



Conducting economic evaluations of mental health and wellbeing early intervention and prevention programmes: Learning and insights from a real-world implementation context

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At a glance

What are programme implementers' perspectives on collecting and using cost data?

What we found out

- Programme sites varied in terms of how much cost data they had collected, the extent to which they had begun planning or implementing local cost data analysis, and the degree to which they ascribed importance to cost data analysis as compared to impact data analysis.
- The relative importance of cost data collection, analysis, and presentation to programme implementors may be driven in part by their perceptions of audience priorities (such as those of schools, the community, or commissioners).
- Barriers to collecting and using cost data include the difficulties of costing a complex programme, contextual constraints, missing data, and the limitations of economic evaluation tools.

Why we did this study

Systematic reviews of economic evaluations have concluded that there is economic merit in funding mental health and wellbeing prevention and early intervention programmes for young people. However, their conclusions are limited by the relatively small number of economic evaluations that have been conducted, and the varying quality and diversity of evaluation methodologies.

Economic evaluations often take place within the context of randomised controlled trials (RCT). However, economic evaluations conducted within tightly controlled RCT settings may not generalise to real-world settings. More economic evaluations of prevention and early intervention programmes are needed to examine their costs, benefits, feasibility, and transferability across different contexts.

Staff working on the ground to deliver programmes are often best placed to collect and provide data on the costs, duration, and resource-use of activities to inform economic evaluations. Little is known to date however, about their perspective on economic evaluations, particularly their motives for engagement, and any barriers or facilitators that they may experience in a real-world implementation setting.

Why this is important

The cost of mental illness to the UK economy is estimated at £70-100 billion each year*. Mental disorders are rising among children and adolescents in the UK. Economic evaluations of prevention and early intervention programmes are important to ensure that public resources are spent on delivering cost-effective interventions, where costs are outweighed by benefits. Understanding barriers and facilitators for collecting and using cost data is needed to design robust economic evaluations.

What we did

We led group discussions with staff members at six sites in the fourth year of the HeadStart programme – a prevention and early intervention programme in schools to improve mental health among young people in England. We took detailed notes during the discussions about how HeadStart teams collected and used cost data. We analysed our data thematically to explore patterns across the sites in terms of their views and experiences.

What are the implications

Our findings speak to the **difficulties of imposing a systematic and standardised method for cost data analysis** in the context of real-world implementation of a complex, multi-area-level, prevention and early intervention programme.

Our findings have **implications for the future development of economic evaluation tools** intended for implementers to use in a real-world programme delivery setting. Economic evaluation tools should not be too time-consuming, complex, or burdensome for programme staff to use, and need to be compatible with the structure of the programme.

*Reference available in full report

Executive summary

Background

The total cost of mental illness to the UK economy is estimated at £70-100 billion each year (Davies, 2014). Recent statistics show that the prevalence of mental health disorders among children and adolescents in the UK is rising (NHS Digital, 2021). Thus, there is a need for prevention and early intervention programmes that can mitigate risk factors at an early stage in life, and promote positive mental health and wellbeing.

Conducting economic evaluations of prevention and early intervention programmes is important to ensure that public resources are spent on delivering cost-effective interventions, where their costs are outweighed by their benefits. Economic evaluations often take place within the context of randomised controlled trials (RCT) (Crowley, Hill, Kuklinski, & Jones, 2014). Yet, economic evaluations conducted within tightly controlled RCT settings may not generalise to real-world settings (e.g., Baltussen, Leidl, & Ament, 1999; Le e al., 2021). More economic evaluations of prevention and early intervention programmes in real-world settings are needed to examine their costs, benefits, feasibility, and transferability across different contexts (Crowley et al., 2014).

Staff working on the ground to deliver programmes are often best placed to collect and provide data on the costs, duration, and resource-use of activities to inform economic evaluation (Brodowski & Filene, 2009). Establishing programme staff or implementers' motives for engaging in economic evaluation, and examining the barriers and facilitators that they may experience in doing so, has implications for planning and designing economic evaluations that are feasible in real-world settings. However, to date, we know little about the process of collecting and using cost data from the perspective of programme implementers in this context.

Aim

This study aims to explore the process of collecting and using cost data from programme implementers' perspectives, in the context of delivering a prevention and early intervention programme in a real-world setting.

Research question

What are programme implementers' perspectives on collecting and using cost data in a real-world implementation setting?

This study presents findings from one example of an area-level, mental health- and wellbeing-focused, prevention and early intervention programme for young people in England: the HeadStart programme.

Started in 2016, HeadStart is a six-year, £67.4 million National Lottery funded programme set up by The National Lottery Community Fund. HeadStart aims to explore and test new ways to improve the mental health and wellbeing of young people aged 10 to 16 and prevent serious mental health issues from developing. The HeadStart partnerships are in the following locations in England: Blackpool; Cornwall; Hull; Kent; Newham; Wolverhampton.

Methods

Participants

The HeadStart national evaluation team led group discussions with a range of staff members at the six HeadStart partnerships in the fourth year of the programme. The discussions were about the partnerships' collection and use of cost data so far and their future plans in this area.

Data collection

The discussions took place between November 2019 and February 2020. Detailed notes were taken during the discussions by the evaluation team.

Data analysis

The notes from the discussions were then analysed thematically. Themes derived from the notes represented patterns across the discussions in the partnerships' views and experiences.

Results

We identified nine themes that described programme implementers' areas of interest with regard to economic evaluation, and their perceptions of barriers and facilitators to the collection and use of cost data.

1. Perceived importance of economic evaluation
2. Different types of analysis
3. Challenges inherent to HeadStart
4. Contextual constraints
5. Missing data
6. Perceived limitations of economic evaluation tool
7. Effective communication
8. Relationships and collaboration
9. Drawing on existing tools

By the fourth year of the programme, the HeadStart partnerships varied, in terms of how much cost data they had already collected, the extent to which they had begun planning or implementing local cost data analysis, and the degree to which they ascribed importance to cost data analysis as compared to impact data analysis.

The relative importance of cost data collection, analysis, and presentation may be driven in part by programme implementers' perceptions of audience priorities (such as those of schools, the community, or commissioners).

Barriers to collecting and using cost data included implementers' perceptions of the difficulties of costing a programme consisting of multiple layers of school- and community-based support and interventions for young people and families, delivered at targeted, universal, whole-school, and whole-system levels. Implementers also commented on the limitations of the tool that they had been provided with to economically evaluate their programmes at a local level. The difficulty of quantifying the potential long-term cost savings of the programme given the limits of its delivery period was also raised by implementers as a challenge.

Implications of these findings

Our findings speak to the difficulties of imposing a systematic and standardised method for cost data analysis in the context of real-world implementation of a complex, multi-area-level, prevention and early intervention programme. This reflects learning from implementation science research, which highlights the importance of employing approaches to economic evaluation in real-world implementation settings that are both rigorous and pragmatic (Eisman, Kilbourne, Dopp, Saldana, & Eisenberg, 2020).

Our findings have implications for the future development of economic evaluation tools intended for implementers to use in a real-world programme delivery setting. Economic evaluation tools should not be too time-consuming, complex, or burdensome for programme staff to use, and need to be compatible with the structure of the programme. Involving programme implementers in designing and interpreting economic evaluations can help to maximise buy-in, feasibility, understanding, and relevance.

Limitations

The degree to which the findings reflect the views of other HeadStart staff members who did not take part in the discussions, or the views of wider stakeholders within the HeadStart local areas, cannot be ascertained here. Likewise, the partnerships' progress around cost data collection and usage since these discussions took place is not captured here.

The findings presented here consist of themes derived from the notes made by the national evaluation team during the discussions with the partnerships. The notes represent what the evaluation team were able to capture during the discussions, with a subsequent quality check by partnership staff. The notes also represent what partnership staff involved in the discussions remembered to share and felt comfortable sharing at the time.

Introduction

The total cost of mental illness to the UK economy is estimated at £70-100 billion each year (Davies, 2014). Statistics show that the prevalence of mental disorders among children and adolescents in the UK is rising, with 1 in 6 young people aged 6-16 years old experiencing a mental disorder in 2021, compared to 1 in 9 in 2017 (NHS Digital, 2021). The Early Intervention Foundation (EIF) have calculated that nearly £17 billion is spent each year in England and Wales on 'late intervention' services that are required when young people experience significant difficulties in life, such as mental disorders, child abuse, and involvement in crime (Chowdry & Fitzsimons, 2016). Thus, there is a clear need for effective prevention and early intervention programmes that seek to mitigate risk factors at an early stage in life and promote positive mental health and wellbeing, in order to prevent escalation of difficulties and future struggles (Chowdry & Fitzsimons, 2016; Clarke & Lovewell, 2021).

At the same time, there is increasing impetus from the public and decisionmakers for public resources to be spent on delivering cost-effective interventions, where their costs are outweighed by their benefits (Crowley et al., 2018). Policymakers are increasingly requiring their funding decisions to be underpinned by information on economic costs and benefits (Crowley et al., 2018). The National Institute for Health and Care Excellence (NICE) in the UK, for example, requires formal evidence of cost-effectiveness to inform intervention funding decisions (Mihalopoulos & Chatterton, 2015). Systematic reviews of economic evaluations have concluded that there is economic merit in funding mental health and wellbeing prevention and early intervention programmes for young people (e.g., Feldman, Gebreslassie, Sampaio, Nystrand, & Ssegonja, 2021; Le et al., 2021). However, their conclusions are limited by the relatively small number of economic evaluations that have been conducted, and the varying quality and diversity of evaluation methodologies (e.g., Le et al., 2020; Schmidt et al., 2020).

Economic evaluations often take place within the context of randomised controlled trials (RCT)

(Crowley, Hill, Kuklinski, & Jones, 2014). However, economic evaluations conducted within tightly controlled RCT settings may not generalise to real-world settings (e.g., Baltussen, Leidl, & Ament, 1999; Le et al., 2021). Indeed, prevention and early intervention programmes are complex (Taylor, Drayton, & McBride, 2019). Complex interventions consist of multiple interacting components, which also interact with their context (Bonell, Prost, Melendez-Torres, Davey, & Hargreaves, 2021). This means that their effectiveness and costs will likely vary according to factors related to the context within which they are implemented, such as socioeconomic, environmental, and organisational factors (Bonell, Fletcher, Morton, Lorenc, & Moore, 2012). Thus, there is a need for more economic evaluations of preventive interventions for young people in real-world settings to examine their costs, benefits, feasibility, and transferability across different contexts (Crowley et al., 2014).

Yet, particularly in real-world implementation settings, evaluating interventions is complicated (Crowley et al., 2014). This is because, unlike in an RCT, the 'control' group in a real-world setting may receive no intervention or they may receive multiple other interventions, over which the researchers have no control (Crowley et al., 2014). Contexts will also vary considerably between intervention and non-intervention sites. Moreover, prevention and early intervention programmes may not only affect a range of outcomes for young people, but they may also affect the wider systems within which young people are situated, such as their families, schools, and communities (Crowley et al., 2018). In addition, it may only be possible to measure short-term costs and impact within the funded preventive intervention or evaluation timeframe, even though long-term follow-up will likely be necessary to truly ascertain the effectiveness of a preventive intervention (Le et al., 2021).

Staff working on the ground to deliver prevention and early intervention programmes are often best placed to collect and provide data on the costs, duration, and resource-use of activities to inform economic evaluation (Brodowski & Filene, 2009). However, to

date, we know little about the process of collecting and using cost data from the perspective of programme implementers. Establishing programme implementers' motives for engaging in economic evaluation, and examining the barriers and facilitators that they may experience in doing so, has implications for planning and designing economic evaluations that are feasible in real-world settings. Consequently, the aim of the present study was to draw on one example of an area-level, mental health- and wellbeing-focused, prevention and early intervention programme for young people in England, to qualitatively explore programme implementers' perspectives on collecting and using cost data in a real-world implementation setting.

Method

Setting for the study

Started in 2016, HeadStart is a six-year, £67.4 million National Lottery funded programme set up by The National Lottery Community Fund. HeadStart aims to explore and test new ways to improve the mental health and wellbeing of young people aged 10 to 16 and prevent serious mental health issues from developing. To do this, six local authority led HeadStart partnerships are working with local young people, schools, families, charities, community and public services to design and try out new interventions aiming to promote young people's mental health, wellbeing, and resilience. The HeadStart partnerships are in the following locations in England: Blackpool; Cornwall; Hull; Kent; Newham; Wolverhampton.

To facilitate the HeadStart partnerships in assessing whether their HeadStart programmes (and their constituent parts) represent value for money, a tool was developed and provided to the partnerships via the HeadStart national evaluation team in the first year of full programme delivery in 2017. The tool provided a framework for capturing cost data and comparing this to costs avoided (associated with outcomes achieved) for a given activity. It required staff at the partnerships to regularly collect and input multiple sources of data, including which interventions were received by young people, intervention costs, and intervention outcomes. The tool was intended for use within the partnerships' own local evaluations of HeadStart.

The national evaluation team led discussions with the HeadStart partnerships in the fourth year of the six-year programme, in late 2019 and early 2020, about their collection and use of cost data so far and their future plans in this area. The discussions were intended to facilitate the partnerships in reflecting on and developing their thinking around local economic evaluation in HeadStart, as well as to provide qualitative data for the national evaluation team about the process of collecting and using cost data in HeadStart. The qualitative findings from these discussions are presented here.

Participants

The national qualitative evaluation of HeadStart has received approval from the UCL Research Ethics Committee (ID number: 7963/002). The evaluation team invited staff at each HeadStart partnership to participate in a two-hour discussion about their collection and use of cost data in HeadStart. Table 1 shows which HeadStart staff members attended the discussion at each of the six partnerships.

Table 1.
[Attendees from the HeadStart partnerships at each cost data discussion](#)

HeadStart partnership	Attendees
Partnership 1	Programme lead Strategic lead Evaluation lead Wider team members
Partnership 2	Programme lead
Partnership 3	Programme lead Strategic lead Wider team members
Partnership 4	Programme lead Strategic lead Evaluation lead
Partnership 5	Programme lead
Partnership 6	Programme lead Strategic lead Evaluation lead

Note. Wider team members present at the discussions with Partnerships 1 and 3 included, for example, the leads of particular strands of HeadStart activity.

Data collection

The discussions took place between November 2019 and February 2020 and were facilitated by the qualitative research lead and another member of the national evaluation team whose role involved building the HeadStart partnerships' capacity for local evaluation. Participants were asked to read an opt-out consent form prior to the start of each discussion. The consent form stipulated that notes would be taken by the national evaluation team during the discussions, findings from the discussions would be published in reports, and that participants could opt-out of the discussions at any point, with their contributions withdrawn prior to publication. The identities of the partnerships and participants have been anonymised in any publications of the findings.

Data analysis

Each partnership was sent a copy of the detailed notes taken during the discussions by the evaluation team to edit, retain for their own use, and share with others as they wished. No edits were made to the notes by participants. The notes were then analysed thematically, facilitated by use of the NVivo qualitative data analysis software package. First, the notes from each discussion were coded, which involved giving descriptive labels or 'codes' to segments of text. Similar codes were then grouped together and collated to form nine themes, representing patterns across the discussions in the partnerships' views and experiences. The themes were organised into three overarching categories:

- 1) Areas of interest with regard to economic evaluation;
- 2) Barriers to collecting and using cost data;
- 3) Facilitators to collecting and using cost data.

Findings

Areas of interest

Theme 1 - Perceived importance of economic evaluation

All partnerships had been collecting or were planning to collate data on the actual cost of the programme. This included the cost per intervention, cost per child, cost per school, cost for resources, and staff costs. Some partnerships had already systematically collected data on the actual cost of all of their activities over the course of the programme. Others had more recently begun thinking about how best to collate cost data and implement local cost data analysis.

Reasons given by the partnerships for collecting and presenting data on the cost of the programme included: the importance of transparency with the local community about how much has been invested in HeadStart, what the outcomes have been, and what has been achieved; determining how much money is left in the programme budget, which could then inform decisions about whether to continue with an activity or not, or whether to allocate extra resource if needed; and planning around sustainability, such as in terms of informing commissioners about how much HeadStart services cost to deliver in the context of outcomes. However, for some partnerships where, from their perspective, HeadStart was already embedded within the local system, the presentation of cost data was perceived as less important than other data sources, such as impact data.

Theme 2 - Different types of analysis

The partnerships expressed interest in: a) determining what costs within the wider system they had succeeded in avoiding as a result of HeadStart; b) working out how much money HeadStart had been saving for other organisations (such as schools or health services) within the wider system; c) conducting cost-effectiveness or cost-benefit analysis to show value for money, such as through presenting cost data in the context of impact data.

Barriers

Theme 3 - Challenges inherent to HeadStart

Challenges raised by the partnerships in relation to

collecting and using cost data were either specific to particular partnerships (for example, working out how best to measure and present cost data from different intervention providers), or were associated with the set-up and remit of the HeadStart programme in general. Specifically, the partnerships spoke about the difficulties that they perceived in economically evaluating HeadStart, as a whole systems programme composed of multiple different types of support provision and mechanisms for cultural change.

Theme 4 - Contextual constraints

The partnerships described constraints within their local context that had affected their capacity and ability to collect and analyse cost data, such as delays in recruitment processes for new staff, or difficulties gaining access to additional data (such as from health services), which could be used to build the case for cost savings as a result of HeadStart.

Theme 5 - Missing data

Types of data that the partnerships were currently missing or struggling to collect included the 'behind the scenes' costs of the central partnership team and co-production activities (i.e., working in partnership with young people), as well as data illustrating the actual costs of particular elements of the programme, rather than estimates or projections. The partnerships also commented on the difficulty of quantifying the potential long-term cost savings of HeadStart given the limits of the funded programme delivery period, and the difficulty of pinning cost avoidance specifically to HeadStart, as one aspect of the wider system.

Theme 6 - Perceived limitations of economic evaluation tool

The initial economic evaluation tool proposed via the national evaluation team was ultimately perceived by the partnerships as being time-consuming to use, requiring the collection of additional burdensome data, and built on assumptions that may not be the best fit for HeadStart, such as incompatibility with its multi-layered, multi-intervention structure.

Facilitators

Theme 7 - Effective communication

The partnerships described how, for maximal utility, any cost data analysis findings that they communicated to others needed to be framed in such a way as to show their relevance to the local community and to particular organisations of interest, such as schools or commissioners. For example, in a schools context, cost data needs to be communicated in language that makes sense to schools (e.g., cost per pupil) and within the context of how HeadStart can positively influence academic attainment and pupil exclusion rates, as well as pupils' wellbeing.

Theme 8 - Relationships and collaboration

The partnerships described the role that building relationships and collaborating with others had in facilitating their collection and use of cost data. This included working closely with commissioned service providers to gather cost data from them, stability within the central partnership team (as understanding the complexity of the data and how the programme works may be more difficult for new staff members), and building relationships with commissioners over the course of the programme.

Theme 9 - Drawing on existing tools

The partnerships saw the advantages of drawing on existing tools to facilitate their collection and use of cost data. For some, this included the tool originally provided via the national evaluation team, which, though seen as potentially less suitable for facilitating cost data analysis in HeadStart, was still felt to be useful as a template for collating cost data and standardising this across commissioned service providers. Others expressed interest in being signposted to tools used by similar programmes.

Discussion

The aim of this study was to draw on HeadStart as an example of an area-level, mental health- and wellbeing-focused, prevention and early intervention programme for young people in England, to qualitatively explore programme implementers' perspectives on collecting and using cost data in a real-world implementation context. By the fourth year of the programme, the HeadStart partnerships varied in terms of how much cost data they had already collected, the extent to which they had begun planning or implementing local cost data analysis, and the degree to which they ascribed importance to cost data analysis as compared to impact data analysis.

The findings suggest that the relative importance of cost data collection, analysis, and presentation may be driven in part by programme implementers' perceptions of audience priorities (such as those of schools, the community, or commissioners). Indeed, where the programme was perceived as already embedded within the local system, the presentation of cost data was seen as less important than the presentation of impact data, for example. For others, the measurement and use of cost data was perceived as useful for transparency with stakeholders about programme investments and achievements, and planning for programme sustainability. Cost avoidance, cost saving, and cost-effectiveness or cost-benefit analysis were all of interest to implementers.

Barriers to collecting and using cost data included implementers' perceptions of the difficulties of costing a programme consisting of multiple layers of school- and community-based support and interventions for young people and families, delivered at targeted, universal, whole-school, and whole-system levels. Such issues are particularly pertinent for prevention and early intervention programmes, which tend to be composed of multiple interacting services and interventions, with multiple beneficiaries across the system and diverse outcomes (Crowley et al., 2018; Taylor et al., 2019).

Implementers also commented on the limitations of the tool that they had been provided with to economically evaluate their programmes at a local level. Our findings suggest that any tool developed

Limitations

to facilitate programme implementers in conducting local economic evaluation must be compatible with the structure of the programme. The tool also needs to balance facilitating robust cost data collection and enabling sites to make the case for future investment, with not being too time-consuming or burdensome for staff to use. The time-consuming nature of economic evaluation, and the resources and commitment needed by programme implementers (on top of their existing responsibilities) to be able to engage in such activities, were issues similarly cited by programme staff in a study of the process of conducting an economic evaluation of a child neglect prevention programme in the USA (Brodowski & Filene, 2009).

The difficulty of quantifying the potential long-term cost savings of the programme given the limits of its delivery period was also raised by implementers as a challenge to meaningful economic evaluation. Indeed, most existing economic evaluations of prevention and early intervention programmes do not account for long-term benefits (e.g., Le et al., 2021; Schmidt et al., 2020). Previous evaluations of another area-level, UK-based, early intervention programme for children and families – Sure Start - have demonstrated cost avoidance and savings well after the initial delivery period (e.g., Cattan, Conti, Farquharson, & Ginja, 2019; Cattan, Conti, Farquharson, Ginja, & Pecher, 2021). For example, Cattan et al. (2021) found that Sure Start reduced hospitalisations in childhood and adolescence, which offset approximately 31% of the original cost of providing Sure Start for children under the age of five. The multiple economic evaluations of Sure Start illustrate that complex programmes like this often require a number of different approaches to economic evaluation, including estimating potential cost savings or benefits based on robust existing research in the absence of actual cost data (particularly those in the long-term), and making comparisons to existing national datasets in the absence of comparison groups (e.g., Cattan et al., 2019, 2021; Meadows et al., 2011).

The findings presented here provide a snapshot of perspectives on and experiences of cost data collection and usage by staff at the HeadStart partnerships in the fourth year of the six-year HeadStart programme. The degree to which the findings reflect the views of other HeadStart staff members who did not take part in the discussions, or the views of wider stakeholders within the HeadStart local areas, cannot be ascertained here. Likewise, the partnerships' progress around cost data collection and usage since these discussions took place is not captured here.

The discussions with each partnership were not audio recorded. Instead, detailed notes were taken by the national evaluation team during the discussions and then shared with each partnership for their own records and use. Thus, the findings presented here consist of themes derived from the notes made by the national evaluation team. The notes represent what the evaluation team were able to capture during the discussions, with a subsequent quality check by partnership staff. The notes also represent what partnership staff involved in the discussions remembered to share and felt comfortable sharing at the time.

Conclusions

The findings from this study speak to the difficulties of imposing a systematic and standardised method for cost data analysis in the context of real-world implementation of a complex, multi-area-level, prevention and early intervention programme like HeadStart. Our findings reflect learning from implementation science research, which highlights the importance of employing approaches to economic evaluation in real-world implementation settings that are both rigorous and pragmatic (Eisman, Kilbourne, Dopp, Saldana, & Eisenberg, 2020). Drawing on the learning presented here, we propose the following key insights for policy and practice:

- To aid decision-making about economic evaluation methodology and scope, it is important to consider the intended audience and use of the evaluation for programme delivery staff, commissioners and policymakers, and evaluators.
- Economic evaluation tools should not be too time-consuming, complex, or burdensome for programme staff to use, and need to be compatible with the structure of the programme.
- Given the strains on capacity that cost data collection and usage can present for programme implementers, additional staff or hours could be costed into local programme budgets from the outset, specifically to facilitate economic evaluation.
- Involving programme implementers in designing and interpreting economic evaluations can help to maximise buy-in, feasibility, understanding, and relevance.
- Economic evaluations of prevention and early intervention programmes need to be able to account for both short- and long-term impact, as programme effects may not become apparent until after the programme delivery period.
- Cost data estimates for outcomes based on robust existing research, and comparisons with existing national datasets, can be used to facilitate cost data analysis in the event of missing or minimal data.

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