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Process evaluation of a UK school-based alcohol intervention using the Behaviour Change Wheel Framework

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ABSTRACT

There are few process evaluations of school-based alcohol education programmes, especially examining teacher's role in implementation. Using a Behaviour Change Wheel (BCW) framework, this qualitative study identifies the barriers and enablers to teacher delivery of the Talk About Alcohol (TAA) programme in UK secondary schools and provides strategies for improvement in this context. Ten teachers were interviewed about influences on their delivery of the TAA programme. Interview transcripts were analysed thematically using the Theoretical Domains Framework (TDF) and then Behaviour Change Techniques (BCTs) were identified for optimisation. Key enablers included increased knowledge from training and resources, increased confidence and effective resource design. Barriers included social pressure on students and further training on complex issues related to alcohol use such as consent. Delivery was influenced by a range of positive enablers which can inform other school-based alcohol interventions. Strategies for optimisation include follow-up training sessions, notifications of new updates to the programme resources, training highlighting past successes for teachers and further action planning for students. This evaluation highlights how the BCW approach can be used to improve teacher implementation in educational research.

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Alcohol education; prevention; implementation, teacher delivery; COM-B model

Harmful use of alcohol can lead to a variety of negative health outcomes for young people, including impaired brain development, physical or mental health problems and alcohol-related injuries (Viner and Taylor 2007). While there has been a downward trend in the number of young people requiring treatment at drug and alcohol services for several years in the UK (Office for Health Improvement & Disparities 2022), early prevention must remain a priority given the potential for serious harm by drinking alcohol at a young age.

School-based interventions present a unique opportunity for early intervention, offering a clear point of access to adolescents (Hennessy and Tanner-Smith 2015). Talk About Alcohol (TAA) is one such school-based intervention (2020). An outcome evaluation of TAA found evidence of its effectiveness in delaying the onset of alcohol use in secondary

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school students in comparison to those attending control schools (Lynch, Dawson, and Worth 2014), however, there has yet to be a process evaluation.

A process evaluation investigates the way in which an intervention is implemented, providing valuable insights into how the intervention can be optimised and replicated in different contexts (Craig and Petticrew 2013). The present study aims to illuminate the influences on teacher delivery and provide key strategies to improve the implementation of TAA and similar interventions. Using the Behaviour Change Wheel (BCW) approach (Michie et al. 2014), we examine the barriers and enablers to teacher's delivery of TAA and then identify strategies for its optimisation.

Research background

Evidence regarding the effectiveness of school-based alcohol interventions has been contested over the last two decades. Despite claims that school-based alcohol prevention programs are ineffective (Babor 2010; World Health Organization 2009), later systematic reviews and meta-analyses have shown positive effects (Agabio et al. 2015; Foxcroft and Tsertsvadze 2012). Effectiveness may be increased by having a shorter-duration intervention, delivering the intervention online and including a parent-student component (Champion et al. 2013; Hennessy and Tanner-Smith 2015; Newton et al. 2017). Given variation in the reports of their effectiveness, a better understanding of the processes and implementation of school-based alcohol intervention programs are needed (Thom 2017).

In terms of implementation, delivery has been recommended for further evaluation in school-based alcohol interventions for some time (Foxcroft and Tsertsvadze 2012). Delivery can be defined as the features of an intervention that convey content to change human behaviour including the deliverer, format, materials, setting, intensity, tailoring, and style of the intervention (Dombrowski, O'Carroll, and Williams 2016). Despite often being the main deliverer of school-based interventions, teachers have been under-represented within this research (Davies 2016; Davies and Matley 2017).

Although the BCW was not used in the design of the TAA programme, it can be a useful tool in process evaluation, with the aim of optimising an existing intervention. As the delivery of an intervention is considered a behaviour, the BCW has been used in previous process evaluations to identify the influences on how an intervention is delivered and suggest implementation strategies for improved delivery (e.g. Moran & Gutman, 2021; De Winter & Gutman, 2022). Developed from 19 behaviour change frameworks, the BCW identifies the sources of a behaviour, intervention functions and policy categories (see Figure 1). At the centre of the BCW, the COM-B posits that capability, opportunity and motivation are necessary for behaviour change to occur. The Theoretical Domains Framework (TDF) provides more granular components of the COM-B domains (Michie et al. 2014). In a behavioural analysis, the COM-B model and TDF can be used to identify the barriers and enablers to a specific behaviour.

The Behaviour Change Techniques Taxonomy (BCTTv1) is a tool that can be used to suggest strategies to address barriers and enhance the enablers identified in the behavioural analysis (Michie, van Stralen, and West 2013). Behaviour Change Techniques (BCTs) are considered the 'active ingredients' of a behaviour change intervention. The BCW and BCTTv1 are linked through expert consensus, which shows which COM-B or TDF components are most likely to map onto certain BCTs (Michie et al. 2014).

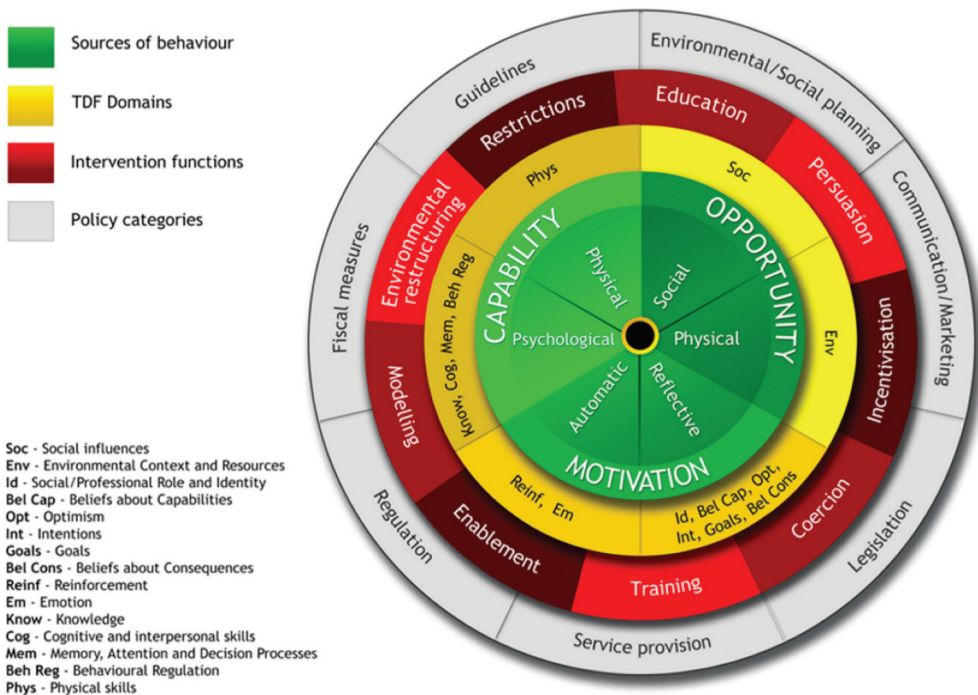


Figure 1. Behaviour Change Wheel (BCW) and Theoretical domains Framework (TDF), Michie et al, (2014).

Behaviour Change Techniques (BCTs) are listed within the BCTTv1 and some have already been incorporated into school-based interventions (Routen et al. 2017). An understanding of the influences on teacher delivery and the corresponding implementation strategies to enhance enablers and tackle potential barriers for improved teacher delivery can be used to optimise the design and delivery of TAA and similar school-based alcohol interventions.

Current study

The current study aims to address the existing research gap in school-based alcohol interventions with a process evaluation examining teacher implementation. Using the BCW framework, we focus on teacher delivery as a specific behaviour with the following research questions: 1. What are the barriers and enablers to teacher delivery of the TAA programme in UK secondary schools? 2. Which BCTs might be used to counter the barriers and enhance the enablers to improve teacher delivery of the TAA programme to secondary school students?

Methods

Ethical approval

The study was approved by the University College London (UCL) Research Ethics Committee on 25/05/22 (Project ID: 22633/001).

Talk about alcohol programme

TAA was designed by the Alcohol Education Trust, an independent, UK-based charity which aims to keep young people (mostly 11–25-year-olds) safe around alcohol and to tackle social norms and stereotypes (The Alcohol Education Trust 2020). Resources are provided free of charge for schools, though training is recommended for teachers to understand and implement them. The resources include lesson plans, a teacher workbook, activity cards and films (see Table 1 for a full list). In the Lynch et al., (2014) outcome evaluation, minimum requirements were set as to what teachers needed to deliver in order to be a part of the evaluation, including specific sections of the teacher workbook and one hour on the www.talkaboutalcohol.com website.

Participants

Participants were contacted via email by the Alcohol Education Trust using a convenience sampling approach. To be eligible for interview, participants must have either: a.) received training, b.) delivered the TAA resources or c.) coordinated or worked closely with colleagues who delivered the resources (for example, in the room during the training or delivery).

Table 1. Resources provided as part of the TAA programme.

Title	Description	Link
Teacher Workbook	100 pages of lesson plans, games and activities, organised by topic and year group	https://alcoholeducationtrust.org/teacher-area/download-teacher-workbook/
Lesson plans	Six fully planned lessons with accompanying PowerPoints Four lesson plans and accompanying guidance for children with moderate additional learning needs	https://alcoholeducationtrust.org/download-lesson-plans/
Alcohol and You Guide	A guide for young people including top tips and advice for staying safe around alcohol	https://alcoholeducationtrust.org/wp-content/uploads/2020/03/alcohol_and_you.pdf
Talking to Kids Guide	A guide for parents which includes information on topics such as units, guidelines, the effects of alcohol and the law	https://alcoholeducationtrust.org/wp-content/uploads/2015/04/ParentGuide.pdf
Activity Box	Laminated activity cards and BAFTA winning 'Just a Few Drinks' films, which is free of charge for those working with special educational needs (SEN) pupils or more vulnerable young people	https://alcoholeducationtrust.org/store/just-a-few-drinks-bafta-award-winning-4-short-films-dvd/
Alcohol Education Trust website	A website which contains more resources for teachers organised by topic and year group	www.alcoholeducationtrust.org
Talk About Alcohol website	A pupil-facing online learning zone including fun and engaging activities and games such as online nightclub, which allows pupils to learn to make safe choices around alcohol in a pupil-friendly way	www.talkaboutalcohol.com
Advice hub for 16–25 year olds	Provides advice on a range of topics including alcohol, drugs, mental health and money	www.life-stuff.org
Resources for FE Colleges and Sixth Forms	Includes detailed films on consent and the associations of alcohol with violence	https://alcoholeducationtrust.org/teacher-area/16plus/16-ice-breakers/

Note: Links to resources were provided by the Alcohol Education Trust. The programme was designed by the Alcohol Education Trust alongside teachers and specialists in PSHE. It takes a harm minimisation approach, is evidence-based and was piloted in 10 secondary schools across the UK before rollout. The intervention aligns with the outcomes of other previous alcohol interventions such as the School Health and Alcohol Harm Reduction Project SHAHRP (McKay et al. 2012) and the Information Psychosocial Competence Protection (IPSY) programme (Spaeth et al. 2010).

Table 2. Participants.

Participant	Role in school	Length of time using resources	Training	Delivered resources	Co-ordinated input of the programme
T1	Teacher and PSHE Lead	2 + years	Yes	Yes	No
T2	Teaching Assistant and PSHE Lead	1 year	Yes	Yes	No
T3	Teacher and Sixth Form Student Support Tutor	1 year	No	Yes	No
T4	Teacher	1 year	Yes	Yes	No
T5	Teacher	6 months	Yes	Yes	No
T6	Teaching Assistant	N/A	Yes	No	No
T7	Teacher and PSHE Lead	1 year	No	Yes	No
P1	Charity lead Facilitator	2 + years	No	Yes	No
P2	Administrative Assistant for SENDepartment	N/A	No	No	Yes
P3	Head of Student Services	N/A	No	No	Yes

Note: T- Teacher, P- Participant .

Participants were offered a £20 Amazon voucher. In line with previous qualitative studies using the BCW (Hennink and Kaiser 2022; Richiello, Mawdsley, and Gutman 2022), ten participants were interviewed (see Table 2).

Procedure

The COREQ (CONsolidated criteria for REporting Qualitative research) checklist was used to ensure accurate reporting in this study (Appendix A). Semi-structured qualitative interviews were conducted by the first author. Interview questions were based on the TDF (see Appendix B). Demographic information was not collected in this study as it was not deemed necessary to the research questions (Morse 2008). Interviews occurred online, lasted 30 to 50 minutes and were recorded using Microsoft Teams.

Analysis

All interviews were transcribed verbatim using Microsoft Stream. Reflexive thematic analysis was employed to identify barriers and enablers to delivery of TAA. Data were first coded deductively to the COM-B and TDF domains, followed by inductive coding to generate sub-themes by the first author. This sequencing of analysis can help to provide a more in-depth understanding of the influences on behaviour (Braun and Clarke, 2012) and has been used successfully in previous qualitative studies using the BCW (Moran & Gutman, 2021; De Winter & Gutman, 2022). The features of thematic analysis are not necessarily dependent on one epistemological or theoretical position (Braun and Clarke 2006). Therefore, this study is not attributed to any one epistemological standpoint but takes a pragmatic approach to qualitative research (Pistrang and Barker 2012).

A codebook was generated which contained all codes and definitions of the COM-B and TDF components to facilitate phase 3 of the analysis (see Appendix C). Codes were mapped deductively to the COM-B and TDF framework before being grouped and coded inductively to draw out common sub-themes. Inductive sub-themes were categorised as barriers or enablers to delivery. Using the Theories and Techniques Tool (<https://>

theoryandtechniquetool.humanbehaviourchange.org/) the final step involved mapping barriers and enablers onto BCTs. The APEASE criteria (Affordability, Practicability, Effectiveness and cost-effectiveness, Acceptability, Safety and side effects and Equity) were applied to identify the most appropriate BCTs for the context.

Results

Participants reported multiple influences on delivering the TAA programme. The majority of these were enablers relating to the COM-B components of psychological capability, physical opportunity and reflective motivation (see Figure 2). The least reported COM-B component was physical capability, suggesting this was not a necessary element to delivery of the TAA programme. A few participants suggested improvements to the training which have been framed as barriers and are discussed further in the results. COM-B components have been described as major themes while the TDF domains are represented by sub-themes. Eleven inductive sub-themes were generated via thematic analysis to offer more description and specificity, however, only details of the main findings have been reported here (see Table 3 for all definitions).

Psychological capability

Enabler: increased understanding from the resources or training

Participants described how the training and resources provided them with knowledge about alcohol, facilitating their programme delivery. This was often defined as specific content knowledge such as alcohol units or government guidelines on alcohol consumption. As well as content knowledge, several participants described gaining knowledge on the style of programme delivery in the TAA training.

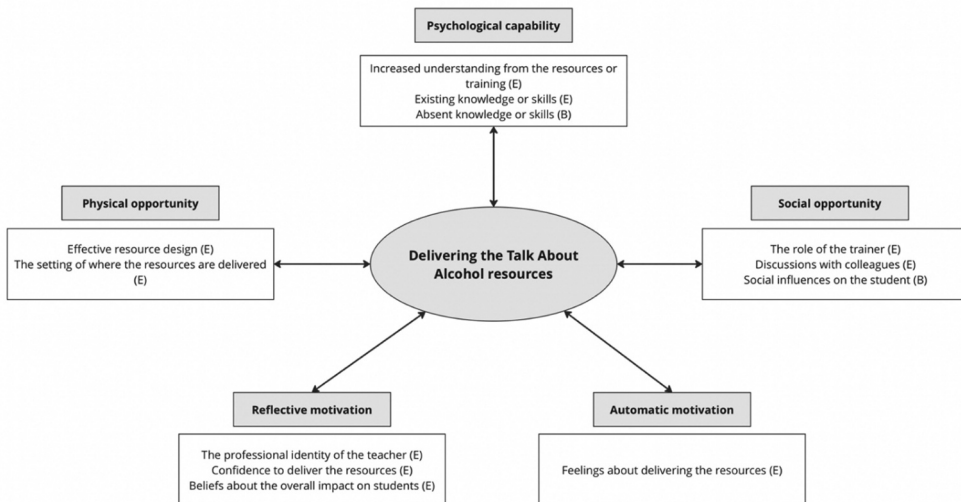


Figure 2. Map of themes: indicating the relationship between COM-B components with inductive sub-themes and the target behaviour.

Table 3. Inductive sub-themes identified as a barrier or enabler with a description of the sub-themes.

Inductive sub-theme	Barrier/ enabler	Description of sub-theme
Increased understanding from resources/training	<i>Enabler</i>	Gaining new knowledge of alcohol related content such as current legislation and alcohol units and how to deliver the resources effectively i.e. without judgment
Existing knowledge or skills	<i>Enabler</i>	Previous knowledge or skills of delivering PSHE lessons about alcohol to pupils; teachers may also bring personal knowledge of alcohol to the lessons
Absent knowledge or skills	<i>Barrier</i>	Knowledge or skills that teachers suggested for additional training on more complex issues related to alcohol use
Effective resource design	<i>Enabler</i>	Beneficial characteristics of how the resources were designed to enable effective delivery, for example, being up to date or easy to understand
The setting of where the resources are delivered	<i>Enabler</i>	Most lessons were delivered within a classroom setting, which helped to keep a consistent learning environment for the students
The role of the trainer	<i>Enabler</i>	Characteristics of the trainer that inspired or made teachers feel comfortable; teachers could also model the style of delivery used by the trainer
Discussions with colleagues	<i>Enabler</i>	Meetings or informal conversations between teaching staff regarding the delivery of the TAA resources and any changes to delivery that were made as a result of these conversations
Social influences on the student	<i>Barrier</i>	The wider context in which students interact with alcohol, for example, peer pressure, parent relationships with alcohol and social norms around alcohol
Confidence to deliver the resources	<i>Enabler</i>	Feeling prepared and comfortable in being able to deliver the resources; this is closely related with having sufficient knowledge to deliver the resources
Beliefs about the overall impact on students	<i>Enabler</i>	Teachers' beliefs about the effect of delivering the TAA resources to students, for example, equipping the students with better knowledge to make more informed decisions
Feelings about delivering the resources	<i>Enabler</i>	Teachers feel calm and optimistic and enjoy delivering these resources

Participants noted that this helped them to deliver information to the students without judgment or preaching. *'I suppose our job, we're, you know, we're not moral ethics teachers, we're just giving them the information, the signs and the information about how these things can impact the young people'* (T5).

Barrier: absent knowledge or skills

Some participants suggested additional information to include in the TAA training, such as understanding how to adapt the resources for different age groups and receiving more knowledge about issues surrounding alcohol and consent. As the consumption of alcohol can have an impact on an individual's ability to consent to sexual activity which has legal and traumatic implications, teachers felt it was important to discuss this with pupils to set clear guidelines. *'Having deeper training on consent stuff and how to deal with those traumatic things from a teacher's perspective, I think would be beneficial to teachers going forward'* (T3). Other suggestions included having an opportunity to debunk myths surrounding alcohol at the beginning of the training session. *'I think it would have been really nice to have just a little 5 or 10 minute slot to talk about myths about alcohol because I know there are so many social erm, like, like whether you should have spirits before beer'* (T6).

Physical opportunity

Enabler: effective resource design

Participants voiced numerous positive views about the design of the TAA resources, noting that this made them easier to deliver. It was reported that resources were up-to-date and accessible, which made teachers feel more secure in what they were teaching. *'I mean even, you know, spiking, they keep you up to date with everything now that spiking is coming in, so we're updated on facts and figures and ways to be careful ... which is really good'* (P1). Adaptability was another strong feature of the resources. Having flexible resources allowed teachers to tailor lessons to the specific needs of their students. Resources could be adapted based on the academic ability of students, the student's curriculum interests, or student involvement with alcohol outside of school. For example, one teacher explained how they could skip certain topics if they knew a child in their class had been having issues related to this at home. *"[The resource] wasn't scripted, you know. It's not like you've got to do this today, that today, that tomorrow like it is when you do some. If I thought for one minute that one of the kids had a bad time with the parents at home that evening, then I could completely skip that and do something completely different to that, we didn't have to look at effects of families on that day'*(T1).

Reflective motivation

Enabler: confidence to deliver resources

Participants mentioned how the training and resources themselves increased their confidence to deliver the materials. This was closely linked with knowledge. Many participants cited how being more informed led them to feel more equipped to deal with student questions and to feel confident they were delivering accurate and factual information. *'Yes, it definitely gave me more confidence being able to talk to students who might need to ask questions and like, I was already able to respond to them. Whereas before I might have had to go away and look up some information'*. (T2)

Barrier: social influences on the student

Some participants mentioned the social pressures students face around alcohol from peers or home. These were seen as obstacles to delivering the resources as they may go against some of the messaging around alcohol safety that teachers were trying to promote. Views of pupils were described as entrenched via social norms: *'It wasn't just the views of the young people, but it was actually, what they'd been brought up seen as being, you know, perfectly normal. And it's trying to get them to see from a different perspective and I think that's that is a really hard thing to do'* (T3). This translates into difficulty for teachers trying to counter what pupils may see as normal or desirable: *'It's a losing battle with teenagers, you know, the alcohol stuff, and you know, you're really running against the wind because, you know, you've got pressure from social culture. That's incredibly powerful'* (T5).

Table 4. Optimising the main enablers and remaining barriers to delivering the Talk about alcohol programme using Behaviour Change Techniques.

Inductive subtheme	COM-B Component	Selected BCT	Recommendation
Effective resource design	Physical opportunity	Adding objects to the environment	Regular updates with notifications and new materials for teachers using TAA resources
Increased understanding from the resources/ training	Psychological capability	Information about social and environmental consequences Information about health consequences	Increasing the intensity of training sessions by providing optional booster sessions at the beginning of a new academic year
Confidence to deliver resources	Reflective motivation	Credible source	A 'focus on past successes' section to top up training for teachers who have used the resources before
Absent knowledge or skills	Psychological capability	Information about social and environmental consequences Information about health consequences	Additional modules to top up training sessions or e-learning modules based on suggestions from teachers
Social influences on the student	Social opportunity	Action planning	Age appropriate first aid and CPR instruction combined alongside the TAA lesson plans to give students skills for real life scenarios

Optimisation of TAA

Building on these results, we may now consider how the three main enablers and two barriers for delivering the TAA resources can be optimised to improve the programme. In Table 4, relevant BCTs are selected for each enabler or barrier. Each of these are then discussed in detail in the discussion section.

Discussion

Using the BCW framework, this study identified the barriers and enablers to teachers' implementation of the TAA programme in UK secondary schools. For the most part, the participants noted positive aspects of the intervention, which facilitated their successful delivery. The main enablers were increased understanding from the resources and training, confidence to deliver the resources and effective resource design. The flexibility and accessibility of the resources were also noted, in line with the outcome evaluation (Lynch, Dawson, and Worth 2014). The barriers included absent knowledge or skills and social influences on the student which represent areas of potential improvement. The core themes and BCTs identified in Table 4 are discussed in further detail below.

Enabler: increased understanding from the resources or training

Improved psychological capability through resources and training enabled teachers to better deliver the TAA programme. In recent years, teachers reported having insufficient training and knowledge on PSHE topics including alcohol (Davies and Matley 2020), so this theme reflecting increased understanding highlights this aspect as a key strength of the intervention. 'Information about social and environmental consequences' was selected as an appropriate BCT to enhance this enabler. This is defined as 'providing

information (such as written, verbal or visual) about the social and environmental consequences of performing the behaviour'. This BCT already takes place within the initial training but in line with findings from Hoffman et al.'s TIDieR checklist (Hoffmann et al. 2014), the intensity of this training could be increased. An optional booster session at the beginning of a new academic year would increase the intensity of the training and act as a knowledge 'top up' for teachers, something found to be beneficial in previous school-based interventions (Reinke et al. 2014).

Enabler: effective resource design

Physical opportunity was increased through well-designed resources, specifically, being up-to-date, accessible and adaptive. Options to tailor an intervention is an important feature of delivery in Hoffman et al.'s TIDieR checklist (Hoffmann et al. 2014). Indeed, *not* being able to adapt a school-based intervention was reported by teachers as a barrier elsewhere in education literature (Arthur et al. 2011). To optimise the programme, 'adding objects to the environment' was selected as a BCT. This is defined in the BCTTv1 as 'adding objects to the environment in order to facilitate performance of the behaviour' (Michie, van Stralen, and West 2011). As teachers valued resources being up-to-date, regular updates and new materials could optimise the programme further. Notifications, perhaps through a newsletter, may help to increase positive support for the updated resources (Bell et al. 2020).

Enabler: confidence to deliver the resources

Increased reflective motivation gained through improved confidence was a key enabler of delivering TAA. Teachers reported that this increased confidence was directly associated with increased knowledge gained from training. 'Focus on past successes' was selected as an appropriate BCT, which is defined as 'advise to think about or list previous successes in performing the behaviour (or parts of it)' (Michie, van Stralen, and West 2011). Asking teachers who are already familiar with the programme to list past successes could be an effective way to sustain their confidence. This has been successful in previous interventions relating to physical activity (Koring et al. 2012). Focusing on past successes could be combined with the recommendation of top-up training sessions, allowing teachers to strengthen the link between their capability and motivation in a new academic year.

Barrier: absent knowledge or skills

A success of TAA was having teachers involved in the design of the intervention (Lynch, Dawson, and Worth 2014), something described as a vital component of school-based interventions more generally (Davies 2016). The programme could be optimised further by reviewing more recent suggestions from teachers. 'Information about social and environmental consequences' was selected as a relevant BCT. Suggestions made by teachers could be reviewed and added as extra modules to the training, delivered as part of top-up sessions or incorporated as e-learning modules. Evidence suggests that online training can effectively teach teachers to deliver evidence-based preventive interventions (Becker et al. 2014). Again, this could be combined with previous recommendations.

Barrier: social influences on the student

Teachers reported the context in which they delivered TAA was against student expectations and entrenched views on alcohol. Teachers felt they were competing with influences outside of school including friends, family and content from social media. ‘Action planning’ was selected as a relevant BCT, which is described as ‘prompting detailed planning of performance of the behaviour, the context of which may be environmental or internal’ (Michie, van Stralen, and West 2011). Role-play activities or games could be modified to include more concrete plans of action for real-life scenarios. One teacher described incorporating basic first aid skills into the intervention to give students practical strategies in emergency situations. This could be adapted into action planning and would meet calls for age-appropriate first aid and CPR instruction to be implemented in schools (Wilks and Pendergast 2017).

Limitations and next steps

By using a convenience sampling approach, this study may have inadvertently involved self-selection bias (Heckman, 1990). Those who chose to participate may have been more confident or wished to express positive views as a form of social desirability (Grimm 2010). Given the high number of enablers identified in this study, social desirability is a real possibility. Attempts were made to mitigate social desirability by including prompts in the interview script to stress the independent role of the researcher and to ask about any challenges or improvements to be made. Although demographic information about participants was not deemed necessary to collect for this study, it is acknowledged that including them could have highlighted another influence on teachers’ perceptions of enablers and barriers.

Building on the findings of this study, researchers may wish to carry out a cost-benefit analysis of the suggested improvements made using BCTs. This would have the benefit of assessing whether the suggestions are financially viable and may help policymakers develop a benefit-cost portfolio on alcohol interventions, as has been done in school-based interventions tackling obesity (An et al. 2018). Furthermore, future studies evaluating school-based evaluations using BCTs may also wish to consult the considerable literature in implementation science which has highlighted the complementarity between the Expert Recommendations for Implementing Change (ERIC) and BCTs (McHugh et al. 2022; Powell et al. 2015).

Conclusion

Using the BCW framework, this study extends current knowledge on conducting process evaluation of school-based interventions. This study further adds to the evidence-base through examining the influences on teacher delivery, which is an important component of school-based interventions that is often overlooked (Dombrowski, O’Carroll, and Williams 2016; Foxcroft and Tsertsvadze 2012). The findings underscore key features for successful teacher delivery of alcohol education including increased knowledge from training and resources, increased confidence and effective resource design. Suggestions

for optimisation include follow-up training sessions, notifications of new updates to resources and additional training focusing on past successes for teachers and action planning for students. Overall, this study offers a case study for the use of the BCW approach as a comprehensive and systematic method to characterize and improve teacher delivery of school-based interventions.

Disclosure statement

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Appendix A

COREQ (Consolidated criteria for REporting Qualitative research) Checklist

No.	Item	Description	Section #
Domain 1: Research team and reflexivity			
Personal characteristics			
1.	Interviewer/facilitator	Which author/s conducted the interview or focus group?	12
2.	Credentials	What were the researcher's credentials? <i>E.g. PhD, MD</i>	12
3.	Occupation	What was their occupation at the time of the study?	12
4.	Gender	Was the researcher male or female?	12
5.	Experience and training	What experience or training did the researcher have?	12
Relationship with participants			
6.	Relationship established	Was a relationship established prior to study commencement?	12
7.	Participant knowledge of the interviewer	What did the participants know about the researcher? <i>E.g. Personal goals, reasons for doing the research</i>	13
8.	Interviewer characteristics	What characteristics were reported about the interviewer/facilitator? <i>E.g. Bias, assumptions, reasons and interests in the research topic</i>	13
Domain 2: Study design			
Theoretical framework			
9.	Methodological orientation and theory	What methodological orientation was stated to underpin the study? <i>E.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis</i>	13
Participant selection			
10.	Sampling	How were participants selected? <i>E.g. purposive, convenience, consecutive, snowball</i>	10
11.	Method of approach	How were participants approached? <i>E.g. face-to-face, telephone, mail, email</i>	10
12.	Sample size	How many participants were in the study?	11
13.	Non-participation	How many people refused to participate or dropped out? What were the reasons for this?	11
Setting			
14.	Setting of data collection	Where was the data collected? <i>E.g. home, clinic, workplace</i>	12
15.	Presence of non-participants	Was anyone else present besides the participants and researchers?	12

16.	Description of sample	What are the important characteristics of the sample? <i>E.g. demographic data, date</i>	12
Data collection			
17.	Interview guide	Were questions, prompts, guides provided by the authors? Was it pilot tested?	12
18.	Repeat interviews	Were repeat interviews carried out? If yes, how many?	N/A
19.	Audio/visual recording	Did the research use audio or visual recording to collect the data?	10
20.	Field notes	Were field notes made during and/or after the interview or focus group?	14
21.	Duration	What was the duration of the interviews or focus group?	13
22.	Data saturation	Was data saturation discussed?	30
23.	Transcripts returned	Were transcripts returned to participants for comment and/or correction?	N/A
Domain 3: analysis and findings			
Data analysis			
24.	Number of data coders	How many data coders coded the data?	14
25.	Description of the coding tree	Did authors provide a description of the coding tree?	N/A
26.	Derivation of themes	Were themes identified in advance or derived from the data?	14
27.	Software	What software, if applicable, was used to manage the data?	14
28.	Participant checking	Did participants provide feedback on the findings?	N/A
Reporting			
29.	Quotations presented	Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? <i>E.g. Participant number</i>	18
30.	Data and findings consistent	Was there consistency between the data presented and the findings?	18
31.	Clarity of major themes	Were major themes clearly presented in the findings?	18
32.	Clarity of minor themes	Is there a description of diverse cases or discussion of minor themes?	18

Appendix B

Interview Questions

COM B domain	TDF domain	Interview question example
Psychological capability	Knowledge	(1) Can you talk to me about what kind of knowledge you needed to deliver these Talk About Alcohol resources? (2) Which topic areas could you have done with more knowledge in? (3) What did you learn on the training? Main takeaways?
Psychological capability	Skills	(1) Can you talk to me about the skills you needed to deliver these resources? (2) Did you receive training on those skills from the Alcohol Education Trust or were they pre existing?
Psychological capability	Memory, attention and decision processes	(1) Were you able to improvise with these resources? (2) Could the resources have been organized better to support that?
Reflective motivation	Beliefs about capabilities	(1) How confident did you feel about delivering the TAA resources and how could that have been improved?
Reflective motivation	Optimism	(1) How optimistic were you about delivering the resources? e.g. how optimistic were you that they would work/have some effect?
Reflective motivation	Beliefs about consequences	(1) What impact do you think that delivering the TAA programme would have for raising awareness about safety around alcohol?
Reflective motivation	Intentions	(1) Why did you decide to use the Talk About Alcohol resources?
Automatic motivation	Emotion	(1) How did you feel emotionally about delivering the workshops? (2) How did you feel about the resources?
Physical opportunity	Environmental context and resources	(1) To what extent did the classroom setting you were in facilitate or hinder your delivery of the TAA workshops? (2) Do you think it could be delivered better in another environment? (3) How many students did you typically deliver to?
Social opportunity	Social influences	(1) How did talking to others (such as your colleagues) effect how you delivered the intervention? For example, did you make any changes to anything?
N/A	N/A	Final question: In your opinion, what improvements could be made to either the training or the Talk About Alcohol resources themselves?

Appendix C

Codebook including COM-B components, TDF domains, Codes and Inductive Sub-themes

COM B	TDF	Codes	Inductive sub-theme
Psychological capability	Knowledge	New knowledge from training Prior knowledge before training Knowledge of own pupils Knowledge lacking	Increased understanding form the resources/training Existing knowledge or skills held Absent knowledge or skills
Psychological capability	Skills	Communication skills Teacher training skills Listening skills Facilitation skills ICT skills	Increased understanding form the resources/training
Physical opportunity	Environmental context and resources	Using a classroom setting Using a setting outside of the classroom Class size Who delivers the resources Resources prompt discussion Resource timings Resources are comprehensive Resources are kept up to date Resources were easy to adapt Resources were accessible Resources were age appropriate Adaptation based on: Age of students Adaptation based on: Time constraints Adaptation based on: Student experience Adaptation based on: Student preference Adaptation based on: Ability of students Adaptation based on: Class size Adaptation based on: Context of the local area Adaptation based on: Personal stories Adaptation based on: Teaching practical strategies	The setting of where the resources are delivered Features of the resources
Social opportunity	Social influences	Parental influences on student Social pressure on teenagers Signposting for parents Discussions with Headteacher Positive relationships with students Student feedback Recommending the resources to other teachers In-class conversations with staff who do not drink alcohol Discussing the programme with colleagues The trainer	The role of the trainer Discussions with colleagues Social influences on the student

(Continued)

(Continued).

COM B	TDF	Codes	Inductive sub-theme
Reflective motivation	Beliefs about capabilities	Confidence gained from training Confidence gained from resources Feeling able to ask questions during training Benefit of prior knowledge	Confidence to deliver the resources
Reflective motivation	Optimism	Optimism that the programme will have a positive impact on students Optimism that the programme is more effective than previous materials	Optimism about the impact of the resources
Reflective motivation	Beliefs about consequences	Students will gain more in-depth knowledge of alcohol Students will gain more knowledge of the law surrounding alcohol Students take alcohol more seriously Students will enjoy or engage with the resources Students have their beliefs affirmed Students will reduce their alcohol consumption Students were already familiar with role play Teachers can identify safeguarding issues Beliefs about the Teacher Handbook Being able to model what was done in the training Responsive team from AET Reflection on own alcohol consumption Suggested improvements for the training	Beliefs about the overall impact on students
Automatic motivation	Emotions	Feeling nervous Feeling concerned/worried for students Feelings about the training Feeling calmer Feeling prepared Enjoyment of using the resources Feeling optimistic about delivering the resources	Feelings about delivering the Talk About Alcohol resources