Research Involvement and Engagement

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# Co-producing school-based mental health interventions with young people, teachers, and schools: a case study

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## Abstract

**Background** Schools are a prime setting for the delivery of universal and targeted mental health interventions. Current school-based mental health interventions may not be developed to fully meet student mental health needs and co-production is needed to understand what young people really want. Despite this, research on school-based mental health interventions does not consistently engage in co-production, involving stakeholders, such as young people and schools, in the decision-making, development, evaluation and/or implementation stages. This highlights that transforming the development of school-based mental health interventions is crucial to meeting all stakeholders' needs. In this paper, we aim to briefly review an approach to co-production that can be used when conducting research on school-based mental health interventions that centre stakeholder voices to drive meaningful change. We describe a case study to showcase this approach.

**Main body** We highlight recommendations and important elements to consider for each stakeholder when engaging in different levels of co-production, including young people, teachers, and schools. We provide practical examples of how this may look like in practice, theoretical underpinnings, and impact on outcomes. Our case study of co-producing a talk to improve mental health literacy in secondary school students is highlighted to demonstrate how a group of young people, teachers, epidemiologist, psychiatrist, and researchers can work together to develop school-based mental health interventions.

**Conclusion** Co-production can be successfully conducted amongst researchers and stakeholders to develop school-based mental health interventions. Changes made to the talk were guided by synthesis of feedback that aligned with the balanced needs, perspectives, and opinions of all stakeholders. The use of this co-production approach in research on school-based mental health interventions with young people, teachers, and schools has important implications for research, service provision, and stakeholder empowerment.

## Plain English Summary

The aim of our project is to improve knowledge and awareness of mental health problems among young people by developing an interactive workshop and talk, which will be delivered in secondary schools. Our focus is on depression, anxiety and self-harm. These are the most common mental health problems experienced by young people, rates are rising, and they are leading causes of suicide. Evidence suggests that co-production needs to

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be at the core of the development of school-based mental health interventions. We recommend how and why we should work together with young people, teachers, and schools to co-produce school-based mental health interventions. For our project, we worked together with groups of young people, teachers, schools, clinicians, and researchers to develop the interactive talk. We met with them regularly to discuss what they think is important to include in the talk, how we present it in the talk, and any ways to improve it. Our experience was a successful one but as a field, we need to consider critically how we can carefully and productively engage in co-production to improve mental health research and young people's mental health.

**Keywords** Child and adolescent mental health, Co-production, School, Prevention

## Introduction

Young people spend most of their childhood and adolescence in schools which provide crucial opportunities for young people to develop socioemotional skills, knowledge, and understandings to navigate the world, explore their self-identity, and build meaningful connections. In the 2023/24 academic year, nearly 9.1 million pupils attended the 24,453 schools in England [1]. Schools and related-factors also explain up to 1–6% of the variation in students' mental health and wellbeing [2–4]. As they may play a direct role in youth mental health, schools are a prime setting for the delivery of universal and targeted mental health interventions. A recent national survey found that 23.3% of 11–16-year-olds reported having accessed mental health support at school [5]. Indeed, recent National Health Service England led strategies to improve young people's mental health have included mental health support in schools [6]. This includes the integration of mental health support staff who assist with the delivery of targeted interventions to at risk/vulnerable pupils, senior mental health leads, and a whole school approach in schools to promote mental health and wellbeing of students in England [7]. Still, there are barriers to the delivery of school-based mental health interventions, including organisational structure of the school, school goals and policies, training, and resources [8].

The current literature on school-based mental health interventions have shown how integrative care can be embedded within complex school systems to prevent and treat youth mental health problems. Mental health prevention programmes have been shown to effectively promote mental health literacy and socioemotional skills in both primary and secondary schools with benefits for wellbeing and educational attainment [9–11]. Interventions using universal, selective, or indicated approaches in school settings have shown promise in addressing youth outcomes such as depression, anxiety, self-esteem, stress, substance use, behavioural difficulties, post-traumatic stress, and self-harm [12–19]. Most of these interventions train school staff, such as teachers, to deliver these interventions which harnesses the workforce's unique skills and familiarisation of the students and classroom. However, a network meta-analysis of school-based interventions found little evidence of any intervention's effectiveness in preventing depression, and only for anxiety when compared to usual curriculum [20]. Some qualitative studies have even indicated potential harms experienced by interventions, such as being confused or frustrated by an intervention, or feeling distressed or worse after receiving the intervention [21–23]. On a population level, small negative effect sizes may still incur large consequences for young people [24]. This may suggest current school-based mental health interventions may not be developed to fully meet student mental health needs and co-production is needed to understand what stakeholders really want.

Co-production and patient and public involvement (PPI) is recognised as important for the quality and direct applicability of research [25] and integral in ensuring an intervention's effectiveness, acceptability, and feasibility. As INVOLVE, a UK public participation charity, put it, co-production is "built on the principle that those who are affected by a service are best placed to help design it" [26]. Despite this, research on school-based mental health interventions does not consistently engage in co-production, involving stakeholders, such as young people and schools, in the decision-making, development, evaluation and/or implementation stages. For example, the recent MYRIAD trial investigated the effectiveness of a universal school-based mindfulness training intervention (comprised of psychoeducation and mindfulness practices) compared with teaching-as-usual and found their intervention was not superior to teaching-as-usual in reducing the risk for depression, social-emotional-behavioural functioning, or wellbeing [27]. The authors also found outcomes that fared worse in the active intervention group compared to the control and suggested co-design of the intervention's content with young people may have improved acceptance and tolerance. A rapid realist review of interventions to promote inclusivity and acceptance of sexual and gender identities in schools guided by young people and teachers found that targeting organisational, structural, and training in schools may reduce discrimination and marginalisation of young people, with potential mental health benefits [28].

Although recent narratives rightfully so push for the involvement of young people [29], teachers, and school staff who spend the most time with students, these

stakeholders are often missed out of co-production initiatives. Without the involvement of stakeholders in research, intervention development is based on researchers' assumptions of young people's needs. We run the risk of missing out on potentially important mechanisms underlying school mental health problems and developing interventions that are not acceptable or feasible. There may be challenges attached to putting the responsibility on teachers to deliver school-based mental health interventions, such as increased burden and need for specialised training and support [30]. There is also a gap in skills and preparedness among teachers for delivering mental health-related content, which fosters limited confidence in teachers. These limitations may result in interventions that do not make meaningful change in young people's mental health, or worse, lead to distress or harm.

This highlights that transforming the development of school-based mental health interventions is crucial to meeting all stakeholders' needs. In the context of dire funding, and overstretched and understaffed schools, it is important to incorporate active groups of young people, teachers, and wider school systems in research. However, there needs to be better consensus on how every stakeholder's views and expertise are heard and used that complement the processes and structures of academic research. The emerging literature on co-production in school-based interventions for youth health suggests a need for better conceptualisation and reporting of co-production and its mechanisms still [31]. In this paper, we aim to briefly review an approach to co-production that can be used when conducting research on school-based mental health interventions that centre stakeholder voices to drive meaningful change. We describe a case study to showcase this approach.

**Table 1** Recommendations for young people, teachers, and schools when conducting co-production for school-based mental health interventions

| Stakeholder | Recommendations |
|---|---|
| Young people | Provide consistent structure, such as a core youth group, that is safe, has clear boundaries, and confidential. This may foster trust to share their needs, rapport with facilitators and other young people, independence, and confidence to participate. |
| | Provide training and support to ensure all young people can participate safely, regardless of prior skills or experience. |
| | Compensate fairly for their input and long-term engagement. |
| | Understand young people's perspectives of problems and their solutions, combined with existing research to strengthen and prioritise youth lived experience. |
| | Feedback adopted ideas to ensure young people feel listened to and empowered. |
| | Work with institutional and parental gatekeepers and local diverse communities to ensure inclusivity and representation of young people. |
| | Follow frameworks and tools to navigate and manage power dynamics. |
| Teachers | Invite teachers to participate based on their own capacity levels. |
| | Engage with school staff across all levels of roles, including school leadership and teaching staff to ensure plurality of perspectives and diversify expertise. |
| | Provide training to avoid overwhelming teachers. |
| | Understand teachers' responsibilities, goals, and needs to ensure longevity of intervention delivery. |
| | Incentivise and embed teacher involvement through local school frameworks and formal training structures. |
| Schools | Ensure intervention adheres to country-specific statutory guidelines and education legislation on what schools are required to deliver to students. |
| | Collaborate closely with governing bodies and school senior leadership to establish commitment to the intervention, facilitate whole school integration, and align with school ethos. |
| | Provide options that may preserve school resources, such as external intervention facilitators. |

## Co-production considerations

The INVOLVE definition of co-production stipulates that co-production is when researchers work together with the public on research in a way that respects and values all participating members' perspectives, skills, and expertise, clearly demarcates goals, responsibilities, and expectations, equalises hierarchical relationships and power dynamics, and develops and maintains good working relationships from research design and planning to analysis, write-up, and dissemination [32]. Previous co-production work on school-based mental health interventions for young people highlight the need to clearly outline key processes, tasks, and adoption of co-produced ideas, and implementation and evaluation of co-produced interventions in studies to demonstrate transparency of co-production and its impact [31]. Hence, we highlight recommendations and important elements to consider for each stakeholder when engaging in different levels of co-production (Table 1).

## Young people

Young people should be involved following co-production principles of shared power, decision-making, and accessibility by providing training. Working with young people and centring their voices and experiences facilitates the development of school-based mental health interventions which are important and relevant to them while identifying and preventing potential harms [29, 33–35]. Supporting young people in contributing to

research themselves also facilitates meaningful change in school mental health and their own behaviours [36].

Consistent structure should be provided, such as a core youth group that is used throughout co-production and every research stage, with rapport, boundaries, participation, and confidentiality integral throughout [37]. This means providing a safe and open space for young people to participate in with research facilitators who they can trust with sharing their needs. By having a consistent core group, young people are involved from the start, have a sense of ownership, and can build relationships and rapport among themselves and with researchers to participate more confidently. Roles and responsibilities should also be set initially, so young people can expect what their input will look like.

Young people should be provided with training and support to undertake research adequately and safely (e.g., addressing sensitive topics such as self-harm and suicide). This also ensures accessibility as young people should be able to contribute to co-production of an intervention regardless of prior skills [38]. They should be encouraged with incentives, such as vouchers, certificates, or academic acknowledgement, to ensure fair compensation for their input and long-term engagement in projects. Problem-setting with young people through consensus discussions, surveys, interviews, focus groups, or concept maps may facilitate brainstorming, analysis, and discussion of identified problems and their solutions [35, 36]. Here is a good opportunity for researchers to bring in prior research to collaboratively identify and prioritise issues in alignment with youth experiences [38].

Feedback of adopted ideas needs to be a key process so young people feel listened to, confident, empowered, and have school ownership [39]. Implementation of co-produced interventions and its impact on young people need to be explored and documented clearly, such as through pre- and post-outcome assessments (e.g., self-reported wellbeing or student wellbeing service use), surveys, and interviews (acceptability, feasibility, and potential mechanisms of change).

There is a lack of diversity in co-produced research with young people, especially those who are younger, disabled, have impairments, or from minoritised ethnic groups [40]. Strategies should be used to ensure a wide range of young people participate meaningfully, such as establishing quotas, purposive sampling, and working closely with institutional and parental gatekeepers and local diverse communities. Research teams should follow frameworks and tools, such as the COMPASS and MAPS heuristic tools [41], to navigate vulnerabilities and empower young people to achieve collective power.

### Teachers

Incorporating teachers' views and educational expertise in school-based mental health interventions is important as they are usually involved in the delivery of interventions and mental health-related lessons in the classroom [30] and are uniquely familiar with the mental health needs of students and the challenges in addressing them [42].

Allowing teachers to participate in the development of mental health interventions equips researchers with the added perspective rooted in teaching and critical pedagogy that teaches researchers how to maximise engagement, processing, and learning of key mental health-related skills in young people. Allowing interested teachers on an advisory level ensures they can input on curricula that complements what they are expected to deliver to students. Teachers should have the option to participate more actively if capacity allows, to prevent adding onto competing responsibilities. Discussions across the whole school body, including school leadership, can capture plurality of perspectives and levels of experience, and avoid teacher network fragmentation during research processes [43, 44]. Often, PSHE (personal, social, health and economic education) leads and senior leadership in schools use and adapt mental health materials from PSHE association programmes, so typically have knowledge of the components needed to develop high-quality, evidence-based curriculum for mental health.

If teachers are involved in further research activities, such as data collection or analysis, training should be provided to avoid overwhelming teachers [45]. Additionally, discussions around teachers' responsibilities, goals, and needs should be regularly facilitated to ensure alignment of the intervention with their role as educators. Importantly, the intervention needs to be acceptable for teachers and the classroom to ensure fidelity [46] and teacher involvement should be incentivised through local school frameworks for longevity of success [47]. Focus groups or interviews, used to assess implementation and evaluation of outcomes that feed into intervention modifications when necessary, should be integrated into formal teacher training structures/curriculum so involvement does not incur additional burden or pressure [48]. Around 35% of schools have external visitors who come into schools to deliver PSHE [49], research teams should work with teachers to understand if external facilitators of school-based mental health interventions are needed. This could reduce the high workload of teachers, as over 20% of educators spend one day a week delivering PSHE on top of teaching duties [49].

### Schools

Schools as a wider system should be core in the development processes to increase long-term outcomes and implementation of mental health interventions within schools. Perceiving the intervention as embedded within the school and its policies facilitates the intervention's acceptability [39]. From the beginning, the intervention should adhere to country-specific statutory guidelines on relationship and sex education (RSE) and health education to meet state requirements of what schools need to deliver to students [50]. Researchers need to collaborate with governing bodies and school senior leadership through formal meetings, as intervention feasibility is associated with school commitment throughout its development, implementation, and evaluation [51].

School resources need to be considered carefully in the intervention's planning; although many interventions rely on school staff to deliver interventions, this may make maintaining integration into routine school curricula difficult in the context of resource constraints and high workloads; teachers already face long days and fatigue and are focused on addressing actual classroom and educational challenges. Thus, researchers should develop a strong relationship with schools to engage intervention facilitators, such as researchers or people with experience working in schools or with young people [52].

Adoption, implementation, and evaluation outcomes should be assessed through objective measures, including educational attainment, student satisfaction, wellbeing and mental health, and use of services. Often, schools collect this data without academic guidance, leading to less precise insights. Adjusting data collection to align with both academic interests and young people's mental health needs would be useful. Moreover, integration of school-based mental health interventions in schools can require cultural shifts, so the need for whole school integration from the start can ensure interventions are developed that fit with educational legislation, school ethos, and meet psychosocial needs of young people sensitively.

### Case study: co-produced mental health literacy talk

Young people of secondary school age are developing an understanding of common mental health problems, their aetiology, and their prevention/treatment [53]. It is therefore imperative to foster an environment at school that supports their learning. This is referred to mental health literacy. This is a complex and multifaceted term that characterises knowledge about mental health and how it enables cognitions, affect, and behaviours that maintain and promote their mental health [54]. The lens we use in approaching mental health literacy as a concept is rooted in existing literature on health literacy in children and young people across their development and what help-seeking may look like in line with mental health care guidelines in the UK. A caveat of this is that it may not directly be borne out of what young people and other stakeholders may view as mental health literacy but should be examined in future.

Few existing universal mental health literacy programmes for UK schools are designed and delivered by mental health experts, use a standardised format that was co-produced by stakeholders, are freely available and accessible even for schools in deprived areas, and proactively engage schools [55], which are potential barriers to effective prevention. As part of public engagement between 2020 and 2022, researchers delivered presentations to four London schools, where GL had previously given talks, on common mental health problems, their causes, and treatment and prevention. Young people, teacher, and school feedback were positive and led us to expand the work to a co-produced mental health literacy talk in 2023. Our ongoing project aims to improve knowledge and awareness of mental health problems among young people by developing an interactive talk to be delivered in secondary schools focused on depression, anxiety, self-harm, and suicide. Specific content covered include mental health problems in young people, the importance of adolescence, its causes, research and evidence, and treatment and prevention. No ethics approval was required for this public engagement project, which was reviewed, approved, and funded by the UCL Institute of Mental Health committee.

We decided to engage in external-level co-production [31] as we wanted to harness capacity outside of the school through academic and clinical researchers to increase mental health knowledge among young people in schools. The theories of change we use are like previous studies that involve stakeholder and support them to actively participate in research activities [33–36]. We developed an interdisciplinary team of experts including a psychiatric epidemiologist, child and adolescent psychiatrist, youth mental health researcher, young person's advisory group, and advisory group of secondary school teachers. Stakeholder subgroups (young people, teachers, and epidemiologist/psychiatrist) separately met up online with researchers at regular intervals to discuss: (a) what are the key issues with youth mental health; (b) what needs to be covered in the talk; (c) how can we cover topics in the most effective and appropriate way; and (d) what needs to be improved or changed? The development of the talk was iterative and invited stakeholders to contribute to problem-setting and problem-solving to modify the intervention and its delivery. Young people were encouraged to share ideas and opinions on the talk through protected feedback time in the sessions. Adoption of feedback from previous discussions were presented at the start of each discussion to highlight

how young people's feedback contributed to changes in the talk.

The young person's advisory group was the ALPHA (Advice Leading to Public Health Advancement) young people group which consist of 14–25-year-olds living in Wales [56]. The young people are supported to input their lived experience, knowledge, insights, and research skills (training provided by DECIPHer, a research centre focused on supporting co-production work) on research. They particularly focused on what topics young people would find interesting and relevant to themselves, resonate with youth and school experiences, would be engaging in a classroom setting, and the accessibility of content. Examples of feedback included using colour and visuals in the presentation slides, simplifying statistical and epidemiological content, and inclusion of examples of real-life research.

The advisory group of teachers consisted of two secondary school teachers with an interest in mental health, varying levels of experience in education and youth work, and previous school leadership positions. Teachers were recruited during prior public engagement activities and were consulted at multiple timepoints about the issues in school mental health, how to use interactive and discussive elements to boost engagement, techniques and methods rooted in pedagogical theory to enhance student learning, and adherence to statutory guidelines for schools. A key point explicitly highlighted by teachers was the strength of not relying on teachers to initiate the talk during their busy schedules and often, limited resources.

Input from the research team consisted of three members with expertise in child and adolescent psychiatry, psychiatric epidemiology, and intervention development for youth mental health. Regular meetings were held to discuss feedback from youth and teacher groups and intervention development. Changes made to the talk were guided by synthesis of feedback that aligned with the balanced needs, perspectives, and opinions of all stakeholders. Importantly, clinical and research lenses were applied to the talk where day-to-day experiences of clinical services and the mental health landscape also informed the talk, such as the highlighting of youth engagement with social media and its impact on mental health and engagement with treatments as reported by young people service users.

There were also challenges that had to be managed and addressed. Firstly, young people and teachers may have to prioritise other competing responsibilities and events at short notice. To circumvent this best as possible, meetings and sessions would be booked in advance and around periods when stakeholders may have more time. Secondly, planning and facilitating co-production sessions was time and resource intensive. Securing funding to employ a researcher responsible to manage these tasks enabled the smooth conduct of the project. Thirdly, as the project spanned months, members of our stakeholder groups would be in different geographical locations. We relied on remote working to maximise participation across groups.

As this project is ongoing, we are focused on the implementation and evaluation of the talk next, which is still in the planning and development phase and will be published elsewhere. We have recruited more than 73 research and clinical staff in University College London, such as professors, consultant psychiatrists, trainee psychiatrists and clinical psychologists, trial managers, research assistants, and master's students, who are interested in being trained as facilitators to deliver this talk across secondary schools in the UK. Facilitator training will be brief and delivered remotely to ensure for accessibility and efficiency reasons. A script for the talk will also be provided to ensure intervention fidelity can be maintained and burden on volunteering facilitators are reduced. Discussions with interested schools will take place to prepare for rollout and implementation of the talk. Quantitative and qualitative data will be collected as part of the evaluation of outcomes in all stakeholders.

#### Implications and future directions

The use of this co-production approach in research on school-based mental health interventions with young people, teachers, and schools has important implications for research, service provision, and stakeholder empowerment. Mental health intervention development and evaluation research should be guided from the beginning by stakeholder perspectives, improving the accessibility, feasibility, tolerability, and engagement with interventions. This may protect young people from potential harms and ensure interventions are shaped by and for their use and benefit. This may also streamline the efficiency of research funding expenditure, particularly pertinent in the context of austerity in public finances [57]. It may also improve the way evidence-based mental health interventions are implemented in schools to ensure existing curricula and systems are not burdened with incongruent ways of working. Collaborative decision-making with all stakeholders, including teachers and school systems, will be key in facilitating the successful delivery of such programmes. Centring young people's voices in intervention research is not new, but a better approach in ensuring they can design content that targets their school environment and experiences is essential in improving student mental health.

## Conclusions

Future research needs to recognise the knowledge and unique contribution of each stakeholder to effectively co-produce external, individual, and systems-level capacity-building to improve the mental health landscape in schools. Theories of change, mechanisms, and outcomes of co-production work need to be core and reported in school-based mental health intervention development and research. There is more work that needs to be done to improve the school mental health landscape and the approach we take to address youth mental health collaboratively, innovatively, and effectively.

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**Author contributions**
GL and PR designed the project and acquired funding, with input from AF. BCFC, GL and PR led the development of the intervention. AF and MS provided input on the conduct of the project throughout. BCFC led the write-up of the paper with input from other authors. All authors read and approved the final manuscript.

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**Data availability**
No datasets were generated or analysed during the current study.

## Declarations

**Ethics approval and consent to participate**
This is a public engagement project and no primary data was collected for analysis. Thus, no ethical approval was required. The project was reviewed and approved by the UCL Institute of Mental Health committee.

**Consent for publication**
Not applicable.

**Competing interests**
The authors declare no competing interests.

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