Community Dental Health (2023) **40,** 53–59
Received 24 October 2022; Accepted 19 November 2022

doi:10.1922/CDH_00242Dyer07

Effectiveness of strategies to increase participation in school-based epidemiological surveys: a rapid review

Tom A. Dyer,[1] Anne-Marie Glenny,[2] Laura MacDonald,[3] Zoe Marshman[1] and Kate Jones[4]

[1]School of Clinical Dentistry, University of Sheffield, UK; [2]Division of Dentistry, The University of Manchester, UK; [3]Cochrane Oral Health, Division of Dentistry, The University of Manchester UK; [4]Office for Health Improvement and Disparities, London, UK

Objective: Rapid review of the literature on strategies to increase participation rates in school-based epidemiological surveys. ***Basic research design***: Rapid review. MEDLINE and Embase databases were searched for articles written in English from 2000 onwards. Synthesised evidence and primary research were included as data sources from peer reviewed journals and reports. ***Interventions***: Any strategy aiming to increase participation in school-based health surveys. The comparator was usual procedure or an alternative strategy to increase participation. ***Main outcome measures***: Primary outcomes included participation and consent rates. Secondary outcomes were feasibility, acceptability and adverse effects. ***Results***: The search identified 591 unique records, of which 587 were excluded. Four studies were suitable for inclusion, including one systematic review, one randomised controlled trial, one cross-sectional study and one retrospective analysis. Based on very low certainty evidence, recommendations for maximising participation rates in one systematic review of US studies included: promoting the survey to school staff, parents and students; disseminating study information using direct rather than mediated methods; offering incentives to schools, staff and participants; following up non-responders; and employing a research team member to co-ordinate and monitor recruitment. However, UK studies found that different strategies did not increase participation more than that achieved by a standard approach (delivery of covering letter/consent forms via the child with no follow-up of non-responders). ***Conclusion***: Given the lack of evidence of effectiveness of alternative strategies in the UK, additional measures beyond existing standard approaches for active consent cannot be recommended.

Keywords*: Schools, health surveys, oral health, parental consent*

Introduction

Globally, response rates in epidemiological surveys have been declining (Morton *et al*., 2006; Galea and Tracy, 2007; Morton *et al*., 2012). However, in general, participation in those undertaken in schools remain high (Morioka *et al.*, 2014; Torstveit *et al*., 2015; Ssenyonga *et al*., 2019) and schools are a convenient setting to conduct research with many participants in one location.

Two major groups of epidemiological surveys of child dental health are undertaken in schools in England. National surveys have been undertaken every 10 years since 1973 (along with other nations in the UK). These have collected data on a range of cohorts, but latterly have been restricted to 5-, 8-, 12- and 15-year-old children. The second group are those undertaken more frequently, with 5-year-olds normally surveyed every other year and other age groups in intervening years. Both groups of surveys strive for methodological rigour: their protocols provide standardised definitions of diseases; examiners are trained and calibrated and there is clear guidance on sampling to ensure those invited to participate represent the target population. The Office for Health Improvement and Disparities (formerly Public Health England) now has responsibility for coordinating these surveys in England as part of its dental epidemiology programme (Office for Oral Health Improvement and Disparities, 2022). Since 2006, active consent from parents and legal carers ("parents" in this report) has been required for children to participate in school-based surveys (Department of Health, 2006), with similar requirements in Wales (Welsh Assembly Government, 2006) and Northern Ireland (Department of Health, Social Services and Public Safety, 2006). Before this, children participated on the basis of passive consent, that is, unless notified otherwise by parents, it was assumed that children could participate. Yet, the annual National Child Measurement Programme still uses passive consent for children aged 4 to 5 and 10 to 11 in mainstream schools (NHS Digital, 2021). Parents are informed that the survey is taking place and can opt out if they do not want their child's height and weight to be measured.

High participation rates are important to ensure representative samples and minimise non-response bias. However, the requirement for active consent has resulted in lower participation rates (Ellwood *et al*., 2010; Davies *et al*., 2011; Spence *et al.,* 2015). Moreover, caries prevalence and severity appear to be underestimated as children with higher levels of caries are more likely to be underrepresented (Dyer *et al*., 2008; Davies *et al*., 2014; Morgan and Monaghan, 2014). Therefore, methods for maximising participation where active consent is required is of interest to public health practitioners, researchers and policy makers.

The aim of this study was to rapidly review and synthesise the literature on methods to increase participation rates in school-based epidemiological surveys.

Correspondence to: Dr. Tom Anthony Dyer Email: t.dyer@sheffield.ac.uk

Methods

A rapid review method was used, i.e. components of the systematic review process were simplified or omitted to produce information that can be used to inform policy in a short timeframe (Ganann *et al*., 2010; Khangura *et al*., 2012; Tricco *et al*., 2015). A protocol was not published before conducting the review. Rapid reviews streamline the literature search and focus on the information needs of the end user. Methods vary, but authors of rapid reviews generally limit the number and scope of the questions posed, search fewer databases, reduce hand-searching and data extraction, and simplify evidence synthesis (Haby *et al*., 2016).

Synthesised evidence, particularly from the UK, was sought as the primary source of data (i.e., systematic reviews, policy guidance). If unavailable, primary research was considered, with priority given to evidence from randomised controlled trials (RCTs). Only English-language full-text publications were included. The population of interest was school-age children, parents and the staff of schools and educational organisations. Interventions included any strategy that aimed to increase participation in any school-based health surveys and the comparator was usual procedure or alternative strategy to increase participation. As it has been established that seeking active consent reduces participation rates in dental surveys (Ellwood *et al*., 2010; Davies *et al*., 2011; Davies *et al.*, 2014; Morgan and Monaghan, 2014; Spence *et al.,* 2015), studies solely comparing participation rates in surveys with active and passive consent were excluded. Primary outcomes included participation and consent rates (including consent form return rates and refusal rates). Secondary outcomes were feasibility, acceptability and adverse effects.

Electronic database searches were undertaken on 9th February 2022 in MEDLINE and Embase via Ovid to identify full-text English-language publications from the period 2000 to 2022. This period was chosen to ensure that any measures and associated evidence are likely to be applicable to contemporary populations. The search strategies combined free-text search terms and controlled vocabulary subject headings (relevant to each database) for comprehensive record retrieval, and Boolean operators (AND and OR) were applied to refine the relevance of retrieved records (Available at on request).

After conducting the searches, the identified records were exported in RIS format and imported into EndNote X9, where duplicates were automatically removed. Two review authors (AMG, LM) screened all records identified to select reviews or studies for inclusion. The priorities were systematic reviews, UK-based research and recent publications. One author (LM) extracted data including: evidence type; research design; location; setting; participant characteristics (e.g. sex, age/school stage, oral health status, socioeconomic status, ethnicity, if relevant); characteristics of the interventions; time period/follow-up duration; assessed/reported outcomes relevant to review scope; and outcome data. A subset of quantitative data was audited by a second author (AMG).

A narrative (descriptive) summary of identified studies was produced, which described patterns of effect size and direction, and variation. Quantitative syntheses, sensitivity analyses, subgroup analyses and publication bias assessment could not be performed because of the paucity of RCTs and the heterogeneity of methods and outcomes (Higgins *et al*., 2021). The GRADE approach was used to evaluate the certainty of evidence in a systematic review. One author (AMG) assessed the GRADE criteria: risk of bias in included primary studies; consistency of results; precision of effect estimates; and applicability of the results. For each key outcome and comparison, the evidence was judged high, moderate, low or very low certainty (Schünemann *et al*., 2021).

Results

The search identified 591 unique records, from which 577 were deemed ineligible. Of the remaining 14 studies, five were suitable for inclusion: one systematic review, two RCTs, one cross-sectional study and one retrospective analysis. However, one of the RCTs was included in the systematic review (Figure 2). The characteristics of the included studies are presented in Table 1 and their findings are reported below by study design.

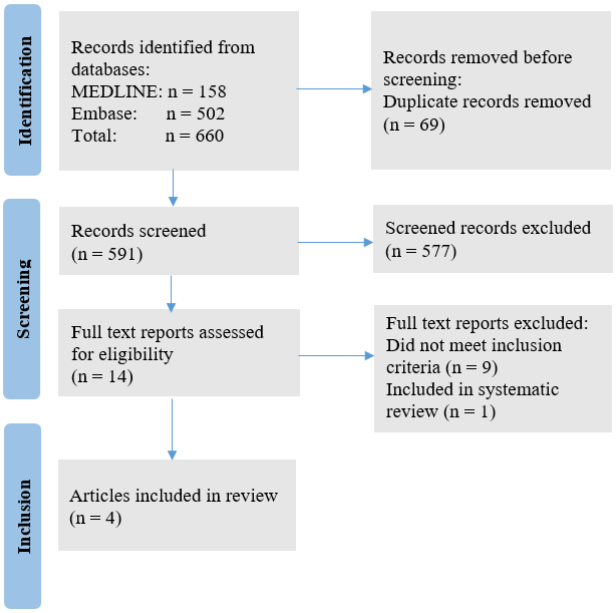

Figure 1*. PRISMA diagram of literature search process (Page et al., 2021).*

The search did not identify any systematic reviews of strategies for increasing participation solely in health surveys in schools. However, a systematic review with partial relevance was identified and included a range of surveys, some of which were health-related (Wolfenden *et al*., 2009). The authors aimed to identify effective strategies for the recruitment of child research participants through schools. It had broad inclusion criteria and identified 18 studies comprising three RCTs, one quasi-experimental study, three cohort studies, and 11 case studies. All were conducted in the US, though one also included Australian schools. The studies varied in outcomes and considered a range of approaches encouraging participation in vaccination, drug and alcohol prevention programmes and health-related surveys. Consequently, the

Table 1. Characteristics of the included studies.

Study	*Design*	*Location*	*Included studies*	*Population, intervention, comparison*	*Outcomes*	*Findings and authors' conclusions*
Wolfenden et al. 2009	Systematic review	All studies conducted exclusively or mainly in USA	18 studies 3 RCTs, 1 quasi-experimental study, 3 cohort studies, 11 case studies	Population: Parents & carers, school administration & teachers Intervention: Various strategies aiming to increase participation Comparison: Various strategies aiming to increase participation or standard approach	Consent forms return rate (regardless of whether parental permission was provided) Consent rate (where parent permission was provided) Participation rate (where consent was provided & the child participated)	The following strategies may be helpful for maximising involvement in health research: Promotion of the research to principals, teachers, parents & students Dissemination of information via direct rather than mediated communication (telephone, face-to-face) Incentives for teachers, peers & individual participants Follow-up reminders for undecided parents Dedicated researcher to co-ordinate & monitor Limitations include reliance on US non-experimental studies & risk of bias.
Glenny et al. 2013	Randomised controlled trial 335 schools n = 11,088	UK	N/A	Population: Parents & carers of 5-year-olds, schools, school administrators & headteachers Intervention: 1) Multiple letters to parents 2) Promotion via extra information to parents & children 3) Financial incentive to school 4) Financial incentive to school plus direct mailing to parents 5) Usual practice of single letter home to parents	Consent rates	Consent rates ranged from 47% (financial incentive to school administrator plus direct mailing) to 63% (multiple letters). Multiple letters not statistically significantly different from usual practice group (single letter home to parents). Little evidence that any interventions increased consent rates compared to usual practice.
Gill, 2017	Cross sectional 54 schools n not provided	UK	N/A	Population: Parents & carers of 5-year-olds, headteachers Intervention: Multifaceted strategy: emailing headteachers; support letter from Director of Dental Public Health to Directors of Public Health & Children's services; nominating a school co-ordinator to publicise & follow up non-responders with reminders. Some schools texted to remind parents. Comparison: Usual practice in 2011/12 survey (not described)	Consent rates	Consent rate in 2014/15 following intervention was lower than in 2011/12 (48% v 52%) No evidence that multifaceted approach increased consent rates.
Detty, 2013	Retrospective analysis 337 schools n = 32,067	USA	N/A	Population: Parents & carers of 3rd grade students, school administration & teaching staff Intervention: No details provided. "All third-grade children were given consent forms"	Form return, refusal & participation rates Predictors of form return, refusal & participation	Fewer forms returned & participation lower in larger schools, those with more pupils attending for short periods, when survey was administered in spring or autumn. More forms returned & more students participated when examination was conducted by internal staff. The overall refusal rate was 10%, with rates lower in schools with high student mobility, low income, or administration of the survey in the autumn.

authors did not pool and synthesise data quantitatively. The GRADE assessment rated the evidence for all outcomes as very low certainty as the evidence was based primarily on non-experimental studies. Due to the lack of synthesis, the main findings of the two RCTs included in the systematic review that are relevant to the aim of this review are described here, followed by a summary of the other included studies.

The first RCT conducted in the USA and Australia compared return of consent forms in the mail versus return by students to their classroom (McMorris *et al.*, 2004). The trial was conducted in 46 schools (n = 1,058) in Washington (USA) and Victoria (Australia) participating in a pilot study of the International Youth Development Study (IYDS). The postal method group involved information packs being sent to parents and pre-paid envelopes for return of the consent form followed up by reminder letters for non-responders and up to seven phone calls for continuing non-responders. The student-delivered group had information and consent forms issued to parents via the children and non-responders received a reminder and a follow-up contact, usually a phone call, if they continued not to respond. This second group also had individual incentives in the Australian schools (a pen) and financial incentives ($100 class gift voucher) in the US schools. The student-delivered method produced higher rates of consent form return (90% v 58%: $p < 0.001$) and higher consent rates (78% v 52%: $p < 0.001$). The method of randomisation was not reported, so risk of selection bias is unclear. No attrition was reported. Risk of performance bias is possible as schools could not be blinded to the group to which they had been allocated.

The second RCT reported higher consent rates when postage paid envelopes were used rather than sending consent forms home with students and incentivising form return with entry in a lottery (MacGregor and McNamara, 1995). The authors reported a chi-squared statistic ($p < 0.05$) and a low overall participation rate (10.9%) but did not report the different rates for each strategy.

The remaining included studies comprised one quasi-experimental study (Stein *et al*., 2007), three cohort studies (Pokorny *et al*., 2001; Ji *et al*., 2004; Tung and Middleham, 2005) and eleven case studies (Dent *et al*., 1993; Harrington *et al*., 1997; O'Donnell *et al.,* 1997; Johnson, 1999; Fletcher and Hunter, 2003; Ladin *et al*., 2004; Leakey *et al*., 2004; Cline *et al.,* 2005; Ji *et al.,* 2006; Elder *et al*., 2008; Esbensen *et al*., 2008). Taken together there was some evidence that higher consent rates were achieved with parent orientation meetings in addition to other approaches. Higher response rates were reported where consent forms were sent home with students along with their report cards, where staff participated in the promotion of the survey, and where staff and pupils were incentivised to respond. However, consent rates were not reported.

Overall, Wolfenden and co-workers (2009) reported that the evidence-base was weak and that further RCTs were required. However, in the interim they recommended the following strategies: 1) promote the research with school staff, parents and students; 2) disseminate information using direct (i.e. telephone and face-to-face) rather than mediated communication; 3) offer incentives to teachers, peers and individual participants; 4) provide three follow-up reminders for non-responders and 5) ensure a member of the research team liaises with schools and monitors recruitment.

An RCT involving 335 schools (n = 11,088) was undertaken as part of the 2007/2008 NHS Epidemiological Dental Health Survey of 5-year-old children in north-west England to determine the effectiveness of different strategies for maximising parental consent rates (Glenny *et al*., 2013). Schools were randomised to one of five interventions by an independent body: 1) financial incentive to school administrator (£50 voucher for 75% consent rate or above) and direct mailing (postage-paid reply envelopes); 2) financial incentive to the school (£4 for each child consented) and delivery of standard parental letters/forms via the child; 3) promotion of the survey by the headteacher in assembly with additional information in a "glossy leaflet" distributed to parents via the child; 4) multiple letters sent to parents via the child with follow-up reminder letter after two weeks to non-responders and 5) control arm (usual practice) comprising delivery of standard parental letter/forms via the child with no follow-up of non-responders. The assessors were blind to the allocation of schools. Although pairwise comparisons revealed consent rates achieved by multiple letters (4) (63%) and promotion of the survey (58%) (3) were significantly better than financial incentives and direct mailing (1) (47%), none of the interventions were better than the usual practice (5) (57%). The study predetermined and met the required sample size and there was no attrition, but the method of randomisation was not specified. The authors acknowledged the pragmatic nature of the study and the limited oversight of schools' adherence to assigned protocols. In addition, it was not possible to blind schools to their allocated intervention and so performance bias is a possibility. Nevertheless, the study authors argued that this was a strength of the study as the findings were likely to reflect outcomes that could be expected in operational surveys. Consequently, they concluded that there was no evidence to support changing usual practice (5).

One cross-sectional study evaluated approaches to increasing participation in the 2014-15 NHS Epidemiological Dental Health Survey of 5-year-olds in Bradford, England (Gill, 2017). A multifaceted approach to encourage parents to return consent forms was used in 54 schools. The strategy comprised: emailing headteachers about the value of the survey to encourage involvement; a letter of support from Public Health England's (PHE) Director of Dental Public Health to the local Directors of Dental Public Health and Children's Services and nominating a school co-ordinator who publicised the survey (e.g., online news articles, posters in schools) and followed up non-responders by sending reminder letters. Some schools used text messaging to remind parents. The consent rate was lower when the strategy was used in 2014-15 compared with the previous survey where a standard approach was used (48% v 52%), though no significance testing was reported. The author acknowledged the limitations of the cross-sectional design and recommended that other approaches be investigated.

A US study retrospectively analysed consent form return, refusal and participation rates in a survey of oral health and body mass index of children in 'third grade'

in 2009-10, where active consent was required (Detty, 2013). Schools were randomly selected (n = 377) and t-tests used to establish associations between school and survey characteristics and response rates. Associations were modelled using generalised linear modelling to identify predictors of form return, participation and refusal rates at the school level. Overall, 19,997 forms were returned (62%) and 16,022 children (50%) participated. Fewer forms were returned and participation was lower in larger schools, those with more pupils attending for short periods ('high student mobility'), and when the survey was administered in spring or autumn. More forms were returned and more students participated when the examination was conducted by internal staff rather than an external person. The overall refusal rate was 10%, with rates lower in schools with high student mobility, low income, or administration of the survey in the autumn. The author reported that it was unknown whether schools independently incentivised consent form return rates and acknowledged this as a limitation of the study.

Feasibility and acceptability of the strategies were not explicitly assessed in any included study. Glenny and colleagues (2013) reported that the strategies tested were feasible, yet the refusal of nine schools to participate once their allocation was revealed may suggest some problems with feasibility or acceptability. Seven schools had been allocated to financial incentives for school administrators plus direct mailing and the other two were allocated to the group sending reminder letters to non-responders. McMorris and co-workers (2004) reported that financial incentives would not be ethically acceptable in the Australian wing of their trial. None of the studies included in this review considered possible adverse effects of the strategies used.

Discussion

Ethical and legal considerations require the use of active consent in dental epidemiological surveys, but this can also reduce the number participating, which may increase non-response bias and underrepresent those with caries and so underestimate caries prevalence (Public Health England, 2020). Therefore, measures to increase participation rates are of interest to public health practitioners, researchers and policy makers. This rapid review identified a small body of evidence that evaluated the effectiveness of different strategies to increase response and consent rates for health surveys undertaken in schools. The systematic review reported some weak evidence of effectiveness and provided recommendations on approaches to take, while acknowledging the limitations of the evidence-base. However, the two UK studies on dental surveys found no evidence of effectiveness beyond standard approaches. Currently, the standard approach comprises the distribution of explanatory letters and consent forms via the child and no follow-up of non-responders. This is consistent with the findings of one of the included RCTs that reported higher consent rates with student-delivered consent forms than postal (McMorris *et al*., 2004).

One difference between the UK studies and those included in the systematic review is that individual incentives to children or parents were not tested for ethical and financial reasons. Direct payments to children or parents to encourage participation are likely to be judged as coercive by UK ethics committees; moreover, they would be unaffordable given the scale of NHS dental epidemiology surveys (Glenny *et al*., 2013). Similarly, the evidence base is limited for strategies for maximising participation in RCTs, where telephone reminders for non-responders, and passive (opt-out) rather than active (opt-in) strategies for consent have been shown to be effective, whereas the evidence for many other approaches is unclear (Treweek *et al*., 2013). Various strategies have been proposed and further trials could be undertaken opportunistically as part of routine dental health surveillance. The effectiveness of following-up non-responders could be evaluated, particularly as the prevalence of caries is likely to be higher in this group than in those that respond.

Not all UK school-based health surveys require active consent. Despite some parental concerns (Gainsbury and Dowling, 2018), The National Child Measurement Programme in England uses passive consent to gather information on the height and weight of children aged 4 to 5 and 10 to 11 years in mainstream schools (NHS Digital, 2021). Another option proposed is for parents to consent for all health surveillance at the start of schooling, but with the option to opt out on a case-by-case basis (Department of Health, 2006). This has been employed infrequently and requires agreement and implementation at a local level (Public Health England, 2021) but could be tested in future surveys. In testing this or any other strategy to increase consent and participation, the costs, feasibility, acceptability and ethical implications of the proposed intervention should be carefully considered.

The limitations of this rapid review should be recognised. Some elements of a systematic review were either simplified or omitted. A study protocol was not published, searches were restricted to two databases, and studies for inclusion had to be written in English and published from 2000 onwards. Consequently, it is possible that some studies that could have provided relevant information are not included. In addition, cost-effectiveness was not considered as an outcome and there were no separate searches for data on adverse effects.

In conclusion, given the lack of evidence of effectiveness of alternative strategies and the additional use of resources required, measures beyond standard approaches of distributing a letter of information and consent forms via students cannot currently be recommended.

Funding

Cochrane Oral Health was commissioned by Public Health England to be involved in the production of this rapid review.

Acknowledgements

Anne Littlewood, Information Specialist with Cochrane Oral Health at The University of Manchester, designed the search strategy and ran the searches.

Sally Weston-Price, Senior Fellow/Honorary Consultant in Dental Public Health at the School of Clinical Dentistry, University of Sheffield, contributed to the design and early drafts of the report.

References

Cline, A., Schafer-Kalkhoff, T., Strickland, E. and Hamann, T. (2005): Recruitment strategies for the Princeton (Ohio) City School District epidemiological study. *Journal of School Health* **75**, 189-191.

Davies, G.M., Jones, C.M., Monaghan, N., Morgan, M.Z., Pine, C.M., Pitts, N.B., Neville, J.S. and Rooney, E. (2011): The caries experience of 5-year-old children in Scotland, Wales and England in 2007-2008 and the impact of consent arrangements. Reports of co-ordinated surveys using BASCD criteria. *Community Dental Health* **28**, 5-11.

Davies, G.M., Robinson, M., Neville, J. and Burnside, G. (2014): Investigation of bias related to non-return of consent for a dental epidemiological survey of caries among five-year-olds. *Community Dental Health* **31**, 21-26.

Dent, C.W., Galaif, J., Sussman, S., Stacy, A., Burton, D. and Flay, B.R. (1993): Demographic, psychosocial and behavioral differences in samples of actively and passively consented adolescents. *Addictive Behavior* **18,** 51-56.

Department of Health (2006): *Consent for school dental inspections and dental epidemiological surveys*. Gateway reference 6673 26 May 2006. London, Department of Health.

Department of Health, Social Services and Public Safety (2006): *Consent for school dental inspections and dental epidemiological surveys*. Belfast: Department of Health, Social Services and Public Safety.

Detty, A.M.R. (2013): School-based survey participation: oral health and BMI survey of Ohio third graders. *Maternal Child Health Journal* **17**, 1208-1214. doi: 10.1007/s10995-012-1107-7

Dyer, T.A., Marshman, Z., Merrick, D., Wyborn, C. and Godson, J.H. (2008): School-based epidemiological surveys and the impact of positive consent requirements. *British Dental Journal* **205**, 589-592.

Elder, J.P., Shuler, L., Moe, S.G., Grieser, M., Pratt, C., Cameron, S., Hingle, M., Pickrel, J.L., Saksvig, B.I., Schachter, K., Greer, S. and Guth Bothwell, E.K. (2008): Recruiting a diverse group of middle school girls into the trial of activity for adolescent girls. *Journal of School Health* **78**, 523-531.

Ellwood, P., Asher, M.I., Stewart, A.W. and Group, I.P.I.S. (2010): The impact of the method of consent on response rates in the ISAAC time trends study. International *Journal of Tuberculosis Lung Disease* **14**, 1059-1065.

Esbensen, F.A., Melde, C., Taylor, T.J. and Peterson, D. (2008): Active parental consent in school-based research: how much is enough and how do we get it? *Evaluation Review* **32**, 335-362.

Fletcher, A. and Hunter, A. (2003): Strategies for obtaining parental consent to participate in research. *Family Relations* **52**, 216-221.

Gainsbury, A. and Dowling, S. (2018): 'A little bit offended and slightly patronised': parents' experiences of National Child Measurement Programme feedback. *Public Health Nutrition* **21**, 2884-2892.

Galea, S. and Tracy, M. (2007): Participation rates in epidemiologic studies. *Annals of Epidemiology* **17**, 643-653.

Ganann, R., Ciliska, D. and Thomas, H. (2010): Expediting systematic reviews: methods and implications of rapid reviews. *Implementation Science* **5**, 56.

Gill, E. (2017): Oral health survey of five-year-olds 2014/15: Have strategies for increasing the levels of parental consent in Bradford been effective? *Community Dental Health* **34**, 193-195.

Glenny, A.M., Worthington, H.V., Milsom, K.M., Rooney, E. and Tickle, M. (2013): Strategies for maximizing consent rates for child dental health surveys: a randomised controlled trial. *BMC Medical Research Methodology* **13**. doi: 10.1186/1471-2288-13-108

Haby, M.M., Chapman, E., Clark, R., Barreto, J., Reveiz, L. and Lavis, J.N. (2016): What are the best methodologies for rapid reviews of the research evidence for evidence-informed decision making in health policy and practice: a rapid review. *Health Research Policy and Systems* **14**, 83. doi: 10.1186/s12961-016-0155-7

Harrington, K.F., Binkley, D., Reynolds, K.D., Duvall, R.C., Copeland, J.R., Franklin, F. and Raczynski, J. (1997): Recruitment issues in school-based research: lessons learned from the High 5 Alabama Project. *Journal of School Health* **67**, 415-421.

Higgins J.P.T., Thomas, J., Chandler, J., Cumpston M., Li, T., Page, M.J. and Welch, V.A. (2021): *Cochrane Handbook for Systematic Reviews of Interventions version 6.2* (updated February 2021). Available at: www.training.cochrane.org/handbook.

Ji, P., Flay, B.R., Dubois, D.L., Brechling, V., Day, J. and Cantillon, D. (2006): Consent form return rates for third-grade urban elementary students. *American Journal of Health Behavior* **30**, 467-474.

Ji, P.Y., Pokorny, S.B. and Jason, L.A. (2004): Factors influencing middle and high schools' active parental consent return rates. *Evaluation Review* **28**, 578-591.

Johnson, K., Bryant, D., Rockwell, E., Moore, M., Waters, B., Cummings, P., Wilson, C. (1999): Obtaining active parental consent for evaluation research: a case study. *American Journal of Evaluation* **20**, 239-250.

Khangura, S., Konnyu, K., Cushman, R., Grimshaw, J. and Moher, D. (2012): Evidence summaries: the evolution of a rapid review approach. *Systematic Review* **1**, 10.

Ladin, L., Engle, K., Pardun, C. and Brown J. (2004): Accessing adolescents: a school-recruited, home-based approach to conduction media and health research. *The Journal of Early Adolescent* **24**, 144-158.

Leakey, T., Lunde, K., Hoga K. and Glanz, K. (2004): Written parental consent and the use of incentives in a youth smoking prevention trial: a case study from project SPLASH. *American Journal of Evaluation* **25**: 509-523.

MacGregor, E. and McNamara, J. (1995): Comparisons of return procedures involving mailed versus student-delivered parental consent forms. *Psychological Reports* **77**, 1113-1114.

McMorris, B.J., Clements, J., Evans-Whipp, T., Gangnes, D., Bond, L., Toumbourou, J.W. and Catalano, R.F. (2004): A comparison of methods to obtain active parental consent for an international student survey. *Evaluation Review* **28**, 64-83.

Morgan, M.Z. and Monaghan, N.P. (2014): Effect of second mailing for consent on child dental survey results. *Community Dental Health* **31**, 172-175.

Morioka, H., Itani, O., Kaneita, Y., Iwasa, H., Ikeda, M., Yamamoto, R., Osaki, Y., Kanda, H., Nakagome, S. and Ohida, T. (2014): Factors affecting unhappiness at school among Japanese adolescents: an epidemiological study. *PLoS One* **9**. doi.org/10.1371/journal.pone.0111844.

Morton, L.M., Cahill, J. and Hartge, P. (2006): Reporting participation in epidemiologic studies: a survey of practice. *American Journal of Epidemiology* **163**, 197-203.

Morton, S.M., Bandara, D.K., Robinson, E.M., and Carr, P.E. (2012): In the 21st Century, what is an acceptable response rate? *Australian New Zealand Journal of Public Health* **36**, 106-108.

Public Health England (2020): *National Dental Epidemiology. Programme for England: oral health survey of 5-year-olds 2019. A report on the variations in prevalence and severity of dental decay.* Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/873492/NDEP_for_England_OH_Survey_5yr_2019_v1.0.pdf.

Public Health England (2021): *National Dental Epidemiology Programme. Oral health survey of 5-year-old children 2021 to 2022: national protocol*. Available at: https://www.gov.uk/government/publications/oral-health-survey-of-5-year-old-children-national-protocol.

NHS Digital (2021): *National Child Management Programme.* Available at: https://digital.nhs.uk/services/national-child-measurement-programme/.

O'Donnell, L.N., Duran, R.H., San Doval, A., Breslin, M.J., Juhn G.M. and Stueve, A. (1997): Obtaining written parent permission for school-based health surveys of urban young adolescents. *Journal of Adolescent Health* **21**, 376-383.

Office for Oral Health Improvement and Disparities (2022): *Oral health. Information and resources to improve oral health and reduce inequalities in England*. Available at: https://www.gov.uk/government/collections/oral-health.

Page, M.J., McKenzie, J.E., Bossuyt, P.M., Boutron, I., Hoffmann, T.C., Mulrow, C.D., Shamseer, L., Tetzlaff, J.M., Akl, E.A., Brennan, S.E., Chou, R., Glanville, J., Grimshaw, J.M., Hróbjartsson, A., Lalu, M.M., Li, T., Loder, E.W., Mayo-Wilson, E., McDonald, S., McGuinness, L.A., Stewart, L.A., Thomas, J., Tricco, A.C., Welch, V.A., Whiting, P. and Moher, D. (2021): The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *British Medical Journal* **372**. https://doi.org/10.1136/bmj.n71

Schünemann, H., Higgins, J., Vist, G., Glasziou, P., Akl, E., Skoetz, N. and Guyatt, G. (2021): *Chapter 14: Completing "summary of findings" tables and grading the certainty of the evidence (GRADE)*. *Cochrane Handbook for Systematic Reviews of Interventions.* In: Higgins, J.P.T., Thomas, J., Chandler, J., Cumpston, M., Li, T., Page, M.J., Welch, V.A. (editors). *Cochrane Handbook for Systematic Reviews of Interventions* version 6.2 (updated February 2021). Available at: www.training.cochrane.org/handbook.

Spence, S., White, M., Adamson, A. and Matthews, J. (2015): Does the use of passive or active consent affect consent or completion rates, or dietary data quality? Repeat cross-sectional survey among school children aged 11–12 years. *BMJ Open* **5**. http://dx.doi.org/10.1136/bmjopen-2014-006457.

Ssenyonga, J., Magoba Muwonge C. and Hecker, T. (2019): Prevalence of family violence and mental health and their relation to peer victimization: A representative study of adolescent students in Southwestern Uganda. *Child Abuse and Neglect* **98**, 104194. https://doi: 10.1016/j.chiabu.2019.104194.

Stein, B.D., Jaycox, L.H., Langley, A., Kataoka, S.H., Wilkins W.S. and Wong, M. (2007): Active parental consent for a school-based community violence screening: comparing distribution methods. *Journal of School Health* **77**, 116-120.

Torstveit, M.K., Aagedal-Mortensen, K. and Stea, T.H. (2015): More than half of high school students report disordered eating: a cross sectional study among Norwegian boys and girls. *PLoS One* **10**, e0122681. https://doi: 10.1371/journal.pone.0122681.

Treweek, S., Lockhart, P., Pitkethly, M., Cook, J.A., Kjeldstrøm, M., Johansen, M., Taskila, T.K., Sullivan, F.M., Wilson, S., Jackson, C., Jones R. and Mitchell E.D. (2013): Methods to improve recruitment to randomised controlled trials: Cochrane systematic review and meta-analysis. *BMJ Open* **3**. Available at: https://bmjopen.bmj.com/content/3/2/e002360.

Tricco, A.C., Antony, J., Zarin, W., Strifler, L., Ghassemi, M., Ivory, J., Perrier, L., Hutton, B., Moher D. and Straus, S.E. (2015). A scoping review of rapid review methods. *BMC Medicine* **13**, 224. Available at: https://bmcmedicine.biomedcentral.com/articles/10.1186/s12916-015-0465-6.

Tung, C.S. and Middleman, A.B. (2005): An evaluation of school-level factors used in a successful school-based hepatitis B immunization initiative. *Journal of Adolescent Health* **37**, 61-68.

Welsh Assembly Government (2006): Welsh Health Circular 052. *Consent for school dental inspections and dental epidemiological surveys*. Cardiff: Welsh Assembly Government.

Wolfenden, L., Kypri, K., Freund, M. and Hodder, R. (2009): Obtaining active parental consent for school-based research: a guide for researchers. *Australian and New Zealand Journal of Public Health* **33**, 270-275.