration. In the Yager et al. (2013) review, no programmes were found to be effective for both girls and boys, yet three programmes were successful for mixed-gender cohorts in the current review. In both reviews, media literacy was the most commonly used approach, with the intervention approach being similar across both sets of studies in approach and length. Many of the measures used in studies in the current review had also been used in studies with adolescent participants.

Discussion

A systematic review of primary school based body-image interventions for children aged twelve and under was conducted. The aim of this was to determine which type of

programme is most effective in improving body-image measures and to compare results to those found in secondary school based programmes. Findings show that ten programmes were effective in improving body image either post-intervention or at follow-up. Of those with positive results, three were maintained at follow-up. Two programmes had no immediate post-intervention affect but a positive change was seen at follow-up. Even though only ten studies found significant improvements to body satisfaction, seven found some positive outcomes on secondary outcomes, whilst only one study found no positive changes. This suggests that body-dissatisfaction prevention programmes can be successful in the short term with younger children. However, of the studies reporting positive outcomes, five were categorised as moderate and five as poor. This suggests that the research findings may not be rigorous enough to conclude that body-image interventions are successful. Furthermore, there is not yet enough data to confirm the longer-term impact and if positive outcomes are maintained. These findings contrast with those found by Holt & Ricciardelli (2008) who found no evidence of success with programmes with this age group.

The length of programme was not shown to affect outcomes, supporting Stice & Presnell (2007) who found that, although multi-session programmes produced stronger effects, evidence did not suggest that single session programmes produced weak effects. There did appear to be some gender differences, with girls experiencing more positive outcomes than boys, although three programmes were found to have successful outcomes with mixed gender cohorts.

18 different programmes and curricula were evaluated in this review in 20 different studies. Whilst they all consisted of multiple components, and had different aims, many were similar in the risk factors they targeted, methods applied and topics covered. It was not possible to ascertain if one method or approach was associated with better outcomes. Given that ten programmes were shown to be effective at targeting body image, researchers should

now seek to replicate the findings for existing programmes rather than develop new ones.

This will help schools determine which intervention is most appropriate for them. Studies should include larger and more varied samples providing the opportunity to explore differences between groups. It would also be useful to explore the different components of the programmes in more depth to help to determine the necessary ingredients for a positive programme.

In addition, more rigorous methodologies and randomised controlled trials would be beneficial given the poor quality rating of many of the studies. School-based research can be limiting as often true randomisation or blinding is not possible due to timetable and organisational factors. Furthermore, many of the programmes in this study relied on convenience sampling where children were selected based on their class or school, which may limit the representativeness of samples and lead to differences between groups. An advantage of this is that convenience sampling can limit the potential for spill-over effects if pupils are not in the same class or school as pupils participating. It also mimics real world practice where programmes are delivered to whole classes. Of the controlled studies, only two had alternative interventions matched for time and developmental level (Baranowski & Hetherington, 2001; Dohnt & Tiggemann, 2008). Future studies should compare programmes to other interventions to determine whether results found are attributable to the specific programme of interest.

The inclusion of uncontrolled studies in this review may be problematic as body satisfaction can change over childhood and adolescence. Over the course of a long intervention body satisfaction may have changed due to other developmental-related factors and it may not be practical to compare adolescents to younger children.

Limitations

This systematic review had some limitations. The inclusion criteria for this review were not as strict as others, to allow a full picture of the state of research. This has meant that some studies used measures that had not been validated with children or young adolescents. This is problematic, but also reflects the wider state of the field where there is a limited number of reliable, valid measures for under 12s (Smolak, 2004). Measures that are not validated or reliable may not be measuring what they intend or may not be suitably matched to the cognitive ability of the sample. Whilst not explored in this review, it is also important to consider which aspect of body-image is being measured as it is a multi-faceted concept (Smolak, 2004; Tylka & Wood-Barcalow, 2015). In addition, some of the measures included were primarily measures of disordered eating that contained a body-image scale or component. It has also been beyond the scope of this review to explore the other measures included which were numerous. Many positive outcomes were seen for measures including disordered eating, self-esteem, knowledge, and reducing internalised ideals.

Conclusion

To date studies have shown that there are universal, school-based programmes that are able to improve body satisfaction in both boys and girls under 12s, and particularly under tens. The impact of programmes has not yet been proven in the longer term and further research is required to measure ongoing longer-term impacts. Further studies should seek to replicate findings in larger, more varied samples adopting rigorous methodological designs. The findings of this review have positive, practical implications and highlight effective, useable programmes that schools can use.

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Chapter 2: Empirical Paper

The KiVa bullying programme in Wales: Which school-factors contribute to outcomes?

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Abstract

Bullying is a common problem in schools internationally and can have significant negative effects for both victims and perpetrators. KiVa, is a whole-school approach to bullying that was first developed in Finland. The aim of this study was to evaluate the use of KiVa in Wales and identify any school factors which contributed to outcomes. A pupil survey from thirty schools was analysed alongside interviews with eight teaching staff. KiVa had a positive impact on school bully behaviour and reductions in victimisation and bullying were seen. Furthermore, school level social deprivation and additional learning needs percentage was found to predict outcomes. Four overarching themes emerged from interviews; 'Outcomes' 'School Pressures and Priorities' 'Fidelity and delivery' 'Parents and the Community'. The clinical implications of these findings are discussed alongside areas for future research.

The KiVa Bullying Programme in Wales: Which school-factors contribute to outcomes?

Introduction

Considerable empirical attention has been given to the prevention and impact of bullying in recent years, however it remains a widespread problem in schools. A recent survey of over 500,000 pupils aged 11 to 15 from 33 different countries found that 29% had been bullied in the past few months (Chester et al., 2015). The impact of bullying is well understood and includes a higher risk of psychosomatic problems; internalising symptoms such as depression and anxiety and also self-harm (Gini & Pozzoli, 2009; Lereya et al., 2013; Zwierynska, Wolke, & Lereya, 2013); whilst individuals bullied in childhood go on to have higher rates of depression, anxiety and suicidality in adulthood (Copeland, Wolke, Angold, & Costello, 2013; Takizawa, Maughan, & Arseneault, 2014). Bullying perpetrators are also at higher risk of later offending behaviours (Farrington & Ttofi, 2011).

Bullying is defined as repeated, aggressive behaviour against a victim who cannot defend themselves and can take many forms including physical, verbal, relational, indirect means and cyber bullying (Olweus, 1991, 1993; Slonje & Smith, 2008). A key element of this definition is the imbalance of power, either physical or psychological, over a prolonged period of time.

Several school-based initiatives to tackle bullying have now been developed and an extensive meta-analysis of these found an average decrease of between 20% and 23% for bullying and 17% and 20% for victimisation (Ttofi & Farrington, 2011). Both intensity and duration of intervention were found to be related to effectiveness, alongside parent involvement and the disciplinary methods used. Interventions used have either been universal, involving the entire school population, or focused, targeting specific groups of bullies or victims. Universal, whole-school approaches have been found to be most effective,

although interventions have produced varied results with differences based on gender, age and socio-economic background (Cantone et al., 2015; Merrell, Gueldner, Ross, & Isava, 2008).

KiVa is an example of an anti-bullying programme that was initially developed and implemented in Finland for grades one to nine (age seven to sixteen; Salmivalli, Garandeau, & Veenstra, 2012). KiVa rests on the role of bystander's reaction when witnessing bullying as a maintaining or extinguishing factor and seeks to influence this as well as provide information and strategies to adults (Salmivalli, 2010; Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1996). KiVa uses both universal and targeted actions. The former consists of student lessons to influence attitudes and actions of all pupils, whilst indicated actions occur to tackle actual cases of bullying and are done by a school team through systematic meetings (Kärnä, Voeten, Little, Poskiparta, Kaljonen, et al., 2011). Student lessons are provided from a comprehensive curriculum and involve experience-based, interactive learning. Through an academic school year, 20 hours of lessons are delivered covering topics relating to bullying, emotions, coping strategies and respecting others (Hutchings and Clarkson, 2015; Salmivalli, Kärnä & Poskiparta, 2010). In addition, there are online and parent resources, posters and high visibility KiVa vests for staff. KiVa is designed to be a permanent part of a school's antibullying work not a one-year intervention.

A large scale RCT in Finland of 8,237 pupils first evaluated the impact of KiVa in grades four to six. This found a positive effect on self and peer-reported victimisation and bullying as well as a beneficial impact on self-efficacy for defending others and well-being. Pre to post-test reductions were 46% for victimisation and 61% for bullying, which were favourable compared to other bullying interventions (Kärnä et al., 2011). The RCT was extended to explore the effects of KiVa on grades one to three and seven to nine. Positive

effects were found for the younger pupils, with more mixed results for the older age group. (Karna et al., 2013).

KiVa was rolled out nationally in Finnish schools from 2009 and the effects of the broader implementation measured (Kärnä, Voeten, Little, Poskiparta, Alanen, et al., 2011). Positive effects were replicated; in a large sample of 888 schools, a decrease in victimisation and bullying was found in the first year of implementation, although to a lesser degree. Beyond bullying, KiVa has also had positive effects on academic motivation and school enjoyment (Salmivalli et al., 2012), internalising symptoms (Williford et al., 2012) and increasing empathy towards victims (Kärnä et al., 2011).

KiVa has been translated, implemented and evaluated internationally, including in the Netherlands (Veenstra et al., 2013), USA (Swift et al., 2017), Italy (Nocentini & Menesini, 2016) and the UK (Clarkson & Hutchings, 2015). In the UK, a psychologist led pilot study of 17 predominately Welsh schools, found a significant post programme reduction in both self-reported victimisation and bullying alongside positive qualitative feedback (Clarkson & Hutchings, 2015). This has been followed up with a randomised controlled trial in Wales (Clarkson et al., 2015).

Studies have also explored how KiVa is being delivered. In terms of fidelity, lesson adherence and preparation has been positively associated with a reduction in victimisation, although not with classroom-level bullying (Haataja et al., 2014). Dosage of KiVa is shown to predict changes in most child level outcomes, including bullying, victimization, bystander behaviour and correlates of victimisation (Swift et al., 2017). Interpersonal factors such as perceived headteacher support, teachers' beliefs about effectiveness and professional burn-out have also has been linked to implementation adherence and dosage (Ahtola, Haataja, Karna, Poskiparta, & Salmivalli, 2013; Haataja et al., 2014; Swift et al., 2017).

Evidence to date has been positive and implementation fidelity is shown to moderate findings. However, samples used in research have often been homogenous and differences between schools are less well explored (Nocentini & Menesini, 2016). Implementation happens within the context of a school and local community, their resources and policies and not just with individual teachers, yet few research studies have examined these in relation to KiVa (Ahtola et al., 2013). In their systematic review of bullying interventions Cantone et al. (2015) suggest there are difference based of gender, age, and socio-economic status of individuals and it is important to examine school level factors that may also predict KiVa outcomes.

School factors can refer to structural characteristics such as size, funding, staffing or socio-economic status or environment related factors including ethos and feelings of connectedness. Factors, including staff stability, resources, school size, community poverty and urbanicity are known to affect the implementation of school-based prevention programmes more generally (Payne, 2009; Payne, Gottfredson, & Gottfredson, 2006). Socio-economic status (SES) has been associated with bullying levels, although inconsistently (Hong et al., 2014). Some studies have found higher levels of victimization and perpetration amongst children from low socioeconomic backgrounds (Due, Merlo, Harel-Fisch, & Al., 2009; Jansen, Veenstra, Ormel, Verhulst, & Reijneveld, 2011; Jansen et al., 2012). However, Chaux, Molano, & Podlesky (2009) found that it is SES inequality that is linked to bullying behaviours. School size has also been associated with bullying risk, with large schools linked to an increased risk of bullying when controlling for other characteristics (Barnes, Belsky, Broomfield, & Melhuish, 2006; Bowes et al., 2009). The risk of bullying and victimisation is also found to vary across student groups with students with disabilities or those from an ethnic or sexual minority at greatest risk (Menesini & Salmivalli, 2017).

Current Study

Units one and two of KiVa have now been translated into English and Welsh and rolled out county wide in Powys. Powys is a large, but predominately rural county in Mid-Wales with a population of 132,160 in 2016. Approximately 18.6% of residents are Welsh speaking, and it has below average levels multiple-deprivation, however there are small towns with high levels of deprivation (Powys County Council, 2017). KiVa's roll out here has been part of the emotional health and well-being strategy in Powys County Council in conjunction with the local health board. Data has been collected annually from all participating schools and this provides a unique opportunity to explore KiVa use in a UK context. Given the gap in knowledge regarding the impact of school-level factors the current study seeks to explore the impact of these within the context of Powys to better understand what contributes to KiVa success and implementation.

The aim of the current study is to:

- 1) Replicate results from KiVa research within a Welsh context.
- 2) Determine which, if any, school-level factors may predict differences in KiVa outcomes.
- 3) Understand what teaching staff feel are the main influencing factors on KiVa outcomes.

Methods

Design

A mixed-methods sequential explanatory design was used to evaluate the implementation of KiVa in Powys (Creswell, 2003). Phase one was an analysis of an online survey completed by school pupils and phase two was qualitative semi-structured interviews with school staff. The aim of the first phase was to identify the predictive power of selected school-characteristics that may be associated with KiVa outcomes, whilst the goal of the

qualitative phase was to explore findings in more depth and uncover any additional factors not captured in the initial analysis. Data were collected and analysed consecutively and integration between the two phases occurred when selecting the sample for interview and in the design of the interview schedule (Creswell et al., 2003; Ivankova, Creswell, & Stick, 2009). The findings were also integrated diagrammatically (see appendix 13 for visual model of design procedure).

Ethical approval was granted by the School of Psychology, Ethical and Governance Board at Bangor University (reference: 2017-16082).

Phase 1: Quantitative Analysis

Sample

Schools were recruited from Powys, a county in Wales, from a pool of 44 state-maintained primary and junior schools who had signed up to KiVa between 2013 and 2017. Children who had participated were from key stage two (age seven to eleven). All schools were eligible for participation if they met the inclusion criteria:

- 1) Survey data available at baseline (T1) and after a minimum of one- year of intervention (T2).
- 2) Mainstream education provision (two schools with special education status were excluded).

Thirty schools met the criteria and all were included in the present study. Schools had implemented KiVa for between one and four years ($Mdn=2$) however only data from years one and two of the programme were used due to inadequate sample sizes for years three and four. Pupil sample size from each school varied considerably (see table 1). Pupils were not identifiable within the survey and their data was not linked across years as data was not matched to individual pupils or a pupil number due to survey design.

Prior to the study, KiVa had been implemented and annual surveys completed. Schools and pupils had consented to completing the annual surveys as part of the programme. As the intervention falls within the usual curriculum parent and child consent was not needed for KiVa participation. For participation in the quantitative analysis informed consent was gained from headteachers of schools, through passive consent. No schools chose to opt-out.

Table 1: Number of participating schools and pupils per year of KiVa.

	Total Number of Schools	Total Number of Pupils	KS2: Pupils per School <i>M</i> (min-max)
Baseline (pre-KiVa)	30	2399	79.6 (16-177)
Year 1 of KiVa	30	2211	73.6 (15-182)
Year 2 of KiVa	20	1502	74.6 (20-178)

Outcome Measures

Pupil Online Survey. Data was used from the KiVa pupil online survey which is completed by pupils annually. The survey was administered in the summer term prior to implementation and at the end of each subsequent year of participation. It was completed online and measured pupil-reported bullying perpetration and victimisation using the revised Olweus Bully/Victim Questionnaire (OBVQ; Olweus, 1996). The OBVQ is an internationally used bullying measure which has satisfactory psychometric properties in terms of construct validity and reliability (Kyriakides, Kaloyirou, & Lindsay, 2006). Pupils responded to items on a five-point scale (0 = “not at all”, 1 = “once or twice”, 2 = “2 or 3 times a month”, 3 = “about once a week”, 4 = “several times a week”, 5 = several times a week).

School-level Measures. The research examined the relationship between school factors and KiVa outcomes. School level factors were chosen based on the existing literature and typically measured school demographics. The predictors used were as follows.

Socio-economic deprivation. This was measured through the proportion of students eligible for free school meals (eFSM), a widely used proxy measure for economic deprivation in the UK (Taylor, 2017). In Wales, LEA maintained schools must provide eFSM if pupils or

their parents receive specific benefits. The percentage of eFSM in 2016 was obtained from the Pupil Level Annual School Census (PLASC; Welsh Government, n.d). PLASC is a collection of pupil and school level data provided by all state maintained schools in January of each year. Data from this is publicly available from the Welsh Government 'Find my Local School' website. 2016 was chosen for all factors as full data was available and schools had completed the KiVa survey during this year.

School Size. The total number of students in the school was recorded and was also taken from the PLASC for 2016 for continuity.

Rurality. The rurality of the school was measured through population density of the local area. This was determined by linking school postal code to their Lower Layer Super Output Areas (LSOAs; a unit of UK census geography containing approx. 2500 people used for statistical reporting by the Office of National Statistics) then using the population density (people per square kilometre) of the LSOA. Data was taken for the year 2016 for consistency (Office of National Statistics, 2017).

Additional Learning Needs (ALN). ALN refers to pupils who have greater needs than the majority of their peers. Pupils with ALN includes those who have special educational needs, disabilities, English as an additional language, medical needs and emotional social and behavioural difficulties (Dauncey, 2016). Complete data was not available through PLASC and therefore the ALN percentage was taken from each school's most recent Estyn report (the inspectorate body for all schools in Wales) which are all publicly available (Estyn, n.d).

Language. The language medium of each school was gathered from publicly available information through the PLASC. Schools were defined as either 'English', 'Welsh' or 'Dual Stream,' the latter being where two language provisions exist side-by-side (Davies, 2007).

Other variables. Child gender and year group were considered as possible confounding variables in bullying behaviour and therefore included in the analysis. These were measured through the KiVa annual survey.

Data analysis

Data analysis was completed in the computer statistical package R (R Core Team, 2017) and the package ‘lme4’ (Bates, Maechler, Bolker, & Walker, 2015). Bullying and victimisation items from the pupil annual survey were used. The distributional characteristics of the variables were examined. One school was removed from analysis of two of the school variables (School Size and ALN) due to missing data. Another school was removed from the population density analysis due to erroneous data.

For the main analysis, a new item was created, ‘Bullying Behaviour’, using a factor analysis with Bartlett scores to combine all four items relating to bullying.¹ (‘Been bullied often?’ ‘Been bullied long?’ ‘Has bullied often?’ ‘Amount of bullying’). A scree plot was used to determine how many factors would be required. Two data sets were used; the first included all schools for one year of KiVa only (n=30). The second set included all data from all 30 schools, the second set only contained schools with two years of data post-KiVa available (n=20).

Given the non-independent nested **structure** of the data, a multi-level modelling approach was adopted. Multilevel models do not **require** data to be independent and model both fixed and random effects. A maximum likelihood linear mixed-model analysis was used to examine the relationship between school characteristics, KiVa and bullying behaviour.

All school characteristic predictors were centred first and gender and age were included as additional covariates. For each school variable, five models were run. First a

¹ R code: `fa.parallel(cbind(KivafullProcessed$been_bullied_often, KivafullProcessed$been_bullied_long, KivafullProcessed$has_bullied_often, KivafullProcessed$amount_of_bullying))`
`fa.parallel(Variables, plot = T)`
`factanal(Variables, 1, scores = 'Bartlett')$scores -> KivafullProcessed$Factor`

model (model 0) was fitted with fixed effects for gender, school year and KiVa year, random slopes for gender, school year, and KiVa year for each school, and random intercepts for each school². KiVa year refers to the number of years a school has implemented KiVa for.

Otherwise identical models were fitted adding terms for:

- 1) Model 1: School Factor (eFSM, ALN, School Size, Population density or Language³.)
- 2) Model 2: KiVa year⁴.
- 3) Model 3: School Factor and KiVa Year⁵.
- 4) Model 4: School Factor (e.g. eFSM), KiVa year and their interaction⁶.

Models were compared with Aikake Information Criteria (AIC) in order to choose the best fitting model. The AIC is a measure of relative quality of statistical models, directly comparing the good-ness-of-fit of models from the same dataset, with lower numbers representing better fit. The best models would then be compared using likelihood ratio tests to the model containing the effect of KiVa year only. This process was repeated for the five different school factors for data sets one (n=30) and two (n=20).

As an additional analysis, **comparing** results with previous literature, pupils were categorised as bullies or non-bullies and victims or non-victims, based on their answers to items referring to how many times they had been bullied or had bullied others in the past couple of months. '2-3 times per month' was used as the cut-off in line with previous literature (Kärnä et al., 2013; Ttofi & Farrington, 2011). Aggregated means were then compared pre-programme and at year one and two.

² lmer(Factor ~ genderc + yearc + (KiVaYearc||school_id_num) + (genderc|school_id_num) + (yearc|school_id_num), REML=F, data = KivafullProcessed_BL_1) -> ModelLMERnull

³ lmer(Factor ~ FSMc + genderc + yearc + (KiVaYearc||school_id_num) + (genderc|school_id_num) + (yearc|school_id_num), REML=F, data = KivafullProcessed_BL_1) -> ModelLMERF

⁴ lmer(Factor ~ KiVaYearc + genderc + yearc + (KiVaYearc||school_id_num) + (genderc|school_id_num) + (yearc|school_id_num), REML=F, data = KivafullProcessed_BL_1) -> ModelLMERK

⁵ lmer(Factor ~ KiVaYearc + FSMc + genderc + yearc + (KiVaYearc||school_id_num) + (genderc|school_id_num) + (yearc|school_id_num), REML=F, data = KivafullProcessed_BL_1) -> ModelLMERK_F

⁶ lmer(Factor ~ KiVaYearc *FSMc + genderc + yearc + (KiVaYearc||school_id_num) + (genderc|school_id_num) + (yearc|school_id_num), REML=F, data = KivafullProcessed_BL_1) -> ModelLMERint

Phase one: Results

Descriptive statistics were run on the dichotomised data to determine if results found in previous literature were replicated in Wales. The resulting prevalence for victimisation was 19.6% at baseline, 16.8% after year one and 13.9% after year two. The prevalence for bullying was 7.7% at baseline, 5.2% at year one and 3.5 % at year two. Over two years there was a reduction of 32.4% and 54.5% for victimisation and bullying respectively. This is comparable to reductions found in bullying in previous literature, although less than found in the original Finnish RCT which may be expected given the smaller sample (Kärnä et al., 2011).

Table 2 displays the bivariate correlations and descriptive statistics for each school level factor. There was a significant moderate correlation between eFSM and ALN and between school size and population density. However, all factors were still used in the analysis as initially planned.

Table 2: School-Level Factors: Bivariate Correlations and descriptive statistics

Variable	eFSM	Size	ALN	Population Density	Language
eFSM	-	-.299	.690*	.240	-
Size	-.299	-	0.059	.677*	-
ALN	.690*	0.59	-	.263	-
Population Density	.240	0.677*	.111	-	-
Mean	11.9	139.5	20.9	199.07	English:18 Welsh:5
S.D	9.6	80.6	9.5	248.394	Dual:7

* Significant at <.01 or greater

Factor Analysis

The Scree plot indicated that there was 1 factor from the items relating to bullying. Factor scores were computed for each pupil using the factor pattern matrix and were used as the dependent variable for analyses.

Mixed effect-models

Analyses were run for years 1 individually (n=29-30) and years 1 and 2 (n=19-20). Results for both data sets were similar with effects stronger in year 2. Data from the second data set are presented here (n=19-20). **Table 3** displays the AIC for each model.

Results of the final best models are summarised in **table 4**. A significant interaction effect of KiVa year and free school meals was found. The effect of KiVa being stronger at higher levels of eFSM. A similar result was found with additional learning needs; schools with higher ALN had better KiVa outcomes. There was no **significant** interaction effect of population density and KiVa year, although there was an effect of population density and KiVa individually. This suggests that independently, KiVa year and population density may **be** predictive of bullying outcome. For Language and School Size, KiVa year alone predicted bullying behaviour.

Table 3 Model Building goodness-of-fit AIC statistic

	eFSM (n=20)	ALN (n=19)	Population Density (n=20)	School Size (n=19)	Language (n=20)
0:	13434.57	12341.36	13429.86	12341.36	13434.57
1: Factor	13429.19	12332.21	13429.97	12343.28	13440.70
2: Year	13423.96	12332.34	13419.25	12332.34	13423.96
3: Factor + Year	13419.08	12324.18	13419.04	12334.29	13427.26

4: Factor * Year	13416.01	12323.79	13420.83	12336.28	13424.65
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Note: Figures in **boldtype** show best model.

A likelihood ratio test comparing the interaction model of eFSM and the KiVa only model showed a significant difference, ($X^2(2) = 11.949$, $p < .01$). A likelihood ratio test comparing the interaction model of ALN and the KiVa only model also showed a significant difference, ($X^2(2) = 12.556$, $p < .01$). This means that the ALN and eFSM interaction models better explain bullying behaviour than the models with KiVa year alone.

Table 4 Final Model results for each school factor

	eFSM		ALN		Population Density		School Size		Language	
	B	SE	B	SE	B	SE	B	SE	B	SE
Intercept	0.62	0.044	0.34	0.041	0.31	0.051	-0.59	0.050	-0.18	0.051
Gender	-0.38	0.016	-0.80	0.017	-0.36	0.017	-0.66	0.017	-0.30	0.016
School Year	-3.01	0.021	-2.48	0.022	-3.09	0.020	-2.61	0.020	-3.04	0.021
KiVa	-5.65	0.022	-4.67	0.024	-4.78	0.024	-4.31	0.025	-4.68	0.025
Factor	3.01	0.041	4.05	0.035	1.56	0.071	-	-	-	-
KiVa* Factor	-2.39	0.021	-1.61	0.025	-	-	-	-	-	-

Phase 2: Qualitative Interviews

The second phase was a qualitative inquiry using in-depth, semi-structured interviews and thematic analysis. The aim of this was to allow exploration of schools' own experiences of KiVa and to uncover factors that may not been captured in the survey.

Methods

Sample

Participants were drawn from eight primary schools all of which had participated in phase one. The sample was purposively selected based on findings from phase 1 to represent

a diverse range of schools and different bullying outcomes. Two schools were Welsh medium, three were English medium and two dual-stream. The size of the schools ranged from 56 to 195 pupils, and eFSM from 1.2% to 23.7%.

Headteachers from selected schools were contacted and asked if a staff member would like to participate. Of ten schools selected, eight interviews were conducted, due to timetabling and a staff member leaving. Written consent was obtained from all participants prior to being interviewed. **Table 5** describes participant characteristics.

Procedure

In-depth semi-structured interviews were conducted. A topic-guide was developed drawing from results of the quantitative phase, prior literature, and previous experience of the research team. Core topics to be covered were included with the scope for spontaneous questions and probes to address individual experience (appendix 14). Interviews were conducted on a one-to-one basis with the same researcher, **each lasting** approximately 60 minutes and were conducted in a private room at each school. Interviews were audio recorded and then transcribed verbatim (see appendix 15 for an example of an annotated transcript).

Anonymity of participations was ensured by removing identifiable information and using pseudonyms for all names. Schools in phase 1 and phase 2 have not been directly linked during write-up to protect individual and school anonymity however the researcher was aware of school-level outcomes at the time of interviewing to inform the conversation.

Analysis

Interviews were analysed into categories and themes using thematic analysis (Braun & Clarke, 2006). This was selected as an inductive analysis to uncover emerging ideas and to explore experiences not necessarily captured by the survey data. The analysis followed the six phases outline by (Braun & Clarke, 2006).

Phase two: Results

The aim of the interviews was to identify additional factors which may impact KiVa outcomes. Educators discussed many experiences relating to KiVa, however the focus of this research is the factors that affect implementation and the effectiveness of KiVa, therefore some 2nd order codes have not been used. With this in mind, four overarching themes were found; ‘Outcomes,’ ‘School pressures and priorities’ ‘Fidelity and delivery’ and ‘Parents and the Community.’ These are shown in table 6 (see appendix 16 for coding table).

Table 5 Interview participant demographics

Interviewee	Role	Years of KiVa at school	Member of school KiVa team
A	Teacher	1.5	No
C	Headteacher	3.5	No
D	Deputy Headteacher	1.5	Yes
B	Deputy Headteacher	2.5	Yes
E	Teacher	2	Yes
F	Family Support Officer	2.5	Yes
G	Teacher	4.5	No
H	Deputy Headteacher	4	No

Table 6 Super-ordinate themes and their 2nd order codes

Outcomes	School Pressures and Priorities	Fidelity and Delivery	Parents and the Community
Understanding bullying	School Factors	Visibility	Parental Engagement
Pupil enjoyment	Time Pressures	Staff	Community
Bullying Outcomes	School Resources	Adaption	
Social and emotional skill development	Is KiVa / Bullying a priority?	Other	
	Staff views	Interventions	
	School Ethos	Fidelity	
		Training	
		Accessibility	
		Support	

		Structures	
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Theme 1: KiVa Outcomes.

This theme described the outcomes reported by participants and referred to both changes to bullying and skill development. Although not the primary focus of the research, all participants discussed the positive impact of KiVa on their pupils and school.

Participants linked a reduction in bullying incidents to KiVa. Participants reported **no relationship** between school demographics and their reported success with KiVa. Nor did those with less positive survey data feel that KiVa had been any less of a success in their school. The reduction in bullying was mostly attributed to the shift in understanding by pupils and all participants reflected that knowledge about bullying had changed. They were confident that their pupils could now describe bullying and use this to inform how they reacted to situations:

The children come to understand the term bullying and that they have a responsibility to be actively kind to each other and look out for each other. (B)

Some participants also attributed the decline to an increase in discussions about bullying and **the openness** that KiVa created:

It brings up issues that you would not normally talk to the whole class about which is nice. Because if there was a bully issue you wouldn't have generally talked to the whole class. (A)

Participants felt that KiVa had helped most pupils irrespective of demographics and needs; however one teacher reflected that for younger pupils with significantly disrupted developmental histories, KiVa may be “*too much for them*” (G) to take in and signalled that for those pupils KiVa may not be as useful at that time.

Other reported outcomes included improvements to social, emotional, problem-solving and friendship skills. Teachers **thought** there were other benefits, particularly if the school did not have high bullying levels to start with:

They are much more able to talk about their emotions and read each other's emotions too. (H)

Without exception, participants reported that all pupils enjoyed KiVa lessons and looked forward to them and it was viewed positively in their school.

Theme 2: Pressures and Priorities

This theme related to the pressures schools face and the impact this had on KiVa. This included how schools chose to prioritise KiVa and their reasons for doing so. All participants felt that time constraints were a factor in schools, however they differed in their ability to find time for KiVa and how they viewed its place within school. This was thought to impact outcomes.

Some participants spoke about the need to put academic standards first and that there was a drive to raise attainment over well-being. This pressure came from different sources; Headteachers, Estyn (the Welsh school regulation authority), National levels and sometimes teachers themselves. One head-teacher felt that:

Because, there's also pressures. It's literacy, numeracy, ICT, standards, standards, standards, raising levels, push push push. (C)

For some, KiVa and bullying were secondary to academic needs which took priority. For others bullying and well-being were held on a par. One school reflected that for them, bullying was not a priority due to already low levels and other challenges due to staff and resource cuts, as a result they agreed that KiVa had got “*pushed to the side*” (C). unintentionally.

For those schools who initially had higher levels of bullying or unique school needs such as serving socially deprived communities, they appeared to have prioritised well-being and as a result KiVa.

Prioritising was not just a whole-school or management issue. There were also reported differences in the priorities of individual teachers. One headteacher noted that some teachers did not always prioritise KiVa:

I believe some staff prioritise it more than other staff. I do think with some classes it has fallen by the wayside. That's something that needs to be addressed. (B)

This was echoed by two more interviewees who described differences in teacher's preferences and how that impacted bullying outcomes:

It's annoying as well, when there was that resistance from that member of staff. It was hard because they [pupils] weren't having that continuity, so when the pupils went up they went backwards. (G)

Most participants felt that they were in a battle against constant time pressures and there were some concerns that these constraints would mean that not all of the KiVa curriculum would fit into a school year. For other teachers, notably the two from smaller schools, time was less of an issue and they felt able to dedicate regular time to delivering KiVa lessons. Most interviewees thought that, although there were competing demands on schools, KiVa was designed to be as teacher friendly as possible and provided all resources needed:

I think that's one of the main things that makes me stick to it [KiVa], if it was something that was going to have to be extra, I haven't got the time or the energy! (A).

Overall, participants felt that time pressure had the potential to impact delivery of KiVa and outcomes seen.

Theme 3: Fidelity and Delivery

This theme described the ways schools had chosen to implement KiVa, the adaptations made and how true to the model the programme was. This included the use of the KiVa team

and indicated actions, training and the role of staff. There were differences in the aspects schools focused on and the ways they had made it work for their school.

All schools ran KiVa lessons regularly; some chose weekly or fortnightly sessions (more than the recommended monthly amount) and others had chosen to have some longer ‘KiVa days.’ Most noted that they tended to go back to sessions if needed. Regular weekly sessions were most common in smaller schools.

Schools varied significantly in their use of the KiVa team and the indicated actions. Some schools did not have a defined KiVa team, either because they were a small school with few staff members or due to low levels of bullying so they felt they had not yet required the indicated actions. One felt that they did not have a team but this was because it was the duty of the whole school:

No, that's something we haven't done as well, to establish the KiVa team. To be honest with you I think possibly, maybe we have gone about it in a different way. I think all staff should endorse principles of Kiva not just one. (B)

The schools doing it this way reflected that they were doing it in a ‘piecemeal’ approach, but that this worked well for their school at the current time. All schools with higher initial baseline levels of bullying, or particularly high social or emotional needs had a regular KiVa team and implemented the indicated actions.

Most schools ran other evidence-based interventions to support social and emotional development alongside KiVa. Everyone who did this felt that doing multiple interventions worked well and laid the foundations for KiVa work:

What's quite nice, the Incredible years and Dina and stuff, they are learning about emotional regulation ... the incredible years stuff cues them in. (F)

Some participants had adapted KiVa to fit the needs of their school and this included introducing buddying systems, KiVa days and adding more resources. The fidelity of the

programme often lay with individual class teachers and some participants reflected that some teachers did not deliver it as much as others. Generally, most participants felt that teachers delivered it confidently however, one head reflected:

It's ensuring that all staff, actually deliver ... I'm a bit worried that one or two teachers aren't delivering it the way they should. That's probably seen in the behaviour of pupils. (B)

Another factor that appeared to impact fidelity was who the staff member nominated as KiVa lead was and the way other staff were involved. One school had a specified non-teaching professional. They felt this helped KiVa delivery due to her extra availability and specific skill set. Two other participants stressed the need for all teachers to be driving KiVa forward and had spent time making sure everyone in the school was on board:

It's not just the teachers delivering it. It's the head, it's myself, it's all the LSAs [Learning Support Assistants] ... Everyone has got that message. (D)

Most participants felt that the way in which KiVa was implemented did affect outcomes and were aware of the link between dosage and outcomes.

Theme 4: Parents and the Community

This theme described the influence parents and the community had on bullying and the way they became involved in KiVa. All interviewees, even where parental involvement was high, raised parent engagement as something they would like to better tackle and believed this would help improve outcomes.

Several participants described difficulties with getting parents involved in KiVa, "Oh getting it across to parents clearly. That would be our struggle" (A). Interviewees attributed this to the general challenges of getting parents into school and the different parent needs. Some also felt that parents had different views and ideas on tackling bullying that did not match the ethos of KiVa which made it harder to implement.

Some children are brought up to fight back, and KiVa challenges that children often find themselves in conflict with school and the way they are being brought up. (B)

Schools had tried many different methods to engage parents including running and promoting regular KiVa days, presentations at parents' evenings, big launch presentations, meetings at the start of each school year and sharing information. These had varying success and were a source of frustration for some participants.

We had quite a big launch at the start, the parents came, but when we re-ran it because yeah, we had one parent ... (G)

Despite the frustrations and struggles, the majority were still optimistic and also recognised that they wanted to do more. Only one school said that their parents would not know about KiVa explicitly.

The result of the lack of **parent** involvement was reported as a lack of parental understanding about bullying, a tendency to erroneously label many behaviours as bullying and unreasonable expectations of schools. As one participant said,

Parents do not always recognise what bullying is ... we have parents "my child is being bullied, "my child is being bullied." (A)

However, two participants felt that parents were more on board since KiVa, and as a result parents did not visit the school as often to complain about bullying.

It was clear from participants that parent and community involvement in KiVa was seen as a key component. Participants reflected on the impact that the community had on bullying; for example how parental fights in the local community impacted their children's relationship in school. One teacher discussed the impact of being in a rural community.

In a rural school like this, if you're not into farming or something like that. It may be very difficult to get on... Oh and family feuds in the village. (A)

Participants reported that things happening within the family and how much parents knew about bullying impacted child behaviour and was a barrier to KiVa.

Integration of Results

Overall, findings from the interviews suggest that KiVa has a positive impact across different schools. According to teachers, within-school programme and implementation characteristics affect KiVa delivery and outcomes more than school level factors. Schools that have higher social deprivation and more pupils with additional needs appear to have both higher levels of initial bullying and bigger declines in bullying. Interviews suggest that local community and pupil intake needs shape a school's priorities, and those schools with pupils with higher needs may be more likely to prioritise well-being programmes such as KiVa.

Figure 2 shows a proposed conceptualisation of how the themes and survey findings may fit together to explain KiVa outcomes.

Figure 2: A Conceptualisation of how findings from phase one and two may fit together.

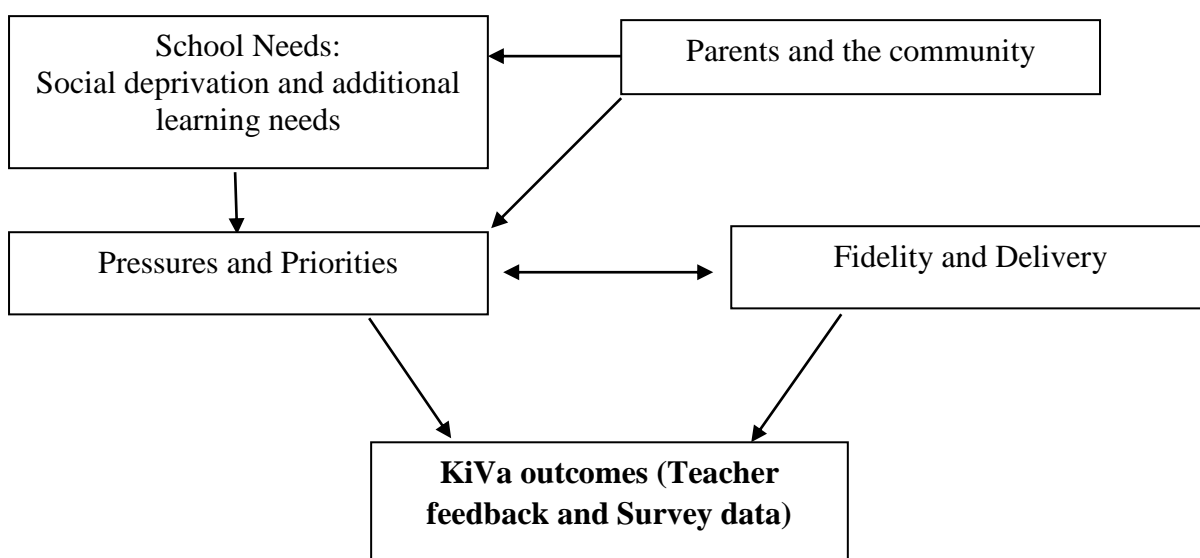


Figure 1: A Conceptualisation of how findings from phase one and two may fit together.

Discussion

Both phases of the study demonstrated that KiVa has positive outcomes on bullying behaviour within Welsh primary schools. This is consistent with previous studies. In addition, the survey analysis demonstrated eFSM as a proxy for social deprivation, and ALN percentage is predictive of the influence of KiVa on bullying. Specifically, findings show that KiVa may have a greater effect in more deprived schools, although it still appears to be successful across a range of different school types. The relationship found between high ALN and eFSM, KiVa and bullying outcomes may be explainable by the initially higher levels of bullying typically found in these schools, supported by research that shows SES is sometimes shown to predict bullying (Hong et al., 2014). This would mean that these schools have a greater opportunity for decline where as a floor effect may be seen in schools with already low levels of bullying prior to intervention. Other structural factors, such as school size, population density or language use did not appear to influence KiVa outcomes or bullying behaviour more generally in this sample. This contrasts with some previous findings regarding larger school size being associated with an increased risk of victimisation (Bowes et al., 2009). A reason for this finding may be the lack of large schools included in our sample due to the nature of Powys.

Interviews with teaching staff suggested that it is within-school and implementation factors that are most influential, such as fidelity, time pressures, prioritisation and parental involvement. It is important to note however this research did not objectively measure the relationship between implementation factors and bullying outcomes. Previous research has also suggested that there is a variation between schools regarding how they implement prevention programmes, and that the resources and commitment of schools affects implementation. While evidence shows that implementation fidelity is associated with better outcomes (Cantone et al., 2015; Haataja et al., 2014).

It is useful to consider how these findings may fit together. In the example of how school prioritise bullying and well-being needs, it was found that reported subjective prioritisation varied between schools. The relationship between this and outcomes found in phase one may be complex. Schools with a high bullying percentage or higher pupil needs (such as low SES) may prioritise interventions targeting wellbeing more than those with lower needs. In the current research, those schools with high social and emotional needs prioritised KiVa and had spent more time embedding the programme. Durlak & DuPre (2008) have argued for an ecological framework that recognises the different contextual factors that influence interventions at multiple levels, in the community, school and teacher level. The current research findings would fit with this view.

Participants discussed the role of parents in both the development of bullying and the KiVa programme. This mirrors research demonstrating how parents and family relationships may impact bullying or victim roles (Gómez-Ortiz, Romera, & Ortega-Ruiz, 2016; Smith, 2014). Fekkes, Pijpers, & Verloove-Vanhorick (2004) found that parents were in an important position for responding to bullying as pupils were more likely to tell them than a teacher. A review of bullying interventions also found that the involvement of parents significantly reduced bullying and victimization (Ttofi & Farrington, 2011). KiVa aims to involve parents through a variety of means including a parent guide which explains the program and information about bullying and how to tackle it. This study suggests that despite this it can be difficult for schools to get parents fully involved. It would be useful in the future to measure parental engagement and impact further given their important role.

Limitations

Despite its strengths, the research did have some limitations. Firstly, the design was limited as it was opportunistic, had no control group and did not allow for pupil data to be

linked across years. Different cohorts within school can differ on bullying behaviour and this would affect results. Furthermore, the survey relies on subjective, self-reported experience which may be affected by social desirability bias. Teacher's perspectives overall supported the changes seen in the survey, however some noted that survey data was less valid within smaller schools where for example, one child out of 20 reporting victimisation would significantly change results.

The research investigated differences between schools, Powys is known to be a particularly heterogenous county in comparison to other areas of the UK, although does provide a unique opportunity to explore the impact of welsh language and rurality. It would be useful to replicate the study in a different area to determine if similar results were found. It is important to note that, although efforts were made to ensure school level data was reliable and consistent, certain factors could vary year to year within smaller schools particularly. Furthermore, there are other school-level factors which were not explored including class size, ethnicity, school rating. The factors raised by teachers in the interviews were also not examined quantitatively due to the sequential design of the study.

Finally, the teachers who participated in interviews had been selected by their headteacher or volunteered and were typically involved in KiVa. Some participants, suggested that other teachers may have different views towards KiVa. It is therefore important to consider the limits of the sample and the possible positive bias.

Future research and implications

This is one of only a few studies to evaluate KiVa in the UK and adds to the international evidence supporting its use in schools. KiVa appears to be an acceptable and effective intervention for Welsh primary schools and their teachers, with positive impacts on bullying and victimisation for different types of schools found. This may be due to an increase in understanding about bullying. Future research could explore this further to

determine if this is a moderating variable and what other pupil changes lead to the observed declines in bullying. Future research may wish to measure the impact of school-level factors and implementation fidelity on outcomes. Given the repeated discussion about parental involvement by participants further research and effort to measure parental involvement may be useful.

Given the relationship between additional learning needs and KiVa outcomes and the lack of research on the use of KiVa in special education needs schools, this would also be an interesting next step to evaluate.

Conclusions

The current study adds to the literature on KiVa effectiveness and specifically the contribution of school-level and implementations factors. Free-school meal eligibility as a proxy for socio-economic deprivation and additional learning needs both appear to predict KiVa outcomes with schools with higher eFSM and ALN having greater declines in bullying behaviours. School staff have indicated that they feel that factors such as time pressures, priorities, parental involvement also contribute to KiVa success. Both pupil-reported survey data and teachers report suggested that there was a decrease in bullying after KiVa implementation.

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Chapter 3: Contributions to Theory and Clinical Practise

Contributions to Theory and Clinical Practise

The focus of this thesis has been the role of primary-schools in providing evidence-based programmes to promote well-being. The systematic review synthesised evidence relating to universal, body-image promotion programmes and found that almost half of the programmes reviewed had a positive impact on body-image, and over 90% had at least one positive change evidenced through outcome measures. The empirical paper evaluated the use of KiVa (Salmivalli, Poskiparta, Ahtola, & Haataja, 2013), a bullying prevention programme, in Wales and explored the different factors that can affect implementation and outcomes. The results showed that KiVa is successful in reducing bullying in Welsh primary schools and that both school-level structural characteristics and within-school factors may affect outcomes. The implications for research and practice are now considered, followed by a reflection of the mixed-methods approach and research process.

Implications for research and theory

There is a large and growing evidence-base for the use of preventative school-based interventions for a variety of health and behaviour needs (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; O'Connor, Dyson, Cowdell, & Watson, 2018). Given the quantity of programmes and the variation in reported results, it may be difficult for schools to navigate the research. Providing a comprehensive, up-to date review of body-image programmes helps to demonstrate the evidence available. In addition, whilst the KiVa is one of the more evidenced programmes available, less is known about the school-level factors that affect its success; the findings of which may also potentially be applicable to other interventions.

The findings from both chapters demonstrated that many evidence-based programmes are underpinned by well-established psychological theory. Broadly, body-image promotion programmes have fallen into three categories. The first is the social cognitive approach which

draws from sociocultural and cognitive development theories and focuses on the interplay between cognitive and emotional processes within the environment to target key risk factors. A second model is known as the ‘non-specific vulnerability-stressor approach,’ where programmes seek to foster generic life skills including stress management and relationship skills. The third approach is entitled the ‘feminist empowerment relational model’ which emphasises critical thinking, relational theory and the consideration of power issues (Levine & Smolak, 2006; McVey, Tweed, & Blackmore, 2007). KiVa is also driven by social-cognitive theory and the role of participants in bullying maintenance (Bandura, 1986; Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1996).

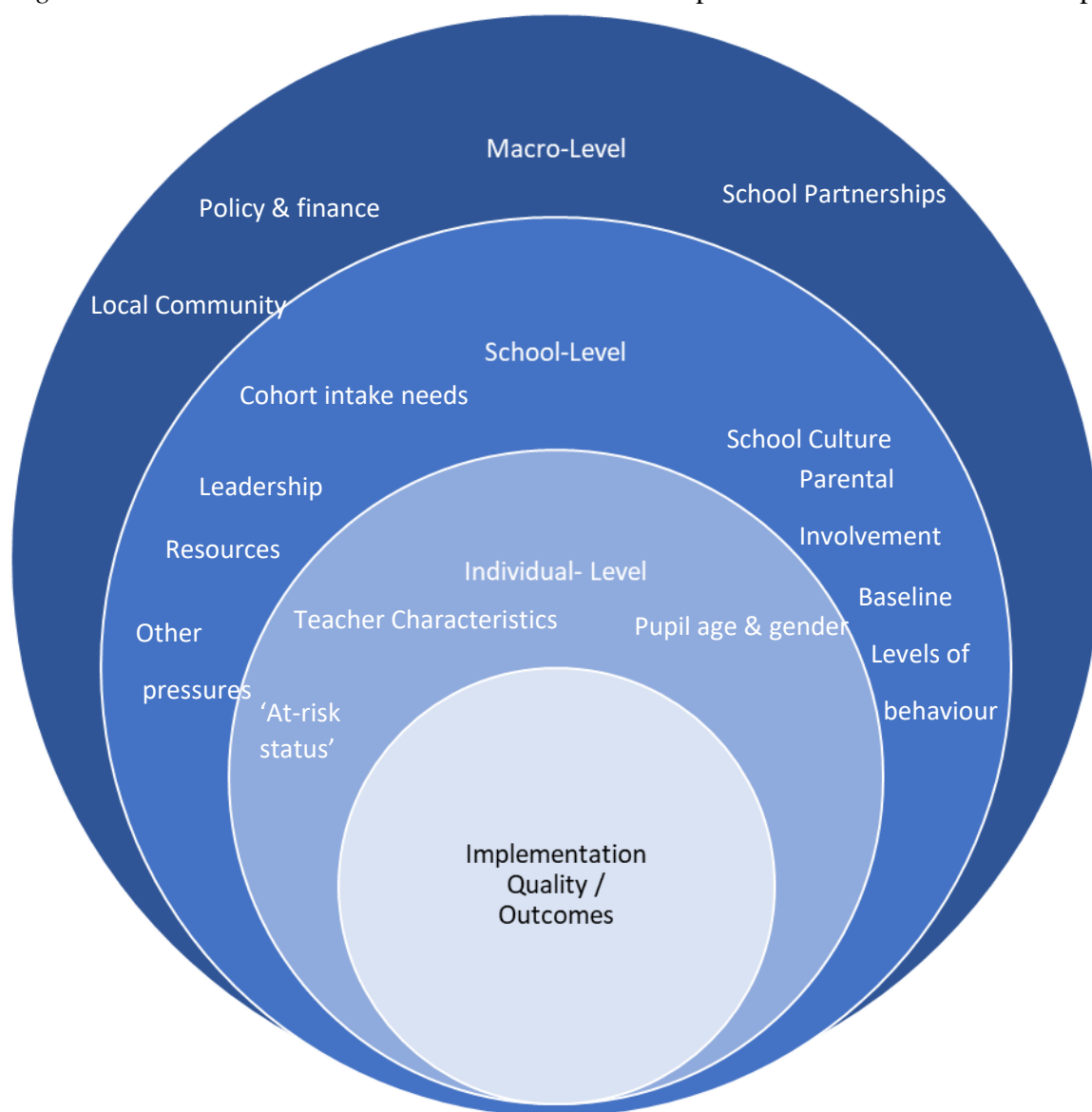
A topic that has been overlooked by researchers is the influence of contextual factors on the implementation and outcomes of interventions (Domitrovich et al., 2008). Evidence of this is seen in the systematic review, where articles typically did not discuss implementation processes or factors that may contribute to variation in results between schools. Programmes are not implemented within a vacuum, and as demonstrated in the empirical paper, the processes that impact at both the school and the teacher level are important in the success of any school-based programme.

One approach to understanding these influences has been to use Bronfenbrenner's, (1979) social-ecological framework as a starting point. Domitrovich et al. (2008) present a multi-level model considering contextual factors across four different levels, accounting for the influence of macro-level, school-level and individual factors. The findings presented in chapter two of the empirical paper can be integrated into this framework and help develop it further. Figure 1 shows an adapted version of this model into which our current findings have been integrated. Whilst some of our findings may fall under pre-existing categories, such as ‘school characteristics’, ‘resources’ and ‘teacher characteristics’, others are notably absent. The role of parents was highlighted across interviews to be crucial in impacting both the

Contributions to Theory and Clinical Practise

maintenance of bullying and the success of the KiVa programme. Other factors such as baseline levels of the selected behaviour/health difficulty, intake needs and school characteristics (such as additional learning needs or social deprivation) and community characteristics appear also to play a role. In addition, the reviewed body-image research suggests that, at an individual level, gender, age and at risk-status may merit inclusion. Further research should seek to continue to address the research-to-practise gap to ensure that evidence-based programmes are able to be used and understood across different schools.

Figure 1: Multi-level model of factors that can affect implementation and outcomes adapted



from Domitrovich et al. (2008)

Research Quality

Whilst the findings from the systematic review demonstrated some effectiveness, given the lack of methodological rigour in some papers reviewed, their evidence should not be accepted unequivocally. The review found that many research papers were of low quality, typically due to difficulties with blinding. Some studies reported a lack of power due to small samples sizes and the populations and schools used were often not ethnically or social-economically diverse. Schools or classes were compared on demographics to reduce the possibility of confounders however, differences between schools and pupils have not been used to predict outcomes.

All studies which were described as randomised controlled trials (RCT) were randomised only at school or class level, not by individual pupil. Whilst this was due to organisational factors it opens the possibility for important confounding variables to exist between groups. Of the controlled studies, only two had an active control (Baranowski & Hetherington, 2001; Dohnt & Tiggemann, 2008). Although some studies contrasted the specific intervention with standard social and emotional lessons it was unclear what these were. The use of active controls can be difficult in school-based research. However, high quality-RCTs should use randomisation, double-blind design and a placebo/active control to reduce bias and isolate the effect of the intervention (Ovosi, Ibrahim, & Bello-Ovosi, 2017). Placebo refers to something designed to resemble the test treatment whereas an active control refers to examples where one treatment is compared to another (Ovosi et al., 2017). Whilst this may be difficult, when possible appropriate 'placebo' or active programmes should be used as a control. In the case of school-based prevention programmes, this may be achieved by comparing two evidence-based interventions to determine which is superior. The test curriculum may also be compared to other lessons matched for length and method.

The papers reviewed did not discuss implementation and fidelity therefore the quality of this was hard to **measure**. The empirical paper highlighted how implementation of a programme can vary between schools although, in this study, fidelity to the model was not measured via objective means. Quality of implementation and fidelity are associated with better outcomes and should be included in programme evaluation (Haataja et al., 2014).

Future research needs to be rigorous and well-controlled. Where possible studies should use large, diverse, multi-school samples and provide consideration and information regarding their implementation quality, blinding procedures and randomisation. Now, studies should focus on evaluating fewer programmes to a more rigorous standard.

Long term effects

The long-term effects of the programmes discussed in both papers are not well known. The systematic review demonstrated that if follow-ups occurred they typically fell at six months post-intervention, although Smolak & Levine, (2001) did provide a two year follow-up. Given that two studies found a positive impact only at the follow-up, it may mean that any changes may not be identified due to the limited timescale between measurements (Dowdy et al., 2013; McCabe, Connaughton, Tatangelo, Mellor, & Busija, 2017). In addition, the outcomes seen may not be maintained in the longer-term. It is important to measure the longer term changes to risk factors and behaviour, especially given many difficulties, including bullying and body-satisfaction, change throughout childhood and adolescence (Eisenberg, Neumark-Sztainer, & Paxton, 2006; Scheithauer, Hayer, Petermann, & Jugert, 2006). Longitudinal studies are therefore needed to measure the impact of programmes over time.

Research may also consider whether programmes need to be run as open-ended interventions in the way that KiVa is, or as time-limited interventions, as explored in the systematic review, or alternatively, whether programmes are best repeated periodically. KiVa

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has an ongoing curriculum that continues throughout each year of primary school, on a rolling schedule. Children moving to secondary school in these areas have a comprehensive experience of the programme. This is seen through the solid understanding teachers report pupils have. Whilst the current research did not examine the long-term impact of the intervention, data for two years of implementation were analysed and a continued decline in bullying behaviour was found. Research should next determine if this trend continues or plateaus across a longer time span. With reference to body-image, the relationship between primary and secondary school interventions should be further explored. Currently, the question is often when should programmes take place? An alternative question may be: what can programmes in secondary schools do to ensure continuation of the skills learnt in primary-school?

Implications for Clinical Practise

The findings suggest that both classroom-based programmes and whole-school approaches can be effectively used by schools and that bullying, body dissatisfaction and their risk factors can be reduced in primary-aged children, at least in the shorter-term. There are several implications of these findings for schools wanting to use such programmes.

Choice of Programme Approach

In the review, the inclusion criteria meant that all the programmes discussed were universal, although some had additional targeted elements (McVey et al., 2007). KiVa on the other-hand is a combination of both; a universal curriculum with additional targeted components. School staff discussed how the targeted actions were not always used by schools due to a lack of need. There is an on-going debate regarding the use of targeted vs universal programmes (Holt & Ricciardelli, 2008). The benefits of universal programmes include the provision of wider access to information; reducing feelings of stigmatisation and unanticipated outcomes that reduce risky behaviours (McVey, Davis, Tweed, & Shaw, 2004;

McVey et al., 2007). Targeted programmes may on the other hand be more efficient and a better use of limited resources (Abascal, Bruning Brown, Winzelberg, Dev, & Taylor, 2004). ‘At-risk’ groups often report the biggest benefits of programmes which may suggest that interventions should be targeted at this group (Dalle Grave, 2003). Whilst the research did not compare the use of universal and targeted approaches, it does demonstrate that no harm occurs as a result of universal programmes and that beneficial changes on a number of different measures are seen. Universal programmes seem like a good choice for schools but it should not be assumed that programmes designed for select, ‘at risk’ groups are going to be appropriate and effective for universal groups (Yager, Diedrichs, Ricciardelli, & Halliwell, 2013). The choice should be carefully considered and evaluated before programmes are implemented.

Another difference in programme approach is whether programmes are multi-component or curriculum based. Most of the programmes reviewed were single component, delivered through a series of lessons. One comprehensive multi-component programme was evaluated: ‘Healthy Schools-Healthy Kids’ (HS-HK; McVey et al., 2007). This programme adopted an ecological approach with a classroom curriculum and peer support groups, parent education and posters. This is similar to the whole-school approach used within KiVa. Findings from the HS-HK programme were mixed, with limited benefit to body-satisfaction reported, although other positive measures were found. From this limited research there is no evidence to suggest that multi-level approaches are any more effective than single component programmes for body-image promotion.

As shown, most preventative programmes now utilise interactive methods as these have repeatedly been shown to be more effective in conveying information to pupils (O’Dea & Abraham, 2000). Escoto Ponce de Leon, Mancilla Diaz, & Camacho Ruiz (2008) directly compared a didactic and an interactive version of an eating disorder prevention programme

and found greater improvement in the interactive group. A variety of methods were used by programmes in our literature review and KiVa also adopts an interactive approach including discussion, role-play, videos, and visualisations. Whilst neither chapter compared the utility of such approaches, findings suggest that future health-based interventions should use varied, interactive methods of delivery as, not only are they enjoyed by pupils, but they are effective in communicating information.

Teachers as facilitators

This thesis has demonstrated that teachers can confidently and successfully deliver school-based programmes but also that they may feel competing demands when doing so. The empirical paper demonstrated that teachers felt confident in their ability to deliver the KiVa curriculum which was designed with this aim. In the systematic review, most successful programmes were delivered by researchers or psychologists, however three successful programmes were teacher led, often supported with initial training. ‘Task-shifting’ from delivery by external experts to internal providers such as teachers is crucial in increasing the availability and sustainability of programmes as well as reducing costs for schools. This should be the desired aim of any school-based programme. Unfortunately, it is suggested that behavioural and social skills curricula are traditionally designed for delivery by specialist staff, rather than teachers and, as a result, teacher effectiveness is mixed (Ratkalkar et al., 2017; Wilson, Lipsey, & Derzon, 2003). Diedrichs et al. (2015) measured the impact of task-shifting, comparing the delivery of their ‘Dove confident me’ programme by experts and teachers. Whilst they found that adherence, competence and completion of lessons was significantly greater by the ‘experts,’ teachers on average were still rated as good or very good and were highly competent. Most importantly, significant improvements in body-image were seen in the teacher-led conditions. Teachers, therefore, can be expected to

deliver programmes, although programme designers may wish to give this greater consideration at the development stage.

The difficulty of the teacher's role was highlighted in chapter two and is supported by previous literature that indicates teachers often lack time, resources and adequate training (Ratkalkar et al., 2017). When introducing a programme, the training and time constraints of teachers must be considered. Comprehensive resources and lesson guides, as used by KiVa, can also help reduce the burden on teachers and mean the programme is essentially 'off the shelf'. This helps to minimise planning and therefore time pressure on teachers. Initial training by experts may be useful in ensuring teachers are confident in their ability which will lead to an increase in fidelity. Other school staff should also be utilised; pastoral staff members and learning support assistants have valuable skills that should be used.

Consider Sustainability

It is crucial to consider the sustainability of school-based programmes if they are to be a success, given that many are not considered to be practical in school settings (Han & Weiss, 2005). The empirical paper discusses a school-based programme that has been implemented by schools across a county in Wales without the underlying support of a research team. Some schools have been participating for five years and plan to continue. KiVa's approach may be a good model of sustainable practice. Han and Weiss (2005) suggest that there are four ingredients for the sustainability of classroom-based programmes: acceptability to teachers; effectiveness of programmes; feasibility and flexibility. Interviewees in our empirical paper discussed these factors and KiVa appeared to successfully meet these criteria, even though concerns regarding the time commitment were discussed. Adherence to the four criteria listed above may be why KiVa has continued to be used within schools and why it has attracted positive praise. Other schools should consider these factors when selecting or piloting a new programme.

One approach to ensuring programmes are sustainable may be to offer shorter or one-off programmes to fit with the time pressures reported by schools. In their review, Stice, Shaw, & Marti, (2007) found that, although multi-session programmes produced stronger effects in relation to dieting outcomes, there was little evidence to suggest that single session programmes produced weaker effects on body dissatisfaction. In our review, programmes varied in length with an average of six sessions. Whilst only one was single session, the shorter programme appeared to be as likely as longer programmes to report positive changes. This suggests that programmes may not need to be long to provide meaningful change. Further research on longer term effects of shorter programmes would be merited together with direct comparison between shorter and longer programmes. The time-tabling of programmes should also be considered; some schools preferred providing longer less frequent KiVa days, whilst other preferred shorter, more regular sessions. Tailoring the programme to the established school structures seems to be of paramount importance.

Partnership working

Research programmes are often supported by research grants and are carefully monitored, thus the efficacy and quality of programmes outside of research programmes needs to be considered. KiVa provided a unique opportunity to explore a real-world example where funding and support came jointly through health and education budgets as part of a county-wide strategy. KiVa was supported by an NHS psychologist, working in close partnership with each school, who could provide consultation, training and resources where needed. This is an example of successful joint working between agencies and could be used as a case-example for the roll-out of other school-based programmes. Schools and local education authorities should be provided with guidance on evidence-based strategies and links should be made between different agencies and stakeholders to encourage well-planned

interventions. Having multiple schools in a local area implement the same programme means that support networks can be developed.

School and pupils needs

Evidence-based public health programmes may also be an opportunity to decrease the inequality gap currently seen and, at the least, should ensure that programmes are meeting the needs of those with the greatest needs. There is now a well-established link between socio-economic disadvantage and poor mental health in children (Reiss, 2013). Given this, it is crucial that any preventative public health programme considers programmes that are suitable for different groups and most importantly meets the needs of their unique school. Whilst researchers, such as those in our systematic review, have typically used schools with ‘typical’ demographic profiles, they may have omitted to consider the specific needs of their community.

Results from our KiVa evaluation are promising in that they show that schools with higher levels of socio-economic disadvantage see bigger decreases in bullying than their more affluent counterparts. Whilst this may be due to baseline level differences, it has important implications and demonstrates that KiVa can be used confidently in more deprived schools. These results should encourage other researchers to explore the differential effect of programmes. When implementing programmes, schools should be supported to consider their unique cohort needs as well as those of their community.

Working with Legislation

The findings from both the empirical paper and the literature review demonstrate that some important improvements to child social and emotional experience and skills can be made in schools, and this should be taken on-board by schools. Government policy increasingly recognises the need to provide support for well-being within schools and there is

now legislation to this affect, for example the National Assembly for Wales' Childhood and Adolescent Mental Health Strategy set out in 'Everybody's Business' (2001).

Schools in Wales are required to have anti-bullying policies that outline procedures for recording and dealing with incidents, bullies and victims (Estyn, 2014) and the 'Together for Children and Young People' (T4CYP) multi-agency improvement programme describes the different levels of intervention that should be offered within services. This includes universal, health promotion in settings including schools (Welsh Government, 2015). In addition to this, in the new curriculum for schools in Wales developed for implementation from 2022, one of the new six areas of learning will focus on health and well-being (Donaldson, 2015). This appears to set the context for the programmes described in this research. Programmes discussed in the review may be able to be incorporated into this new curriculum.

However, as the agenda for addressing the emotional and social wellbeing needs of pupils is increasingly promoted, the focus of schools and teachers has also increasingly been on educational attainment (Banerjee, McLaughlin, Cotney, Roberts, & Peereboom, 2016). The empirical paper found that some schools faced difficult decisions about what to prioritise and there was an underlying pressure to focus on reaching the prescribed national standards. As a result, KiVa, and other schools-based well-being programmes were pushed to the side. In the future, programmes need to be integrated into the wider school system in an approach that is working with, and not against other school priorities (Banerjee et al., 2016). One participant described how well-being and pro-social behaviour encouraged in KiVa was, in her view, the foundation to learning. Adopting this stance may help both educational and well-being needs sit together.

Reflections on Mixed-Methods Research

Mixed-methods approaches are used to help introduce an expansive and creative approach to answering research questions and can provide insights that may otherwise be missed (Creswell et al., 2003; Johnson & Onwuegbuzie, 2004). This method seemed appropriate for the empirical paper as using only the survey analysis, (as in the majority of previous KiVa research), would have meant that the unique insight from teachers would have been missed. Teachers could discuss experiences in depth and introduce factors, such as the feelings of pressure and prioritisation, that were best encapsulated by a qualitative approach. Using a qualitative phase can also improve the validity of findings. The empirical paper used self-reported bullying as an outcome measure. This can be problematic as elements of bias may be introduced. Interviewees were able to confirm if they felt bullying had reduced in their school; some reported a decline in bullying that had not been captured in the survey data. Interviewees also suggested other outcomes that had not been measured such as social and emotional skill development. These may have been missed if a mixed methods approach had not been used.

There are many types of mixed methodologies; the sequential explanatory approach is one of the more popular and was used in the current research (Ivankova, Creswell, & Stick, 2006). In this approach, the qualitative phase is used to explain or contextualise the earlier quantitative component. The quantitative phase can be also used to inform the design of qualitative measures (Creswell & Plano Clark, 2007). This approach lent itself well to the topic and research questions proposed; firstly, measurable school characteristics and KiVa outcomes could be explored and then interviews could be used to discover any other factors that had not been covered and to determine if findings fit with the participants' experiences. The large sample used in phase one meant findings can be generalised more easily and may

be more reliable, while the smaller sample of phase two meant that the in-depth subjectivity was not lost (Bowen, Rose, & Pilkington, 2017).

Research methodologies are often aligned to specific and strict philosophical paradigms. Quantitative and qualitative methods are seen to be in opposition. The epistemological differences are important and influence the design and evaluation of research. It is important in mixed-methods research to maintain consideration of the epistemological stance, or else risk an uncritical and un-reflexive piece of research (Wiggins, 2011; Yardley, 2001). The current research adopted a pragmatist approach (Bishop, 2015; Yardley & Bishop, 2008). Pragmatism in this case refers to the evaluation of research with regard to its valuable consequences and ability to achieve the research questions. (Bishop, 2015; Yardley & Bishop, 2008) In essence, is the research practical and useful? The aim of the research was to identify factors affecting KiVa and the methods employed were necessary to ensure a comprehensive picture was achieved, whilst the outcomes of both stages are useful in terms of their real-world application and for the implications previously discussed.

Another consideration of the mixed methods approach is the way data is integrated. Integration of findings can lead to three possible outcomes; ‘confirmation’ when both forms of data appear to confirm the result of the other with similar conclusions; ‘expansion’ where the findings from one phase may diverge and expand insight by addressing different aspects; or ‘discordance’ where the findings are inconsistent or incongruous (Fetters, Curry, & Creswell, 2013). This study fits best with the ‘expansion’ category; results from the qualitative phase provided additional, but not incongruent, factors that shaped KiVa outcomes whilst expanding insight by considering elements not initially considered in the research design or aims.

Interestingly, despite the acknowledgement of the use of the mixed-methods approach within school-based and public health research, the studies evaluated in the literature review

did not adopt this method. Whilst this is partially a reflection of the inclusion criteria, mixed-methods studies were not excluded. The absence of this approach may mean potential outcomes or interesting learning points are being missed in our current way of evaluating preventative programmes.

Reflective commentary on the research process

During my time as an assistant psychologist I developed an interest in the role of schools in providing behavioural and emotional intervention to children which I continued into my clinical training. I have been able to reflect on the impact that the school environment can have on pupils and, following experiences and current media interest, I was interested in further exploration of what schools can do to work in positive preventive ways. This led me to explore the use of preventative programmes such as KiVa.

As my research progressed I became aware of how ambitious and time consuming my empirical paper had become. I sometimes questioned the necessity of a mixed-methods approach, however, as discussed, both phases were equally important and helped to paint a comprehensive picture of KiVa. The geographical distance I needed to cover seemed to make this challenge even more frustrating; I had to travel for over 2 hours to meet with each participant and, due to the timetable of the school day, it was rare for me to be able to effectively co-ordinate visits at multiple schools.

Prior to starting this project, my statistics experience was limited to small-scale research projects and single-case design, with minimal knowledge of multi-level modelling statistical analyses. Learning how to build and understand multi-level models, as well as a new statistical computer package, took a significant amount of time and sometimes engendered confusion. My eventual understanding in this area would not have been possible without the personal statistics tutoring that was gratefully received. I experienced feelings of

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hopelessness at several points when models were not converging and the data appeared more complex than I had originally thought. During these periods I was also anxious that, despite the time invested in the study, there would not be any 'interesting' results. Whilst this was not the case, I also reminded myself that all findings are of equal value and the absence of an effect also has important implications.

As I moved onto the qualitative phase of the research I felt more comfortable. As the interviews progressed I noticed that, despite the differences between the schools, interviewees were discussing almost identical things; being passionate about the pupils they taught and feeling frustrated by the same difficulties. I found myself wanting to validate their experiences and to share what others had told me. During the interviews I felt myself being drawn towards my role as a clinician, wanting to provide advice on the struggles they were facing and to share ideas, however I ensured that I remained in 'researcher role'. Many interviewees were initially slightly anxious, with concerns about 'doing KiVa right' or worrying that their outcomes would be judged. I ensured that prior to each interview I reassured them that this was not the purpose. During interviews I was constantly checking in with myself, feeling pressure to ensure I was gathering meaningful and useful data. Listening back to recordings could be challenging if I felt that I had missed cues at the time and subsequently wanted to know more about something that had been said. As the interviews progressed I felt more confident as I became more familiar with the interview schedule and recognised common topics that came up although I was careful not to pre-assume what would be discussed.

When conducting the research, I was acutely aware of potentially being a burden on teachers and adding to the time pressures they face every day. I had worked in schools and knew that timetabling meant free time was rare. I registered a sense of guilt that I was asking them to give up their time to talk to me. This was further amplified during the interviews that

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frequently discussed the lack of time everyone faced. Despite my worries, everyone was accommodating and appeared more than happy to talk. Interruptions were common, a pitfall of conducting interviews in schools, but the interviews were relaxed and did not feel pressured.

The thesis has been challenging, overwhelming and exciting. It has demonstrated the multifaced role of clinical psychologists in balancing academic, research and clinical demands. As the project draws to a close, I surprisingly feel some disappointment; in my qualified role I may not have comparable time to dedicate to research and I may not be able to explore a topic in this much depth again. I realise how much I had enjoyed the process and challenge and I hope to ensure research becomes a part of my clinical practice as I continue in my qualified role.

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Appendices

Appendices

Appendix 1: Bangor University Ethics Application

Application for Ethical Approval

Project Title: What makes the KiVa bullying program a success in primary schools?

Principal investigator: Stewart, Jessica

Other researchers: Hutchings, Judith, Evans, Sue, Saville, Christopher

Pre-screen Questions

Type of Project

D.Clin.Psy

What is the broad area of research

Clinical/Health

Further details: Mixed methods project investigating the impact of a bullying intervention in primary schools.

Funding body

Internally Funded

Further details: Funded by School of Psychology as part of the DClinPsy award

Type of application (check all that apply)

A new application that does not require sponsorship or scrutiny from an outside body?

Proposed methodology (check all that apply)

Questionnaires and Interviews

Further details: Mixed methods design. Data that has already been collected routinely as part of the KiVa intervention will be analysed and alongside semi-structured interviews with education professionals.

Do you plan to include any of the following groups in your study?

Children

Further details: Data gathered from routine surveys already completed by pupils will be analysed. This data has already been collected and the intervention has already been run therefore children will not directly participate in the current research project.

Does your project require use of any of the following facilities and, if so, has the protocol been reviewed by the appropriate expert/safety panel? If yes please complete Part 2:B

If your research requires any of the following facilities MRI, TMS/ tCS, Neurology Panel, has the protocol been reviewed by the appropriate expert/safety panel?

Not applicable (the research does not require special safety panel approval)

Connection to Psychology, (i.e. why Psychology should sponsor the question)

Investigator is a staff member in Psychology (including the North Wales Clinical Psychology Programme). Investigator is a student in Psychology (including the North Wales Clinical Psychology Programme)

Further details: Investigator is a student on the North Wales Clinical Psychology Programme.

Does the research involve NHS patients? (NB: If you are conducting research that requires NHS ethics approval make sure to consult the Psychology Guidelines as you may not need to complete all sections of the Psychology online application)

No

Has this proposal been reviewed by another Bangor University Ethics committee? No

NHS checklist. Does your study involve any of the following?

Further details: Data from surveys previously routinely administered to children as part of school provision will be analysed. No children will actively participate. No NHS ethics required.

Part 1: Ethical Considerations

Will you describe the main experimental procedures to participants in advance, so that they are informed about what to expect?

Yes

Further details: Participants in both phases of the study will be made aware of the project's aims and what it entails verbally and through the participant information sheet.

Will you tell participants that their participation is voluntary?

Yes

Further details: Participants involved in interviewing will be informed of this verbally and through the information sheet. The surveys have already been completed as part of routine practice. Head teachers from schools will be told that their school's inclusion in this data analysis is voluntary through the information sheet.

Will you obtain written consent for participation?

Yes

Further details: Written consent will be gained from: - Head teachers of schools whose survey data will be analysed will be asked to opt out if they do not wish for their data to be used. - Education professionals who will be interviewed. - Consent will also be gained from KiVa UK who owns the data collected from the annual surveys, via one of the research supervisors (Professor Judy Hutchings).

If the research is observational, will you ask participants for their consent to being observed? N/A

Will you tell participants that they may withdraw from the research at any time and for any reason?

Yes

Further details: Details of the participants right to withdraw from the interviews and research will be given verbally and on the participant information sheet.

With questionnaires, will you give participants the option of omitting questions they do not want to answer?

N/A

Further details: Questionnaires have already been completed and data collected.

Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs?

Yes

Further details: This will be outlined in the participant information sheets.

Will you debrief participants at the end of their participation (i.e. give them a brief explanation of the study)?

Yes

Further details: Participants of the interviews and the participating schools will be given a summary of the results once the study has been written up. An explanation of the study will be given prior to participation.

Will your project involve deliberately misleading participants in any way?

No

Is there any realistic risk of any participants experiencing either physical or psychological distress or discomfort? If *Yes*, give details and state what you will tell them to do should they experience any problems (e.g., who they can contact for help)

No

Appendices

Further details: No risk of distress or discomfort is anticipated. Some teachers may potentially find it difficult to discuss negative aspects of school provision or their role. They will be reassured that all data remains anonymous and the school will not be directly informed of the individual's response.

Is there any realistic risk of any participants experiencing discomfort or risk to health, subsequent illness or injury that might require medical or psychological treatment as a result of the procedures?

No

Does your project involve work with animals? If *Yes* please complete Part 2: B

No

Does your project involve payment to participants that differs from the normal rates? Is there significant concern that the level of payment you offer for this study will unduly influence participants to agree to procedures they may otherwise find unacceptable? If *Yes* please complete Part 2: B and explain in point 5 of the full protocol

No

If your study involves children under 18 years of age have you made adequate provision for child protection issues in your protocol?

Yes

Further details: Data has already been collected from children as part of their routine participation in the bullying intervention which forms part of normal school provision. Children will not be directly involved in the current research. If anything is disclosed by teachers during the interviews the child protection policy of the school will be followed. It is unlikely however that any disclosures will be made.

If your study involves people with learning difficulties have you made adequate provision to manage distress? N/A

If your study involves participants covered by the Mental Capacity Act (i.e. adults over 16 years of age who lack the mental capacity to make specific decisions for themselves) do you have appropriate consent procedures in place? NB Some research involving participants who lack capacity will require review by an NHS REC. If you are unsure about whether this applies to your study, please contact the Ethics Administrator in the first instance N/A

If your study involves patients have you made adequate provision to manage distress? N/A

Does your study involve people in custody? No

If your study involves participants recruited from one of the Neurology Patient Panels or the Psychiatry Patient Panel then has the protocol been reviewed by the appropriate expert/safety panel? N/A

If your study includes physically vulnerable adults have you ensured that there will be a person trained in CPR and seizure management at hand at all times during testing?

N/A

Is there significant potential risk to investigator(s) of allegations being made against the investigator(s). (e.g., through work with vulnerable populations or context of research)?

No

Is there significant potential risk to the institution in any way? (e.g., controversy or potential for misuse of research findings.)

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No

Further details: A disclaimer will be placed on the published thesis. Disclaimer The views expressed in this study are those of the author and not necessarily those of the Bangor University.

Part 3: Risk Assessment

Is there significant potential risk to participants of adverse effects?

No

Is there significant potential risk to participants of distress?

No

Is there significant potential risk to participants for persisting or subsequent illness or injury that might require medical or psychological treatment?

No

Is there significant potential risk to investigator(s) of violence or other harm to the investigator(s) (e.g., through work with particular populations or through context of research)? No

Is there significant potential risk to other members of staff or students at the institution? (e.g., reception or other staff required to deal with violent or vulnerable populations.)

No

Does the research involve the investigator(s) working under any of the following conditions: alone; away from the School; after-hours; or on weekends?

Yes

Further details: The investigator may have to travel to schools/council buildings in Powys to compete interviews with education professionals. Supervisors will be informed of where the investigator is and when they have returned.

Does the experimental procedure involve touching participants? No

Does the research involve disabled participants or children visiting the School?

No

Declaration

Declaration of ethical compliance: This research project will be carried out in accordance with the guidelines laid down by the British Psychological Society and the procedures determined by the School of Psychology at Bangor. I understand that I am responsible for the ethical conduct of the research. I confirm that I am aware of the requirements of the Data Protection Act and the University's Data Protection Policy, and that this research will comply with them.

Yes

Declaration of risk assessment The potential risks to the investigator(s) for this research project have been fully reviewed and discussed. As an investigator, I understand that I am responsible for managing my safety and that of participants throughout this research. I will immediately report any adverse events that occur as a consequence of this research. Yes

Declaration of conflict of interest: To my knowledge, there is no conflict of interest on my part in carrying out this research. Yes

Part 2: A

The potential value of addressing this issue

Hypotheses

Participants recruitment. Please attach consent and debrief forms with supporting documents

Further details:

Research methodology

Estimated start date and duration of the study.

For studies recruiting via SONA or advertising for participants in any way please provide a summary of how participants will be informed about the study in the advertisement. N.B. This should be a brief factual description of the study and what participants will be required to do.

Part 2: B

Brief background to the study

Further details: Approximately 20% of children in Wales experience bullying; this is comparable to the reported prevalence worldwide. Bullying is defined as a repeated an intentional aggressive act which typically involves an unbalance of power (Olweus, 2001). The consequences for victims of bullying are well-documented and include an increased risk of psychiatric disorders in adulthood (Ttofi, 2011). Bullying is also a predictor of future anti-social behaviour in perpetrators. Schools in the UK are required by law to have a policy for bullying however currently a wide range of initiatives, some with little supporting evidence, are used. Research has shown that the responses of bystanders can maintain or decrease bullying behaviour (Salmivalli, Lagerspetz, Bjorkqvist et al., 1996). Based on this, an anti-bullying programme, 'KiVa', was designed within Finnish schools. KiVa aims to tackle the norms, skills, behaviours and attitudes of pupils at both a class and school level. KiVa it is constructed from two components; a universal element with a curriculum that contains specific lessons, alongside training, resources, online activities and parental support. The aim of these is to increase respect for others and learn about emotions, group processes and pressure, types of bullying and the role of the bystanders. A RCT in Finland of 234 schools reported positive results and found that after one year of implementation bullying and victimisation for 7 – 11 year olds had reduced significantly (Salmivalli, 2010). Findings also demonstrated improved academic engagement and victim empathy and a reduction in internalising problems and negative peer perceptions (Williford, Boulton, Noland et al., 2011; Karna, Voeten, Little et al, 2011; Salmivalli, Garandeau and Veenstra, 2012). KiVa was first piloted in Wales during 2012/2013 with 17 schools with pupils aged 9-11 years. Results found that significantly more pupils reported being a victim or that they had bullied others pre-intervention. These results were maintained in the following academic year (Hutchings and Clarkson, 2015). A RCT trial with 20 schools from across Wales was then carried out whilst KiVa has also been rolled out in primary schools across Powys. The original Finnish RCT found varied results according to gender and age (Karna, Voeten, Little et al, 2011), however other factors predictive of success have not yet been analysed. A systematic review of predictive factors for bullying and victimisation in general has found that several individual, school, family and community factors that increased the risk of bullying. These included gender; ethnicity; personality traits; academic performance; popularity; teacher factors and a pupil's perception of their school (Kljakovic and Hunt, 2016). There are also mixed findings regarding socio-economic background (Fink et al, 2017). Fink et al (2017) have also suggested that it is important to look at school level factors involved in bullying which are less examined. Due to these factors role in bullying, they may also impact the success of KiVa. Understanding the school factors that are predictive of KiVa outcomes is therefore important and has possible implications for future implementation. The proposed study will be a mixed methods project examining the factors involved in KiVa success.

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The hypotheses

Further details: There will be a reduction in bullying and victimisation in Powys schools as measured by the KiVa annual survey. Further research questions: Which school factors contribute to successful outcomes of KiVa? What do education professionals think contributes to successful implementation and outcomes of KiVa? How do views from professionals explain the results found the annual survey and statistical measures?

Participants: recruitment methods, age, gender, exclusion/inclusion criteria

Further details: Two different groups of participants will be recruited for each phase of the mixed methods approach (2 phases). Phase 1) Data has already been collected from over 30 state maintained primary and junior schools in Powys who have participated in the KiVa bullying program during 2014/2015, 2015/2016 and 2016/2017 academic year (approximately 2,000 pupils). Inclusion: 1. Primary schools within Wales (headteacher consent will be sought to use data) 2. Pupils in Key Stage 2 (Years 3-6, aged 7-11 years). AND Phase 2) 6 – 10 Educational Professionals who work in schools/ Education in Powys and are directly involved in KiVa implementation. Inclusion: -Have worked in a primary school/council within Powys that has implemented KiVa and had significant involvement in its running. - Have worked within school/council prior to and during the implementation of KiVa. These will be recruited across different schools within North Powys. Recruitment: Schools have already been recruited and quantitative data gathered as part of routine practice. Schools will be asked to opt out if they do not want to participate. Staff from schools in North Powys that have participated in the research to date and are involved in KiVa will be invited to consent to be contacted by the trainee to receive information regarding the interview phase of the research.

Research design

Further details: A mixed methods design will be used with a sequential explanatory approach (Creswell, 2003). In this study data collected from the annual KiVa questionnaire will be used to test whether KiVa had a positive outcome on bullying and victimization and the school and pupil factors that are predictive of success. The qualitative data will explore the teacher's perceptions of what lead to KiVa success (if found to be successful). The quantitative data is analysed first followed by the collection and analysis of qualitative data which is used to assist in the interpretation and explanation of the quantitative study. The qualitative element of the research will be important to explain quantitative results found in more depth and highlight factors that may not have been measured quantitatively.

Procedures employed

Further details: 1: Analyse the quantitative data gathered from Powys Local Education Authority (LEA) to determine what the impact of KiVa was and identify significant factors that may contribute to success. 2: Interview education professionals to understand their experiences and views on what contributes to KiVa success and why. 1) Quantitative data. Data has already been collected from 30+ schools using the measures described. This adopted a repeated measures design where pre-and post-measure data was gathered from non-matched pupils whose school had participated in KiVa. The dependant variable is the change in reported bullying and victimisation as measured by the KiVa annual survey. 2) Qualitative Data Semi-structure interviews will be used with teachers. The interviews will elicit their experiences of implementing KiVa, things about the school that may have helped or hindered KiVa and observed benefits or drawbacks from KiVa. This will follow from the statistical findings.

Measures employed

Further details: Measures KiVa Annual Survey Data This measure records whether pupils self-identify as victims, non-victims, bullies or non-bullies as has been used throughout KiVa research. Versions of the questionnaire have also been used world-wide in a variety of studies (Curry et al., 2012). This survey incorporates elements of the revised Olweus bully-victim Questionnaire (OBVQ); Olweus, 1996) which has been shown to have satisfactory psychometric properties and good validity (Kyriakides, et al., 2006). Other data already collected: School level data:

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Percentage of Free school meals (FSM) Language Government rating Rurality School size Pupil Level data: Gender School Year

Qualifications of the investigators to use the measures (Where working with children or vulnerable adults, please include information on investigators' CRB disclosures here.) Further details: No measures are actively administered for this project. Quantitative data has already been collected. Investigators have DBS checks as part of their employment although the study does not include active recruitment or participation of children or vulnerable adults.

Venue for investigation

Further details: The data will be produced on Powys county council sites (predominately schools).

Estimated start date and duration of the study (N.B. If you know that the research is likely to continue for more than three years, please indicate this here).

Further details: 01/09/2017 to 30/05/2018 Active participation approximately 1/10/2017-30/03/18

Data analysis

Further details: A mixed effects model will be used to determine predictors of success of KiVa and the changes in bullying/victimisation. This is appropriate due to the repeated measures design; data is nested (pupils are nested within schools) and as pupils not independent of each other. The data would not fulfil independence of observation as there would be an expected correlation between outcomes for children from the same school. This will be used to determine the predictive value of the independent variables (Free School Meal % (FSM); Rural vs Urban; school year; gender; size of school; Estyn report) the dependant variables (bullying and victimisation levels). Interview data will be analyzed using thematic analysis (Braun and Clarke, 2006) to identify overarching themes relating to what factors contribute to KiVa success. This will be used to explain findings from the large data set.

Potential offence/distress to participants

Further details: No distress to participants is expected. If teachers participating in the interviews have had a negative experience relating to bullying or KiVa they may feel discomfort or reluctance to discuss issues. Participants will be reassured that their data will be anonymous.

Procedures to ensure confidentiality and data protection

Further details: Identifiable information (teacher name, school name and location) will be changed into a unique research ID or name for analysis purposes. Data will be stored separately from the research on an encrypted USB stick provided by the North Wales Clinical Psychology Programme and information regarding participating school's will not be removed from Bangor University or NHS locations. Schools are assigned a number used to identify participant information. School information will be kept separately from the data base and will be stored on an encrypted document on the researcher's personal university drive. Pupil data has already been anonymised at point of collection. The researcher will not be aware of pupil names at any stage. Any paper documents will be transported via locked briefcase and stored in a locked cabinet. All data not considered to be essential to the research purpose regarding schools will be anonymised (e.g Name; location; exact number on roll). Some unique school characteristics will be required for analysis (for example rurality and free school meal provision). The way results are presented will ensure that individual schools are not identifiable (e.g. by grouping data and schools). Data for analysis will be stored on an encrypted USB stick and an encrypted document of the researcher's personal university account. Qualitative data will be collected on a Dictaphone provide by the DClinPsy training programme to the trainee transported in a locked case. Media files will be transferred to the Trainee's university and encrypted memory stick for back-up and deleted off the device immediately. Transcripts of the recordings will also be stored securely on the trainee's university account. In accordance with Bangor University procedures, anonymised data will be stored for five years after thesis submission to be available for scrutiny. Data will not be used for any other research purposes within this time without further consent from participants. The research supervisor will have access to the data and ensure it is adequately stored for the five years and destroyed after this time.

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****How consent is to be obtained (see BPS Guidelines and ensure consent forms are expressed bilingually where appropriate. The University has its own Welsh translations facilities on extension 2036)***

Further details: All information sheets and consent forms will be made available in English and Welsh.

Information for participants (provide actual consent forms and information sheets) including if appropriate, the summary of the study that will appear on SONA to inform participants about the study. N.B. This should be a brief factual description of the study and what participants will be required to do.

Further details: You are invited to take part in a research study examining the factors that contribute to the successful implementation of KiVa. As part of the project we will be interviewing professionals working within education in Powys, alongside analysis of data collected from schools as part of the annual KiVa survey. We are inviting professional working within primary education in Powys to participate in these interviews. What does the study involve? The study will require you to participate in one to one interviews with the researcher. These interviews will be audio-taped and then transcribed. These interviews will focus on factors relating to the school, pupils and KiVa which may contribute to success or difficulties when implementing the programme. Interviews will be one-off and semi-structured and last approximately 1 hour. The researcher will visit you at school at a time convenient for yourself. Your interview will form part of a wider project.

Approval of relevant professionals (e.g., GPs, Consultants, Teachers, parents etc.)

Payment to: participants, investigators, departments/institutions Further details: n/a

Equipment required and its availability

Further details: Dictaphone already provided by North Wales Clinical Psychology Programme.

If students will be engaged a project involving children, vulnerable adults, one of the neurology patient panels or the psychiatric patient panel, specify on a separate sheet the arrangements for training and supervision of students. (See guidance notes)

Further details: Not applicable -The student will not be engaged in a project actively involving the above participants.

If students will be engaged in a project involving use of MRI or TMS, specify on a separate sheet the arrangements for training and supervision of students. (See guidance notes) Further details: n/a

What arrangements are you making to give feedback to participants? The responsibility is yours to provide it, not participants' to request it.

Further details: All individual participants and participating schools will receive written feedback via their referred contact details following write-up.

Finally, check your proposal conforms to BPS Guidelines on Ethical Standards in research and sign the declaration. If you have any doubts about this, please outline them.

Part 4: Research Insurance

Is the research to be conducted in the UK? Yes

Is the research based solely upon the following methodologies? Psychological activity, Questionnaires, Measurements of physiological processes, Venepuncture, Collections of body secretions by non-invasive methods, The administration by mouth of foods or nutrients or variation of diet other than the administration of drugs or other food supplements No

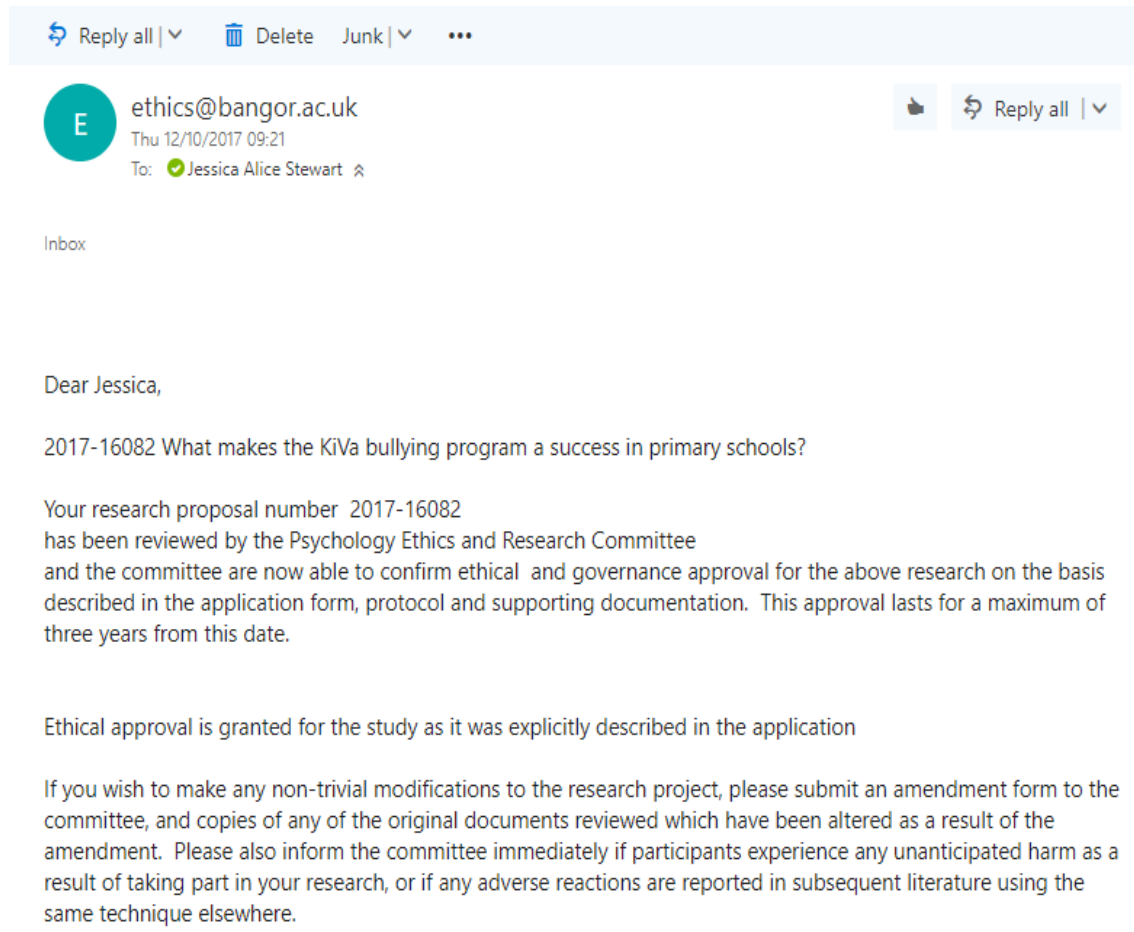
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Research that is based solely upon certain typical methods or paradigms is less problematic from an insurance and risk perspective. Is your research based solely upon one or more of these methodologies? Standard behavioural methods such as questionnaires or interviews, computer-based reaction time measures, standardised tests, eye-tracking, picture-pointing, etc; Measurements of physiological processes such as EEG, MEG, MRI, EMG, heart-rate, GSR (not TMS or tCS as they involve more than simple 'measurement'); Collections of body secretions by non-invasive methods, venepuncture (taking of a blood sample), or asking participants to consume foods and/or nutrients (not including the use of drugs or other food supplements or caffeine).

No, please specify

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Appendix 2: Bangor University Ethical Approval



Appendix 3: Participant consent form (English)

COLEG IECHYD A GWYDDORAU YMDDYGIAD
COLLEGE OF HEALTH & BEHAVIOURAL SCIENCES

YSGOL SEICOLEG
SCHOOL OF PSYCHOLOGY



NWCPP-RSCGC

**RHAGLEN SEICOLEG CLINIGOL GOGLEDD CYMRU
NORTH WALES CLINICAL PSYCHOLOGY PROGRAMME**

Informed Consent Form for professionals participating in interviews.
KiVa Programme

Title of Research:

Investigating which factors make the KiVa bullying programme a success in primary schools.

Names and Positions of Investigators:

Jessica Stewart, DCLinPsy student at North Wales Clinical Psychology Programme, School of Psychology, Bangor University.

Dr Sue Evans, Supervisor, Consultant Child Psychologist, Powys Teaching Health Board.

Professor Judy Hutchings, Supervisor, Professor, Centre for Evidence Based Early Intervention, Bangor University.

Dr Christopher Saville, Supervisor, Lecturer and Research Tutor, North Wales Clinical Psychology Programme, Bangor University.

Please read the following information very carefully and if you agree with everything stated below, initial the boxes and sign at the end of the page.

1.	I confirm that I have read and understood the information sheet for the above study. I have had the opportunity to consider the information, ask questions, and have these answered satisfactorily.	
2.	I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.	
3.	I understand that all information I give will be treated with the utmost confidentiality. If any concerns relating to child protection are raised during interviews this will be passed on to the named child protection officer at the school.	
4.	I consent to the interviews being recorded, and understand that direct quotes will be made anonymous, and if published, will not be identifiable as mine.	
5.	I agree to take part in this study.	

This is to certify that I,, hereby agree to participate in this research project within the School of Psychology at Bangor University.

Participant Signature:

Date:

Researcher Signature:

Date:

Interview Consent Form

V1

1/09/2017

Appendix 4: Participant consent form (Welsh)

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RHAGLEN SEICOLEG GLINIGOL GOGLEDD CYMRU
NORTH WALES CLINICAL PSYCHOLOGY PROGRAMME



Ffurflen Gydsvnio i weithwyr proffesiynol sy'n cymrvd rhan mewn cyfweiliadau.

Rhaglen KiVa

Teitl yr Ymchwili:

Ymchwilio i'r ffactorau sy'n gwneud rhaglen bwlio KiVa yn llwyddiant mewn ysgolion cynradd.

Enwau a Swyddi'r Ymchwilwyr:

Jessica Stewart, myfyrwraig DClinPsy ar Raglen Seicoleg Glinigol Gogledd Cymru, Ysgol Seicoleg, Prifysgol Bangor.

Dr. Sue Evans, Goruchwyliwr, Seicolegydd Plant Ymgynghorol, Bwrdd Iechyd Addysgu Powys.

Yr Athro Judy Hutchings, Goruchwyliwr, Athro, Canolfan Ymyrraeth Gynnar ar Sail Tystiolaeth, Prifysgol Bangor.

Dr Christopher Saville, Goruchwyliwr, Darlithydd a Thiwtor Ymchwil, Rhaglen Seicoleg Glinigol Gogledd Cymru, Prifysgol Bangor.

Darllenwch yr wybodaeth ganlynol yn ofalus iawn ac os ydych yn cytuno â phopeth a nodir isod, rhowch lythrennau blaen eich enw yn y blychau a llofnodwch ar waelod y dudalen.

1.	Rwy'n cadarnhau fy mod wedi darllen a deall y daflen wybodaeth am yr astudiaeth uchod. Rwyf wedi cael y cyfle i ystyried y wybodaeth, gofyn cwestiynau ac wedi cael atebion boddhaol i'r cwestiynau hynny.	
2.	Rwy'n deall fy mod yn cymryd rhan yn wirfoddol ac y gallaf dynnu'n ôl unrhyw bryd, heb roi rheswm.	

Interview Consent Form

V1

1/09/2017

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3.	Deallaf y bydd yr holl wybodaeth a roddaf yn cael ei thrin yn gwbl gyfrinachol. Os codir unrhyw bryderon ynghylch amddiffyn plant yn ystod cyfweiliadau caiff y wybodaeth hon ei rhoi i'r swyddog amddiffyn plant a enwyd yn yr ysgol.	
4.	Rwy'n cydsynio i'r cyfweiliadau gael eu recordio ac rwy'n deall y bydd y manylion personol yn cael eu tynnu o unrhyw ddyfyniadau uniongyrchol, ac os cyhoeddir hwy, ni fydd modd fy adnabod ohonynt.	
5.	Cytunaf i gymryd rhan yn yr astudiaeth hon.	

Mae hyn i dystio fy mod i,..... trwy hyn yn cytuno
i gymryd rhan yn y project ymchwil hwn yn yr Ysgol Seicoleg ym Mhrifysgol Bangor.

Llofnod y Cyfrannwr:

Dyddiad:

Llofnod yr ymchwilydd:

Dyddiad:

Interview Consent Form

V1

1/09/2017

Appendix 5: Participant information form (English)

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**RHAGLEN SEICOLEG CLINIGOL GOGLEDD CYMRU
NORTH WALES CLINICAL PSYCHOLOGY PROGRAMME**

Please read this information carefully before deciding to take part in this research. If you are happy to participate you will be asked to sign a consent form.

KiVa Programme

Title of Study

Investigating which factors make the KiVa bullying programme a success in primary schools.

Information about the study

You are invited to take part in a research study examining the factors that contribute to the successful implementation of the KiVa programme. As part of the project we will be interviewing professionals working within education in Powys, alongside an analysis of data collected from schools as part of the annual KiVa survey.

Why have I been asked to take part?

You have been asked to take part as a professional working within primary education in Powys who has been directly involved with KiVa. We want to better understand the perspectives of those who have been involved in implementing the programme and their views regarding factors that may contribute to its success.

What does the study involve?

The study will require you to participate in a one to one interview with the researcher. These interviews will be audio-taped and then transcribed. Transcriptions will only be identifiable by pseudonym and audio-recordings will be destroyed. The interview will focus on factors relating to the school, pupils and KiVa which may contribute to success or difficulty when implementing the programme and factors which may affect the overall outcome. Interviews will be one-off and last approximately 1 hour. The researcher can visit you at your place of work at a time convenient for yourself or interviews can be conducted via SKYPE as negotiated between yourself and the researcher. Your interview will form part of wider project.

Are there any benefits or risks?

We do not envisage that there will be any risks to you taking part in this research. Your participation may help with the running of KiVa in schools in the future.

What will happen to my data?

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All data will be anonymised, and you or your school will not be identifiable in any report, thesis or publication which arises from this study. Your individual responses will not affect the running of KiVa in your school. Your interview will be analysed alongside transcriptions of interviews collected from other schools.

The data from this study will be stored securely in line with the data protection act for five years and will not be used in any further research project without your prior consent. If you choose to withdraw from the study and your data is identifiable to the research team, then you have the right to request that your data is not used.

What if I don't want to take part?

It is up to you to decide whether or not you would like to participate in this study. Deciding not to take part will not impact any other aspect of your employment or your school's participation in KiVa. Your participation is entirely voluntary.

What will happen to the results of the research project?

The results of the project will form part of a thesis submitted as part of the Doctorate in Clinical Psychology and Bangor University. Results may be presented at conferences and written up in journals. If direct quotes are used they will be made anonymous and not identifiable as yours. Research results will be feedback to you and participating schools when the project is complete.

Ethical review of the study

The project has received ethical approval from the Psychology Research Ethics Committee of Bangor University.

Who do I contact about the study?

If you require any more information regarding the research that you wish to discuss you can contact:

Jessica Stewart
Trainee Clinical Psychologist
NWCPP
Bangor University
Brigantia Building
Bangor,
LL57 2AS

Psp6f1@bangor.ac.uk

Who do I contact with any concerns about this study?

If you have any concerns or complaints about this study, or the conduct of individuals conducting this study, then please contact School Manager, School of Psychology, Bangor University, Bangor, Gwynedd LL57 2AS or e-mail h.francis@bangor.ac.uk.

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Appendix 6: Participant information form (Welsh)

COLEG IECHYD A GWYDDORAU YMDDYGIAD
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RHAGLEN SEICOLEG GLINIGOL GOGLEDD CYMRU
NORTH WALES CLINICAL PSYCHOLOGY PROGRAMME



Os gwelwch yn dda, darllenwch y wybodaeth hon yn ofalus cyn penderfynu a ydych am gymryd rhan yn yr ymchwil. Os ydych yn barod i gymryd rhan, gofynnir i chi lofnodi ffurflen gydsynio.

Rhaglen KiVa

Teitl yr Astudiaeth

Ymchwilio i'r ffactorau sy'n gwneud rhaglen bwlio KiVa yn llwyddiant mewn ysgolion cynradd.

Gwybodaeth am yr astudiaeth

Rydym yn eich gwahodd i gymryd rhan mewn astudiaeth ymchwil sy'n archwilio'r ffactorau sy'n cyfrannu at weithredu rhaglen KiVa yn llwyddiannus. Fel rhan o'r project byddwn yn cyfweld gweithwyr proffesiynol ym maes addysg ym Mhowys, a hefyd yn dadansoddi data a gasglwyd mewn ysgolion fel rhan o arolwg blynyddol KiVa.

Pam y gofynnwyd imi gymryd rhan?

Gofynnwyd i chi gymryd rhan yn yr astudiaeth hon am eich bod yn weithiwr proffesiynol sy'n gweithio ym maes addysg gynradd ym Mhowys ac wedi cymryd rhan yn uniongyrchol yn KiVa. Rydym eisiau deall yn well safbwyntiau'r rhai hynny sydd wedi cyfrannu at weithredu'r rhaglen a'u barn ar y ffactorau a all fod yn cyfrannu at ei llwyddiant.

Beth fydd yn digwydd yn yr astudiaeth?

Yn yr astudiaeth bydd gofyn i chi gael cyfweiliad un i un gyda'r ymchwilydd. Caiff y cyfweiliadau hyn eu recordio ar dâp sain ac yna eu trawsgrifio. Dim ond ffugenw fydd ar bob trawsgrifiad a chaiff y recordiadau sain eu dinistrio. Bydd y cyfweiliad yn canolbwyntio ar ffactorau'n ymwneud â'r ysgol, y disgyblion a KiVa a all gyfrannu at lwyddiant neu anhawster wrth weithredu'r rhaglen a ffactorau a

1

Interview Information sheet

VI

1/09/2017

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all effeithio ar y canlyniad cyffredinol. Hwn fydd yr unig gyfweiliad a bydd yn para tua awr. Gall yr ymchwilydd ymweld â chi yn eich man gwaith ar adeg sy'n gyfleus i chi neu gellir cynnal cyfweiliadau trwy Skype yn ôl trefniant rhyngoch chi a'r ymchwilydd. Bydd eich cyfweiliad yn rhan o broiect ehangach.

Oes yna unrhyw fanteision neu risgiau?

Nid ydym yn rhagweld y bydd unrhyw risg i chi wrth i chi gymryd rhan yn yr ymchwil hon. Os ydych yn cymryd rhan gallai hynny helpu wrth redeg rhaglen KiVa mewn ysgolion yn y dyfodol.

Beth fydd yn digwydd i'm data?

Tynnir y manylion personol o'r holl ddata ac ni fydd modd adnabod yr ysgol mewn unrhyw adroddiad, thesis na chyhoeddiad, sy'n deillio o'r astudiaeth hon. Ni fydd eich atebion unigol yn effeithio ar redeg rhaglen KiVa yn eich ysgol. Caiff eich cyfweiliad ei ddadansoddi ochr yn ochr â thrawsgrifiadau o gyfweiliadau a gasglwyd o ysgolion eraill.

Cedwir y data o'r astudiaeth hon yn ddiogel am bum mlynedd yn unol â'r ddeddf diogelu data ac ni chaiff ei ddefnyddio mewn unrhyw broiect ymchwil arall heb eich caniatâd blaenorol chi. Os byddwch yn dewis tynnu allan o'r astudiaeth, a bod modd i'r tîm ymchwil eich adnabod o'ch data, mae gennych hawl i ofyn iddynt beidio â defnyddio eich data.

Beth os nad wyf eisiau cymryd rhan?

Chi sydd i benderfynu a ydych eisiau cymryd rhan yn yr astudiaeth hon ai peidio. Ni fydd penderfynu peidio â chymryd rhan yn effeithio ar unrhyw agwedd ar eich cyflogaeth neu ymwneud eich ysgol â rhaglen KiVa. Byddwch yn cymryd rhan o'ch gwirfodd.

Beth fydd yn digwydd i ganlyniadau'r project ymchwil?

Bydd canlyniadau'r project yn rhan o thesis a gyflwynir ar gyfer Doethuriaeth mewn Seicoleg Glinigol ym Mhrifysgol Bangor. Gellir cyflwyno'r canlyniadau mewn cynadleddau ac mewn cyfnodolion. Os defnyddir dyfyniadau uniongyrchol tynnir y manylion personol ac ni fydd modd eich adnabod o'r dyfyniadau. Rhoddir adborth ar ganlyniadau'r ymchwil i chi ac i'r ysgolion sy'n cymryd rhan pan fydd y project wedi ei gwblhau.

Adolygiad moesegol o'r astudiaeth

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Mae'r project hwn wedi cael cymeradwyaeth foesebol gan Bwyllgor Moeseg Ymchwil Seicoleg Prifysgol Bangor.

Â phwy y dylwn gysylltu ynglŷn â'r astudiaeth?

Os hoffech ragor o wybodaeth am yr ymchwil a'ch bod chi am ei thrafod mae croeso i chi gysylltu â:

Jessica Stewart

Seicolegydd Clinigol dan Hyfforddiant

RHAGLEN SEICOLEG GLINIGOL GOGLEDD CYMRU

Prifysgol Bangor

Adeilad Brigantia

Bangor,

LL57 2AS

Psp6f1@bangor.ac.uk

Â phwy ddylwn i gysylltu os oes gennyf unrhyw bryderon ynglŷn â'r astudiaeth hon?

Os oes gennych unrhyw bryderon neu gwynion ynglŷn â'r astudiaeth hon, neu ynglŷn ag ymddygiad yr unigolion sy'n ei chynnal, cysylltwch â Rheolwr yr Ysgol, Ysgol Seicoleg, Prifysgol Bangor, Bangor, Gwynedd LL57 2AS, neu anfonwch e-bost at h.francis@bangor.ac.uk.

Appendix 7: School Information Sheet (English)

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NORTH WALES CLINICAL PSYCHOLOGY PROGRAMME



Please read this information carefully before deciding to take part in this research. If you are happy to participate you need take no further action. If you do not wish to take part please complete the attached form and return to:

**Jessica Stewart, Trainee Clinical Psychologist, NWCPP, Bangor University, Brigantia Building, Bangor, LL57 2AS
Or
psp6f1@bangor.ac.uk**

KiVa Programme

Title of Study:

What makes the KiVa bullying program a success in primary schools?

Information about the study

Your school is invited to take part in a research study examining the factors that contribute to the successful implementation of KiVa. As part of the project we will be analysing data collected from the annual pupil KiVa survey alongside interviewing professionals who work within education in Powys.

Why has the school been asked to take part?

You have been asked to take part as a head-teacher of a primary school in Powys who runs the KiVa programme and has completed the annual KiVa survey. We want to analyse the data collected from this survey to determine how effective KiVa has been and to better understand the factors that contribute to its' success.

What does the study involve?

If you consent, the data already collected from the annual KiVa survey, currently held by KiVa UK will be included within the data analysis. This analysis will include approximately 30 other schools. No further action will be required from you and pupils will not be required to fill in any additional surveys or measures. Data from 2014/2015, 2015/2016 and 2016/2017 academic years will be included if available. The research project is separate from any support and training regarding KiVa.

Are there any benefits or risks?

We do not envisage that there will be any risks to you taking part in this research. Your participation may help with the running of KiVa in schools in the future.

What will happen to the data?

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All data collected from pupils has already been anonymised. School information will also be anonymised and the school will not be identifiable in any report, thesis or publication, which arises from this study. The information gathered will not be directly linked to your school and will not affect the running of KiVa in your school.

The data from this study will be stored securely for five years and will not be used in any further research project without your prior consent. If your schools chooses to withdraw from the study and the data is identifiable to the research team, then you have the right to request that the data is not used.

What if I don't want the school to take part?

It is up to you to decide whether or not you would like your school's data to be included in this study. Deciding not to take part will not impact any other aspect of your school's participation in KiVa.

What will happen to the results of the research project?

The results of this project will for part of a thesis for the Doctorate in Clinical Psychology in Bangor University. Results may be presented at conferences and written up in journals. Research results will be feedback to you and other participating schools when the project is complete.

Ethical review of the study

The project has received ethical approval from the Psychology Research Ethics Committee of Bangor University.

Who do I contact about the study?

If you require any more information regarding the research that you wish to discuss you can contact:

Jessica Stewart
Trainee Clinical Psychologist
NWCPP
Bangor University
Brigantia Building
Bangor,
LL57 2AS

psp6f1@bangor.ac.uk

Who do I contact with any concerns about this study?

If you have any concerns or complaints about this study, or the conduct of individuals conducting this study, then please contact School Manager, School of Psychology, Bangor University, Bangor, Gwynedd LL57 2AS or e-mail h.francis@bangor.ac.uk.

Appendix 8: School Information Sheet (Welsh)

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NWCPP-RSCGC

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NORTH WALES CLINICAL PSYCHOLOGY PROGRAMME



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BANGOR
UNIVERSITY

Darllenwch y wybodaeth hon yn ofalus cyn penderfynu a ydych am gymryd rhan yn yr ymchwil. Os ydych yn fodlon cymryd rhan does dim angen i chi gymryd unrhyw gamau pellach. Os nad ydych eisiau cymryd rhan dylech lenwi'r ffurflen sydd ynghlwm a'i dychwelyd at: Jessica Stewart, Seicolegydd Clinigol dan Hyfforddiant, Rhaglen Seicoleg Glinigol Gogledd Cymru, Prifysgol Bangor, Adeilad Brigantia, Bangor, LL57 2AS

Rhaglen KiVa

Teitl yr Astudiaeth:

Beth sy'n gwneud rhaglen bwllo KiVa yn llwyddiant mewn ysgolion cynradd?

Gwybodaeth am yr astudiaeth

Gwahoddir eich ysgol i gymryd rhan mewn astudiaeth ymchwil yn archwilio i'r ffactorau sy'n cyfrannu at weithredu rhaglen KiVa yn llwyddiannus. Fel rhan o'r project byddwn yn dadansoddi data a gasglwyd yn arolwg disgyblion blynyddol KiVa ynghyd â chyfweld â gweithwyr proffesiynol sy'n gweithio yn y maes addysg ym Mhowys.

Pam y gofynnwyd i'r ysgol gymryd rhan?

Gofynnwyd i chi gymryd rhan fel pennaeth ysgol gynradd ym Mhowys lle cynhelir y rhaglen KiVa ac sydd wedi cwblhau'r arolwg KiVa blynyddol. Rydym eisiau dadansoddi'r data a gasglwyd yn yr arolwg hwn i benderfynu pa mor effeithio oedd KiVa ac i ddeall yn well y ffactorau sy'n cyfrannu at ei lwyddiant.

Beth fydd yn digwydd yn yr astudiaeth?

Os byddwch yn cydsynio, caiff y data sydd wedi ei gasglu eisoes yn yr arolwg KiVa blynyddol, sydd ar hyn o bryd ym meddiant KiVa UK, ei gynnwys o fewn y gwaith dadansoddi data. Bydd y gwaith dadansoddi hwn yn cynnwys oddeutu 30 o ysgolion eraill. Ni fydd angen i chi wneud unrhyw beth arall ac ni fydd angen i ddisgyblion lenwi unrhyw arolygon na mesurau ychwanegol. Caiff data o flynyddoedd academaidd 2014/2015, 2015/2016 a 2016/2017 eu cynnwys os ydynt ar gael. Mae'r project ymchwil yn sefyll ar wahân i unrhyw gefnogaeth a hyfforddiant mewn perthynas â KiVa.

Oes yna unrhyw fanteision neu risgiau?

Nid ydym o'r farn bod unrhyw risgiau os ydych yn cymryd rhan yn yr ymchwil hon. Os ydych yn cymryd rhan gallai hynny helpu wrth gynnal KiVa mewn ysgolion yn y dyfodol.

Beth fydd yn digwydd i'r data?

Mae pob data sydd eisoes wedi ei gasglu gan ddisgyblion wedi cael ei droi yn ddata di-enw. Bydd gwybodaeth am yr ysgol hefyd yn ddi-enw ac ni fydd modd adnabod yr ysgol yn unrhyw adroddiad, thesis na chyhoeddiad, sy'n deillio o'r astudiaeth hon. Ni fydd yr wybodaeth a gesglir yn cysylltu'n

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uniongyrchol â'ch ysgol chi ac ni fydd yn effeithio ar gynnal KiVa yn eich ysgol.

Cedwir y data o'r astudiaeth hon yn ddiogel am bum mlynedd ac ni chaiff ei ddefnyddio yn unrhyw ymchwil arall heb eich caniatâd chi. Os yw eich ysgol yn dewis tynnu'n ôl o'r astudiaeth a bod y data gan y tim ymchwil, yna mae gennych hawl i ofyn i'r data beidio â chael ei ddefnyddio.

Beth sy'n digwydd os nad ydych chi eisiau i'r ysgol gymryd rhan?

Chi sydd i benderfynu a hoffech i ddata eich ysgol gael ei gynnwys yn yr astudiaeth hon ai peidio. Ni fydd penderfynu peidio â chymryd rhan yn effeithio ar unrhyw elfen o ymwneud eich ysgol â rhaglen KiVa.

Beth fydd yn digwydd i ganlyniadau'r project ymchwil?

Bydd canlyniadau'r project hwn yn rhan o thesis ar gyfer Doethuriaeth mewn Seicoleg Glinigol ym Mhrifysgol Bangor. Gellir cyflwyno'r canlyniadau mewn cynadleddau ac mewn cyfnodolion. Cewch chi ac ysgolion eraill sy'n cymryd rhan adborth ynglŷn â chanlyniadau'r ymchwil pan orffennir y project.

Adolygu'r astudiaeth yn foesebol

Mae'r project hwn wedi cael cymeradwyaeth foesebol gan Bwyllgor Moeleg Ymchwil Seicoleg Prifysgol Bangor.

Â phwy y dylwn gysylltu ynglŷn â'r astudiaeth?

Os hoffech ragor o wybodaeth am yr ymchwil mae croeso i chi gysylltu â:

Jessica Stewart
Seicolegydd Clinigol dan Hyfforddiant
RHAGLEN SEICOLEG GLINIGOL GOGLEDD CYMRU
Prifysgol Bangor
Adeilad Brigantia
Bangor,
LL57 2AS

psp6f1@bangor.ac.uk

Â phwy ddyln i gysylltu os oes gennych unrhyw bryderon ynglŷn â'r astudiaeth hon?

Os oes gennych unrhyw bryderon neu gwynion ynglŷn â'r astudiaeth hon, neu ynglŷn ag ymddygiad unigolion sy'n ei chynnal, cysylltwch â Rheolwr yr Ysgol, Ysgol Seicoleg, Prifysgol Bangor, Bangor, Gwynedd LL57 2AS, neu anfonwch e-bost at h.francis@bangor.ac.uk.

Appendix 9: School consent form (English)

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NORTH WALES CLINICAL PSYCHOLOGY PROGRAMME**



Opt out Form for Head teachers of Schools participating in data analysis.

KiVa Programme

Title of Research:

Investigating which factors make the KiVa bullying programme a success in Primary Schools.

Names and Positions of Investigators:

Jessica Stewart, DCl Psy student at North Wales Clinical Psychology Programme, School of Psychology, Bangor University.
Dr Sue Evans, Supervisor, Consultant Child Psychologist, Powys Teaching Health Board.
Professor Judy Hutchings, Supervisor, Professor, Centre for Evidence Based Early Intervention, Bangor University.
Dr Christopher Saville, Supervisor, Lecturer and Research Tutor, North Wales Clinical Psychology Programme, Bangor University.

This is to certify that I,, want the school,

..... **to opt out** of participation of the
named research project within the School of Psychology at Bangor University.

Head teacher Signature:

Date:

Return to: Jessica Stewart, Trainee Clinical Psychologist, NWCPP, Bangor University, Brigantia Building, Bangor, LL57 2AS

Or

psp6f1@bangor.ac.uk

Appendix 10: School Consent form (Welsh)

COLEG Iechyd a Gwedduron Tmduddiaid
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Ffurflen eithrio ar gyfer Penaethiaid Ysgolion sy'n cymryd rhan mewn dadansoddi data.

Rhaglen KiVa

Teitl yr Ymchwili:

Ymchwilio i ba ffactorau sy'n golygu bod y rhaglen bwlio KiVa yn llwyddiant mewn Ysgolion Cynradd.

Enwau a Swyddi'r Ymchwilyr:

Jessica Stewart, myfyrwraig DClinPsy ar Raglen Seicoleg Glinigol Gogledd Cymru, Ysgol Seicoleg, Prifysgol Bangor.
Dr Sue Evans, Goruchwyliwr, Seicolegydd Plant Ymgynghorol, Bwrdd Iechyd Addysgu Powys.
Yr Athro Judy Hutchings, Goruchwyliwr, Athro, Canolfan Y myrraeth Gynnar ar Sail Tystiolaeth, Prifysgol Bangor.
Dr Christopher Saville, Goruchwyliwr, Darlithydd a Thiwtor Ymchwili, Rhaglen Seicoleg Glinigol Gogledd Cymru, Prifysgol Bangor.

Hyn sydd i dystio fy mod i....., eisiau i ysgol
..... **eithrio** rhag cymryd
rhan yn y project ymchwili a enwir o fewn Ysgol Seicoleg Prifysgol Bangor.

Llofnod y Pennaeth:

Dyddiad:

Jessica Stewart, Trainee Clinical Psychologist, NWCPP, Bangor University, Brigantia Building,
Bangor, LL57 2AS
psp6f1@bangor.ac.uk

Appendix 11: KiVa Annual Survey (Not included).

The KiVa Annual Survey is adapted from the Olweus Bully Questionnaire and is copyrighted and not available in the public domain. The first author did not have access to this survey during the research as survey data had already been collected therefore the survey has not been included here.

Appendix 12: Effective Public Health Practise Project: Quality Assessment Tool for

QUALITY ASSESSMENT TOOL FOR QUANTITATIVE STUDIES



COMPONENT RATINGS

A) SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?

- 1 Very likely
- 2 Somewhat likely
- 3 Not likely
- 4 Can't tell

(Q2) What percentage of selected individuals agreed to participate?

- 1 80 - 100% agreement
- 2 60 - 79% agreement
- 3 less than 60% agreement
- 4 Not applicable
- 5 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

B) STUDY DESIGN

Indicate the study design

- 1 Randomized controlled trial
- 2 Controlled clinical trial
- 3 Cohort analytic (two group pre + post)
- 4 Case-control
- 5 Cohort (one group pre + post (before and after))
- 6 Interrupted time series
- 7 Other specify _____
- 8 Can't tell

Was the study described as randomized? If NO, go to Component C.

No Yes

If Yes, was the method of randomization described? (See dictionary)

No Yes

If Yes, was the method appropriate? (See dictionary)

No Yes

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

Appendices

Quantitative Studies

C) CONFOUNDERS

(Q1) Were there important differences between groups prior to the intervention?

- 1 Yes
- 2 No
- 3 Can't tell

The following are examples of confounders:

- 1 Race
- 2 Sex
- 3 Marital status/family
- 4 Age
- 5 SES (income or class)
- 6 Education
- 7 Health status
- 8 Pre-intervention score on outcome measure

(Q2) If yes, indicate the percentage of relevant confounders that were controlled (either in the design (e.g. stratification, matching) or analysis)?

- 1 80 – 100% (most)
- 2 60 – 79% (some)
- 3 Less than 60% (few or none)
- 4 Can't Tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

D) BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the intervention or exposure status of participants?

- 1 Yes
- 2 No
- 3 Can't tell

(Q2) Were the study participants aware of the research question?

- 1 Yes
- 2 No
- 3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

E) DATA COLLECTION METHODS

(Q1) Were data collection tools shown to be valid?

- 1 Yes
- 2 No
- 3 Can't tell

(Q2) Were data collection tools shown to be reliable?

- 1 Yes
- 2 No
- 3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

F) WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?

- 1 Yes
- 2 No
- 3 Can't tell
- 4 Not Applicable (i.e. one time surveys or interviews)

(Q2) Indicate the percentage of participants completing the study. (If the percentage differs by groups, record the lowest).

- 1 80 -100%
- 2 60 - 79%
- 3 less than 60%
- 4 Can't tell
- 5 Not Applicable (i.e. Retrospective case-control)

RATE THIS SECTION	STRONG	MODERATE	WEAK	
See dictionary	1	2	3	Not Applicable

G) INTERVENTION INTEGRITY

(Q1) What percentage of participants received the allocated intervention or exposure of interest?

- 1 80 -100%
- 2 60 - 79%
- 3 less than 60%
- 4 Can't tell

(Q2) Was the consistency of the intervention measured?

- 1 Yes
- 2 No
- 3 Can't tell

(Q3) Is it likely that subjects received an unintended intervention (contamination or co-intervention) that may influence the results?

- 4 Yes
- 5 No
- 6 Can't tell

H) ANALYSES

(Q1) Indicate the unit of allocation (circle one)

community organization/institution practice/office individual

(Q2) Indicate the unit of analysis (circle one)

community organization/institution practice/office individual

(Q3) Are the statistical methods appropriate for the study design?

- 1 Yes
- 2 No
- 3 Can't tell

(Q4) Is the analysis performed by intervention allocation status (i.e. intention to treat) rather than the actual intervention received?

- 1 Yes
- 2 No
- 3 Can't tell

Appendix 13: Quality Ratings breakdown for individual studies using the EPHP.

Study	Selection Bias	Study Design	Confounders	Blinding	Data Collection Methods	Withdrawals	Overall Rating
Baranowski & Hetherington (2001). Untitled.	Weak	Strong	Weak	Weak	Weak	Weak	Weak
Bird et al., (2013). “Happy Being Me.”	Moderate	Strong	Strong	Weak	Weak	Moderate	Weak
Dalle Grave et al., (2001). Untitled.	Moderate	Strong	Weak	Weak	Weak	Strong	Weak
Damiano et al., (2018). “Achieving Body Confidence for Young Children.”	Weak	Moderate	n/a	Weak	Strong	Strong	Weak
Dowdy et al., (2013). “Empower U.”	Strong	Moderate	n/a	Weak	Strong	Strong	Moderate
Dohnt & Tiggemann (2008). “Shapesville.”	Moderate	Strong	Weak	Moderate	Strong	Weak	Weak
Escoto Ponce de Leon (2008). Untitled	Moderate	Strong	Strong	Weak	Strong	Strong	Moderate
Ghaderi et al., (2005). “Everybody’s different.”	Moderate	Strong	Strong	Moderate	Strong	Strong	Strong
Halliwell et al., (2016). “Body Image in the Primary School.”	Moderate	Strong	Strong	Weak	Strong	Weak	Weak
Hinz, (2017). My “Body and I.”	Moderate	Strong	Strong	Weak	Moderate	Strong	Moderate
Kater et al., (2002). “Healthy Body	Weak	Weak	Weak	Weak	Moderate	Weak	Weak

Appendices

Image.”							
McCabe et al., (2017). “Healthy Me.”	Moderate	Strong	Strong	Weak	Strong	Moderate	Moderate
McVey & Davis. (2002). “Every Body is somebody.”	Moderate	Strong	Strong	Weak	Strong	Strong	Moderate
McVey et al., (2007). “Healthy Schools- Healthy Kids.”	Weak	Strong	Strong	Weak	Strong	Moderate	Weak
McVey et al., (2004). “Everybody is somebody.”	Moderate	Strong	Strong	Moderate	Strong	Weak	Moderate
Niide et al., (2013). Healthy Body Image curriculum.”	Moderate	Moderate	Strong	Weak	Strong	Weak	Weak
Norwood et al., (2011). “Beautiful from the inside out.”	Strong	Moderate	n/a	Weak	Moderate	Weak	Weak
Ross et al., (2013). “Y’s Girls.”	Moderate	Strong	Strong	Weak	Strong	Strong	Moderate
Smolak et al., (1998) “Eating Smart, Eating for Me.”	Strong	Strong	Weak	Weak	Moderate	Strong	Weak

Each Component is allocated a rating of ‘strong’ ‘moderate’ or ‘weak’ based of the EPHPP quality assessment tool for Quantitative studies Dictionary. These component ratings contribute to an overall rating as follows:

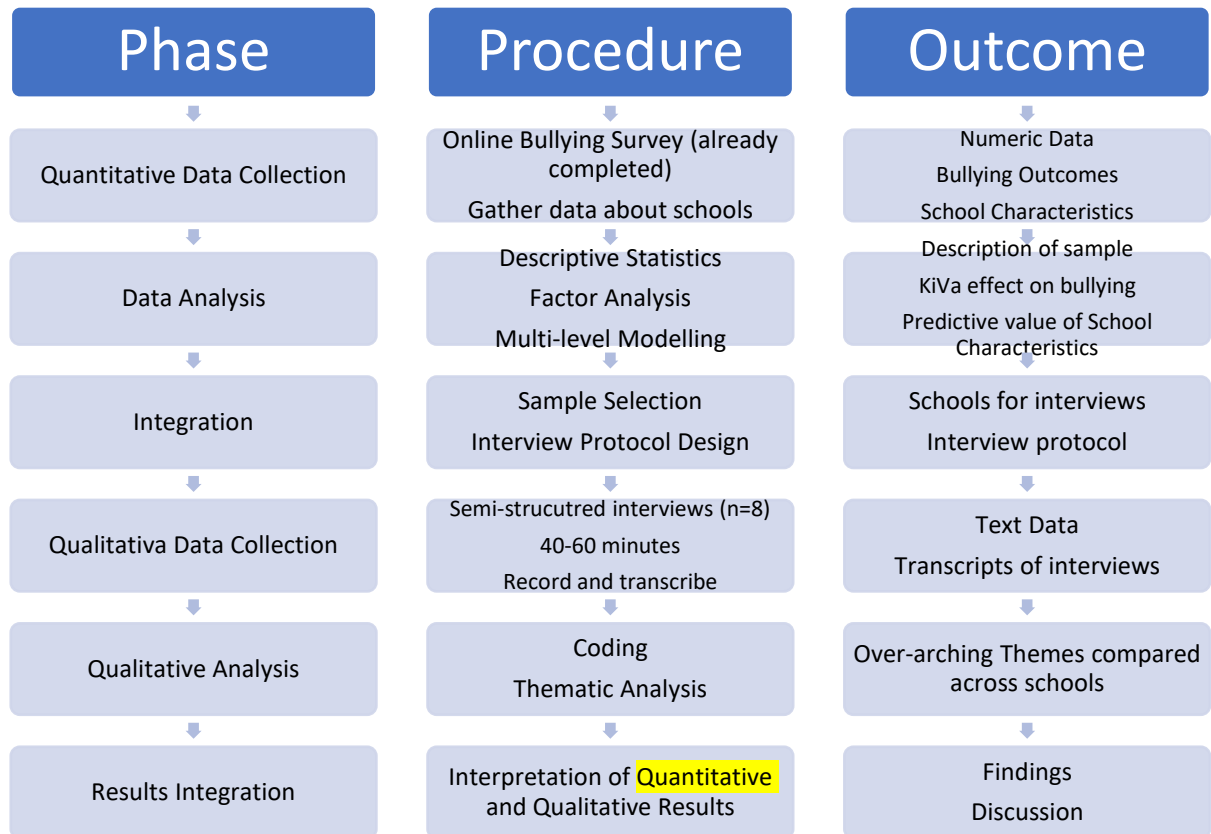
‘Strong’ = No ‘Weak’ rating

‘Moderate’ = One ‘Weak’ ratings

‘Weak’ = Two or more ‘Weak’ ratings

Appendix 14: Visual Model of Design Procedure

(Adapted from (Ivankova, Creswell, & Stick, 2006))



Appendix 15: Interview schedule

Semi-Structured Interview Protocol – version 2 – January 2018

School:

Participant:

Role:

Number of years implementing Kiva intervention:

Kiva Training Received:

1. Can you tell me about your school generally?

Intake; ethos

What bullying policies/strategies/interventions were in place pre-kiva?

Have you tried other evidence-based interventions

2. How have you found Kiva?

Are there change you have made in the way you tackle bullying?

3. Do you think it has been a success or not in your school?

Additional prompts: What means/shows it has / has not been a success (e.g. drop in bullying, change in relationships, teacher self-efficacy?)

Have you seen a drop in bullying in your school?

4. How do you account for this change?

Additional prompts:

5. Why do you think KiVa did / didn't work in your school?

Additional prompts: What aspects of Kiva works well for your school; elements of the schools ethos that match with kiva; school level factors that may help/hinder; way it was implemented; any change of working over time?

6. What are the difficulties/challenges faced by your school with KiVa and bullying?

Barriers to implementation?

7. Does your school have any unique needs? Did KiVa meet the needs of your school

High sen? Language? Resources? No. of pupils? High/low levels of bullying? Staff turnover? Parents involvement; local area; specific types of bullying

Appendices

8. What do you feel are the main factors that influence implementation?

What's been helpful?

9. You receive the annual data set – does this ring true and explain your school experience?

Understandable? Useable? Explain your experience or not capture? Do figures match experience? (School level data available during interview)

10. Has the Kiva team stayed the same / changed?

How has this worked? Training? New staff? – Have there been any big school changes during this time has it affected Kiva? E.g. combining schools, new management, Estyn?

11. Are you aware of different Teachers perspectives on it?

Understanding? Struggled or found easier? Fidelity? Like/dislike?

What impact has the curriculum had? What impact have the indicated actions had- procedure for dealing with bullying?

Any other comments?

Extra questions

12. Other support needed / wanted to be successful
13. School competence / self-efficacy in dealing with bullying.
14. Relationships with parents / between children change?
15. Beyond bullying changes – confidence, anxiety, social competence, empathy?
16. How many times indicator actions initiated? Have they been followed through? Reviewed?
17. Curriculum – What aspects of the kiva curriculum do you like?
18. Cases of bullying
19. How have you kept KiVa alive for new staff and pupils/ visibility within the school

Appendix 16: Excerpt of Annotated Transcript

Green: First-order codes and comments

2

D:

29 D: yeah

30 I: and do you think kiva provides a good framework for doing that?

31 D: Yeah I think so, umm, we don't contact the parents unless really needed. That's
 32 how we feel, Every time there's an incident we don't contact the parents. *Parents not always contacted*

33 I: mm

34 D: It's only when it's got to a stage when we think, right we need to contact them
 35 otherwise you could be ringing and it's a one of thing. Does that make sense? *Parents not involved not 1st stage*

36 I: So aside from bullying, any other outcomes you've notice on the children?

37 D: ummm, that's a difficult one.

38 I: Or maybe not?

39 D: ..., umm, We implemented this at the same time we were doing visible learning. *another intervention*
 40 which is where, a programme that looks at fixed mindsets, not giving up. We came
 41 up with different dispositions, determination, being challenged, reflective. So some of
 42 the skills from this, along with being nice to each other, team-work, they all fit *social/skill*
 43 together quite nicely and yeah, the class I had last year who've had two years of this, *skills have*
 44 kiva and visible learning and the other things we've implemented. They've gone onto *different*
 45 the high-school and we've had the feedback that they've never had a group wo *unconscious*
 46 wanting to learning and willing to engage and they are in top sets for everything, so *fit together*
 47 that was good. *the feedback about children*

48 I: Wow.

49 D: This year's class are different, they are quite laid back and chilled, but it was nice
 50 to know that the children who've at the longest and an older age, it had, made a *short difference*
 51 difference to them. I can't say if that's kiva, visible learning or the changes in the *difference may be due to kiva*
 52 school or lots of thing.

53 I: so lots of different things, but kiva may be one factor?

54 D: Exactly, Exactly.

55 I: What aspects of kiva do you think don't work as well for your school?

Kiva Interview – Interview 4

Blue: Emerging themes / 2nd order codes

82 D
83 D: They love the drama. If I can change a lesson to make it drama. That, That they
84 like, um, and staff really like kiva days because they are teaching the same thing all
85 day and it's not planning [laughing]! *no planning* *Staff + Pupil enjoyment*
86 I: They get given it all [laughing]
87 D: Exactly, they like it, it's refreshing.
88 I: Do the other teachers and staff feel confident in delivering it?
89 D: Yeah, yeah, they do feel confident delivering it, what's difficult is when you have a
90 incident and you have to sit with the victim and talk to the bystanders, especially with
91 time, none of us have much time, spare time to do anything like that. I've recently
92 had a meeting with parents. An issue about bullying was brought to my attention by
93 parents, so I've had a meeting, and it was very useful to say through our kiva
94 approach, we've done this which should help and we've done this. So if you've done
95 kiva you've got it there to show parents that it's not ignored. *showing parents*
96 I: you can show you've done something.
97 D: Sometimes with parents, some parents may expect that a child is banished from a
98 school, they don't understand that you don't just get rid of a bully, it's not fair on that
99 child, does that make sense? *parent wants not make*
100 I: Yeah, you don't just get rid of that child.
101 D: They've got to be thought about as well don't they, so that's, but as I've said
102 we've not had many that have got to that point.
103 I: Ok. So you've said about having a high level of SEN [special educational needs]
104 and free school meals.
105 D: Well I think it's high but I don't know what other schools are,
106 I: it is above average but then, average for wales that is. Powys is different again,
107 maybe because you are in a town it is more than other places.
108 D: Definitely
I: Do you find that it works as well for children with special education needs.

Handwritten notes on the left margin:
- Pupil enjoyment
- Staff
- Teachers + Staff
- Difficulties
- Time
- Parents
- Parents

Handwritten notes on the right margin:
Teacher's Confident
dealing with incident = hard
no spare time
showing parents
parent wants not make

Kiva Interview – Interview 4

5

109 D: The children with autism, they may have a one-to-one with them on those kiva
 110 days. Those LSA's get to have the best day ever because they get to do all the
 111 activities, they love it. It doesn't seem too much of a problem. *not issue for SEN pupils*

112 I: and you are quite a big school?

113 D: Yeah, yeah and just a junior school.

114 I: Yeah

115 D: So we are doing Thrive now as well, have you heard of Thrive? *Anchor intervention*

116 I: No?

117 D: Thrive, again, it links with kiva, it's looking at a child's development right back to
 118 attachment, that sort of thing. Then looking at putting intervention into place to fill
 119 that gap. *Intervention linking together*

120 I: Ahh, yes Ok.

121 D: So I'm not trained, the head is currently being trained and the LSA's and the
 122 SENCO's trained in Thrive. It's not kiva or incredible years but it's another. *Lds of program implemented*

123 I: It sounds like you have quite a few evidence-based interventions.

124 D: Yeah thrive is a new one.

125 I: There's quite a few around.

126 D: So it's that, yeah. The other thing is that we all have a kiva board in the
 127 classroom. You know, making it visual. Mainly with the rules on, err, so if the
 128 children have any work or a press release it's on that. *kiva board = visible*

129 I: Yeah

130 D: some of my children went to be interviewed too, we haven't seen the video yet

131 though.

132 I: yeah I think that has just been finished.

133 D: There we go. So yeah they spoke about it.

Kiva Interview – Interview 4

D

134 I: So thinking also about the local area, you've said you have some hard to reach
135 families.

136 D: Yeah

137 I: Do you think, that kiva suits the needs of your school and the area?
138 D: I think if you went out into the community and said "we are a kiva school" they
139 wouldn't have a clue.

140 I: No

141 D: We are a dementia friendly school, they'd know about that. But they wouldn't
142 know, if we went to the library, the police, they wouldn't. I don't think so. Which is a
143 shame. That wouldn't mean a huge deal to the community. Our parents, some of
144 them wouldn't register it, but some would.

145 I: DO you think it works better with specific types of bullying?

146 D: I don't think, I don't think kiva can prevent some of the physical bullying, because
147 that's a thrive thing.

148 I: ok that's interesting.

149 D: what it does do is encourage people to stand up and say that's not right. But for
150 the more physical, for some children that's not the right, it's more of a
151 I: an attachment difficulty?

152 D: right, and that goes right back.

153 I: That's really interesting.

154 D: Yeah there's lots of talk about the physical but,

155 I: If it's underpinned by something else.

156 D: Yeah, and if they are on the spectrum, I don't. It may have reduced it, I don't
157 know, but I think it's more about inclusion. That's what I would say but others may
158 say something different.

159 I: Ok

Kiva Interview – Interview 4

Handwritten notes:
- Community
- Parents
- School needs community aware
- Not all parents know about kiva
- X physical bullying due to different reasons
- Stand-up for others
- Some bullying = different
- Inclusion

Socially emotional

160 D: Emotional regulation is a big one for our school, we have a lot who can't regulate
 161 emotions. Our SENCO, when we were looking at that particular kiva day, she was
 162 like "I really want to do that one." And she's right, a lot of children can't read other
 163 people's emotions and can't understand emotion. That's a big one, and being told
 164 now. Some of our children can't handle that. They aren't often told no so when they
 165 are they can't regulate. So the emotion side of things is important. *emotional skills*
Pupil needs children struggle with their emotions

166 I: so it's not just the bullying but emotion side, emotion skills.

167 D: Definitely yeah. They are big class sizes remember so in a class of 31 pupils, you
 168 don't have to get on with everyone really well so that helps. What you find in a
 169 smaller school, if you only have 7 pupils in a school than they are really limited for
 170 who they can and the bullying may be more intense because they have no other
 171 option where they can go. But in our school. Larger class sizes is a good thing. *Big class*
School factors *Big School - good thing.*

172 I: It's a good thing. They've got options.

173 D: It's a good thing and well it's been proven that it doesn't affect the results of the
 174 pupils having a large class, certainly in a smaller school I would be worried about,
 175 They just need time away from each other and that is all it takes. *large class better in small class*

176 I: They don't need to be best friends, *not everyone has to be friends*

177 D: That's it, that's it. So yeah, Yeah.

178 I: Um, ..., Has there been factors, anything that's made it easier to implement, ..., so
 179 you get a lot of support from those meetings? *How meetings*

180 D: Yeah, they, it's a difficult one, I think that with those meetings, we have got a few
 181 ideas from it but I think we have gone a step further than just to use the kiva books
 182 and deliver the sessions, we've taken it but done our own thing with it. *done our thing*
Adapting

Kiva Interview - Interview 4

Appendix 17: Excerpt of Coding table

2 nd Order codes	Initial Codes / Labels	Illustrative quote
Time pressures	<p>No time to do everything. Fitting things in is hard. We can't do everything. Time pressures in schools. Teachers have no time to plan. Not got time for everything. Lots of time pressures. Releasing teachers to training is hard due to time. We need more time on it. Difficulty fitting all units in. Teachers' have no time. Timetabling can be hard. There's time constraints. All the resources are there to use - time saving. Hard to fit things in. Time. Choosing priorities to fit it in. Would like more time. Fit everything in ok. Easy to do a regular time slot. Competing demands. No spare time. Lack time.</p>	<p>"Well time, time is the critical thing really. Because there's also pressures It does, get put to the side, there's no doubt about it, just because of time constraints." (C)</p>
Is Kiva / bullying a priority?	<p>Bullying not a major school issue. Kiva is an 'extra'. Academic pressures come first. Well-being is a school focus. Kiva pushed to the side. Fitting it in with other priorities. Place high priority on wellbeing. Wellbeing = school priority. Wellbeing = foundation of academic work. Headteacher support. Have to make decisions about what is a priority.</p>	<p>"I would like to see the staff, um, prioritise more time... I believe some staff prioritise more than other staff." (B)</p>
School Resources	<p>Cuts. Lack of resources. Class teachers do always prioritise. Lots of other things to do.</p>	<p>"It's just ridiculous. Cuts. Cuts. You can't maintain the same." (C)"</p>

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	<p>Staff sickness hits us. Financial cuts makes it hard. Staffing level . Lots of pressures over past years.”</p>	
Parental Engagement	<p>Parents not involved. Getting parents in is hard. Parental involvement hard. Parental understanding sometimes poor. After-school sessions for parents offered. Not all know about KiVa. Showing action to parents. Parents wants may be different. School only - not home. Reaching Parents. Don't always contact parents. Not all parents seem to know about kiva. Getting parents on board is key. Need to reach parents. Children get different messages at home. Difficulty getting message to parents.</p>	<p>"It's very difficult to get the whole message across to them [parents]." (A)</p>
Understanding Bullying	<p>Emphasises discussion and understanding. More talking about bullying. Awareness of bullying improved. Understanding improved. Not always bullying - misunderstanding common. Understanding what bullying is. Bringing issues to the fore. Understanding what bullying is important. Kiva helps understanding. The term bullying has been misused. Helps talking and understanding. Understanding the reasons behind bullying. Open discussions about bullying. Talking about bullying. Pupil understanding. Now understand the term bullying. Need to know the full picture to understand what's happened. Have frank discussions. Bullying vs just falling out.</p>	<p>"Because the word bullying was used far too frequently, far too easily. But now the class will go, you've just fallen out, it's not bullying. I step back a lot and they can do it for me". (A)</p>

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	Impact of parent's own experiences. Real life experiences help.	
Pupil Enjoyment	Pupils can talk about kiva. Children enjoy it. Children are positive. Kids want more. Children enjoy it. Children enjoy different bits. Children Enjoy it. Not to academic. They've asked for more. Pupils like talking. Everyone enjoys it. Relaxed. Both staff and pupil enjoyment. Need training. Fun.	"They really enjoy it, they really engage. They really like to speak about thing and have a chat." (E)
Training	Important to send the right person on training. Not attended training yet. Filtering training. Training method Trained in Kiva Cascaded training through staff. Had training. Training cascaded through staff. Few staff members trained. More training in future.	"I had the training...the first thing I did, cascade that out to staff, to teaching staff and support staff and lunchtime staff" (B)
Fidelity	Regular lessons implemented. Not fully implemented. We don't audit kiva . Don't run full programme. Room for improvement. Have a KiVa team. No kiva team. Not always delivered as intended. Implementation differences reflected in child's behaviour. Have kiva team. Do more than needed = bigger impact. Regular fortnight lessons. Have a kiva team of trained staff. Continuity key for impact.	"I'm aware we are sort of doing it piecemeal but not doing it by the book." (C)
Child Factors	Cohort Differences. One child makes a difference to behaviours. ALN pupils can participate. Meets needs of SEN pupils. Gender differences exist.	"One thing I have notice about kiva is, that it in year 3, for some of the pupils who are coming in with a lot, it is a big higher level for them, it is a bit much."

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	<p>Can adapt to ALN.</p> <p>There's differences between cohorts.</p> <p>It's age appropriate.</p> <p>Cohorts are all different.</p> <p>Children's early history and experiences impact.</p> <p>Too much for y3s with developmental disruptions.</p> <p>Doesn't always match developmental stage.</p> <p>Disruptive children make it difficult.</p>	(G)
CyberBullying	<p>E-safety as a priority of schools.</p> <p>Kiva isn't about e-safety.</p> <p>Social media is a problem.</p> <p>Cyberbullying is big problem.</p> <p>Cyber-bullying at home affects school.</p> <p>Social media affects schools.</p> <p>Can use KiVa.</p> <p>Online bullying and bullying is different.</p>	"The one things for us is cyber bullying. You know, and it doesn't always matter how much kiva you put in place, it happens" (D)
Social and emotional skill development	<p>Develop empathy.</p> <p>Hard to measure social skills.</p> <p>Kiva is about inclusion.</p> <p>Social and friendship skill development.</p> <p>More talking and listening.</p> <p>Empathy has developed.</p> <p>Social Skill development.</p> <p>Child Relationships improved.</p> <p>Helps Friendship skills.</p> <p>Sharing data with governors.</p> <p>Data matches experiences.</p> <p>Emotional regulation is key.</p> <p>Emotional needs of pupils.</p> <p>Helps understanding about themselves.</p> <p>It's social skill development.</p>	It's about kindness and friendship skills that is positive" (B)
Data and Evidence	<p>Data shows big decline.</p> <p>Data useful for Estyn.</p> <p>Helpful for healthy school.</p> <p>Accreditation.</p> <p>Sharing the data.</p> <p>Data matches experiences.</p> <p>Evidences action.</p> <p>Useful for self-evaluation evidence.</p> <p>Evidence the school is proactive.</p> <p>Data problematic due to school size.</p> <p>Estyn.</p> <p>The paperwork shows action</p>	"It's great for Estyn for when they want evidence or whatever" (D)

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	shows that we are acting Act on the data. Data does not reflect experience.	
Other Interventions	Other programmes are in place. Incredible Years implemented. Evidence-base adds power. Kiva one of many interventions. Also do IY. Have a nurture group. Other interventions / strategies go well. Goes well with restorative justice Do incredible years. Do Thrive and Restorative justice alongside Interventions don't overlap. Done incredible years too. Incredible years fits with kiva. Works well with other interventions.	"Its brilliant that incredible years is like the foundation to it and then it carries on" (A)
Teachers and staff	Teachers confident in delivery. Worries about it all coming out. Other interventions are like a domino effect Staff confident in delivery All Staff involved Staff able to learn quickly LSAs involvement Staff understanding good All Staff involved some staff better at prioritising Teachers confident in delivery Teachers are confident Some teachers resistant Teachers personal preferences Teacher resistance impacted behaviour Repetition in lessons Staff now know what to do Not delivered by class teachers Getting all teachers involved Reinforcing and Repeating	It's not just the teachers delivering it. It's the head, it's myself, it's all the LSA's, it doesn't matter who it is. Everyone has that message" (D)
Shortcoming and difficulties	Need to keep up to date with social media Online resources Hard to talk to victims, bystanders and perpetrators Less good with physical bullying More community participation Extending into high school Not to a deep enough level for	"The only thing, I do find it takes a lot of time to interview everyone" (F).

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	<p>some?</p> <p>Difficulties with mixed age classes</p> <p>Continuation into secondary schools</p> <p>Reduction in bullying levels</p> <p>Positive data outcomes</p> <p>Can be time consuming to do procedure</p>	
Bullying Outcomes	<p>Been successful</p> <p>Change in the way bullying is tackled</p> <p>Stops the bullying process</p> <p>Children know what to do now</p> <p>Change in approach to bullying as occurred</p> <p>behaviour change has occurred</p> <p>increase in discussion</p> <p>Child Understanding improved</p> <p>Decline in incidents</p> <p>Bullying has become infrequent</p> <p>Kiva works for most, not all</p> <p>No planning needed</p> <p>Resources all there</p> <p>Prevention - nipping it in the bud</p> <p>Success</p> <p>Increase talking about bullying</p>	<p>"Because all the resources and things are all there anyway and they are all in Welsh which is fantastic. You can just login, have a quick read and go do it" (A)</p>

Word Count

Abstract: 228

Paper 1: Literature Review

Excluding tables, figures and references: 5,024

Including tables, figures and references: 8,455

Paper 2: Empirical Paper

Excluding tables, figures and references: 7,381

Including tables, figures and references: 9,099

Paper 3: Contributions to theory and practise.

Excluding references: 4,788

Including references: 6,042

Appendices (Excluding ethics appendices): 4,819

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Tables, figures, references and appendices : 11,776

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