Psychology & Health

ISSN: (Print) (Online) Journal homepage: www.tandfonline.com/journals/gpsh20

Enhancing making every contact count (MECC) training and delivery for the third and social economy (TSE) sector: a strategic behavioural analysis

Beth Nichol, Catherine Haighton, Rob Wilson & Angela M. Rodrigues

To cite this article: Beth Nichol, Catherine Haighton, Rob Wilson & Angela M. Rodrigues (31 Jul 2024): Enhancing making every contact count (MECC) training and delivery for the third and social economy (TSE) sector: a strategic behavioural analysis, Psychology & Health, DOI: 10.1080/08870446.2024.2386289

To link to this article: https://doi.org/10.1080/08870446.2024.2386289

PSYCHOLOGY & HEALTH
https://doi.org/10.1080/08870446.2024.2386289

Enhancing making every contact count (MECC) training and delivery for the third and social economy (TSE) sector: a strategic behavioural analysis

Beth Nichol[a], Catherine Haighton[a], Rob Wilson[b] and Angela M. Rodrigues[c]

[a]Department of Social Work, Education, and Community Wellbeing, Northumbria University, Newcastle upon Tyne, UK; [b]Newcastle Business School, Northumbria University, Newcastle upon Tyne, UK; [c]Department of Psychology, Northumbria University, Newcastle upon Tyne, UK

ABSTRACT

Objective: To enhance Making Every Contact Count (MECC, an opportunistic approach to health promotion), training in the Third and Social Economy (TSE, all groups and organisations primarily working towards social justice, outside of the government or household) by examining the degree to which the behavioural content of MECC training tackled significant factors influencing MECC delivery.

Methods and Measures: A strategic behavioural analysis design. Semi-structured interviews with service providers ($n=15$) and users ($n=5$) were coded for barriers and facilitators of MECC delivery using the Theoretical Domains Framework (TDF). Existing MECC training was coded for behaviour change techniques (BCTs) and intervention functions (IFs). The degree to which BCTs and IFs addressed the key TDF domains of influences on MECC delivery in the TSE were examined using prespecified tools.

Results: Seven key TDF domains of influences in MECC delivery were identified. Overall, only 9/31 linked BCTs were utilised within MECC training, with percentage utilisation of relevant BCTs for each domain ranging from 0% to 66.7%. Training adequately addressed 2/7 key domains.

Conclusion: The TSE and healthcare share many common key TDF domains, although there are differences in how each are relevant. Limitations and recommendations for MECC training are discussed.

ARTICLE HISTORY
Received 4 December 2023
Accepted 24 July 2024

KEYWORDS
Making every contact count; strategic behavioural analysis; brief interventions; opportunistic behaviour change interventions; voluntary and community sector; third and social economy sector

Introduction

Noncommunicable diseases including cardiovascular diseases, cancer, diabetes, and mental illness account for around 74% of deaths worldwide (WHO, 2020). Interventions to target tobacco, alcohol, healthy diets, and physical activity are the top four 'best buys' in terms of return on investment (WHO, 2021), with interventions to reduce

CONTACT Beth Nichol bethany.nichol@northumbria.ac.uk Department of Social Work, Education, and Community Wellbeing, Northumbria University, Newcastle upon Tyne, UK.

Supplemental data for this article can be accessed online at https://doi.org/10.1080/08870446.2024.2386289.

smoking, alcohol consumption, and sodium intake accounting for almost two-thirds of the predicted health benefits of all interventions to reduce the impact of non-communicable diseases (Watkins et al., 2022). Whilst the statistics around the detrimental impact of noncommunicable diseases are driven by low and middle-income countries (WHO, 2020), all countries independent of income level are proposed to benefit from such 'best buy' policies and interventions (WHO, 2022).

Initially proposed by Public Health England (Public Health England, 2016), Making Every Contact Count (MECC) is an initiative that aims to address such health behaviours through very brief (delivery of information and or signposting, lasting seconds to a few minutes) or brief (a two-way discussion, lasting up to 30 min) opportunistic conversations (Public Health England, 2016). MECC draws upon behavioural science approaches including the COM-B model (Michie et al., 2011), which posits that capability, opportunity, and motivation are all necessary to achieve behaviour change, in particular aiming to increase recipients' psychological capability to change (Public Health England, 2016). Due to its opportunistic nature in that MECC makes use of existing interactions between service providers and users, MECC is a potentially cost-effective approach to health promotion and prevention (Public Health England, 2016). Although a solid evidence base for the effectiveness of MECC conversations on service user outcomes is sparse (Adam et al., 2020; Baird et al., 2014; Jarman et al., 2019; Lawrence et al., 2020), with available evidence indicating some improvement in sedentary behaviour and dietary quality in pregnant individuals (Adam et al., 2020), the justification for MECC builds upon the effectiveness of brief interventions to address smoking (DiClemente et al., 2017), alcohol (Chisholm et al., 2018), physical activity (Vijay et al., 2016), and diet (Whatnall et al., 2018). Furthermore, one study published in the Lancet of two opportunistic very brief interventions lasting less than 30 s reported significant reduction in weight, particularly when providing support rather than advice alone (Aveyard et al., 2016). More recently, MECC has been expanded to incorporate wider topics including mental health and the social determinants of health, described under the umbrella term of MECC plus (Public Health England, 2016).

It has been demonstrated that MECC delivery within healthcare settings is acceptable to both service providers and users (Hollis et al., 2021; Jarman et al., 2019; Keyworth et al., 2021; Parchment et al., 2023), facilitated by the perception of MECC as an integral and not additional part of one's role (Chisholm et al., 2019; Haighton et al., 2021; Meade et al., 2023; Parchment et al., 2023), support from senior leadership and management (Parchment et al., 2021; Rodrigues et al., under review), and a shift in organisational culture towards health promotion (Keyworth et al., 2019; Parchment et al., 2022; Rodrigues et al., under review). However, the most prominent barrier is time (Awan et al., 2020; Haighton et al., 2021; Keyworth et al., 2019; Parchment et al., 2021; 2022; Tinati et al., 2012), with MECC delivery further hindered if not perceived as part of service providers' role (Keyworth et al., 2019; Parchment et al., 2021; Vogt et al., 2023), confidence to deliver MECC is low (Keyworth et al., 2019; Parchment et al., 2021; Tinati et al., 2012), service users are perceived as not ready to change (Keyworth et al., 2019; Parchment et al., 2022), and little organisational support is received (Keyworth et al., 2019; Parchment et al., 2022).

More recently, MECC funding and training roll-out has supported the implementation of MECC outside of healthcare settings including the Third and Social Economy (TSE) sector (Harrison et al., 2022), which describes all groups and organisations that operate outside of the family and government whose primary aim is social justice (Salamon & Sokolowski, 2016). The TSE is also described as the voluntary and community sector and encapsulates all formal and informal groups and organisations with a social mission including charities, faith-based settings, food banks or pantries, mutual aid groups, and social enterprises, cooperatives, and mutuals where social justice is prioritised over profit (Salamon & Sokolowski, 2016). In support of this broader implementation of MECC to include the TSE, a systematic review of brief interventions within the TSE found some evidence for smoking reduction for recipients, with motivational interviewing the most promising mechanism, although evidence to support effectiveness for alcohol, diet, and physical activity is needed (Nichol et al., 2023). Specifically, MECC plus may be particularly relevant for the TSE that addresses a variety of physical, psychological, and social needs. Implementation of MECC within the TSE may be optimal for a number of reasons. Firstly, building rapport and a relationship with service users is repeatedly reported as a facilitator to MECC delivery (Haighton et al., 2021; Parchment et al., 2021), and service providers within TSE settings have time to build such relationships through repeated interaction (Harrison et al., 2022). Furthermore, as TSE settings are supported by volunteers and volunteering has been demonstrated to provide a myriad of health and wellbeing benefits for volunteers (Nichol et al., 2023), MECC delivery within the TSE could potentially provide a two-fold benefit to both the recipient and deliverer. Finally, another key barrier within healthcare settings is that health promotion is not perceived as their role, or diagnosis and treatment is at least prioritised (Haighton et al., 2021). In contrast, TSE settings most often incorporate a holistic perspective of health and wellbeing lending itself to MECC delivery, particularly MECC plus. However, to the authors' knowledge, only one evaluation of MECC within the TSE exists (Harrison et al., 2022). Although common barriers to healthcare included time, lack of perceived relevance to one's role, and reluctance of service users to change, unique challenges included funding instability and uncertainty, wider circumstances of service users, and the need for long term support (Harrison et al., 2022). However, no existing literature has explored whether such challenges are addressed by MECC training when considered as an intervention.

A strategic behavioural analysis (SBA) is a methodology that utilises behaviour change science to evaluate existing interventions in terms of whether they appropriately address the target behavioural problem (Haighton et al., 2021). Specifically, the Behaviour Change Wheel (BCW) (Michie et al., 2014) is a tool used to build interventions in accordance with the target behavioural problem but may also be utilised to assess existing interventions to ensure their optimisation and that they are fit for purpose. Existing interventions can be coded for their active components, using the 93 empirically identified behaviour change techniques (BCTs) (Michie et al., 2013), and compared against the barriers and facilitators identified to conducting the target behaviour. Barriers and facilitators can be identified using the Theoretical Domain Framework (TDF) (Cane et al., 2012), which identify 14 domains that are congruent with capability, opportunity, or motivation to perform the target behaviour.

The TDF is advantageous for providing more specific guidance on the influences of behaviour than capability, opportunity, and motivation and is widely applied to evaluate the implementation of interventions (Atkins et al., 2017). Existing tools (project Hbc) that explore links between individual BCTs (identifying active components of an intervention) and TDF domains (identifying barriers and facilitators to performing a behaviour or engaging in the intervention) can be applied to compare both stages of analysis, to identify whether the existing intervention efficiently addresses the relevant barriers to the target behaviour, or if there are missed opportunities to optimise the efficacy of the intervention.

One existing SBA conducted a systematic review to identify barriers and facilitators to MECC delivery and mapped them onto existing MECC training within healthcare nationally (Haighton et al., 2021). The SBA found that MECC training mostly missed opportunities to address the most relevant TDF domains. Another scoping review coded barriers and facilitators to MECC delivery using the TDF. Within both existing analyses of MECC utilising the TDF as a framework, Environmental Context and Resources was ranked as most relevant (Haighton et al., 2021; Parchment et al., 2021), particularly as a barrier (Haighton et al., 2021). However, both existing analyses only included healthcare settings. Given the aforementioned differences in the barriers and facilitators of MECC delivery within the TSE, there is a need to assess available MECC training for its suitability within these novel settings, as it is likely that an alternate approach to MECC training is needed. Furthermore, the existing SBA did not include MECC plus training interventions (Haighton et al., 2021), which are increasingly utilised particularly outside of healthcare settings.

Thus, the aim of the current study was to identify the barriers and facilitators to MECC delivery within the TSE and assess whether current training sufficiently addressed them, informing future funding and training in this area. For example, given that most service providers from the TSE do not have a healthcare background, they are potentially lacking in the knowledge and skills related to health promotion needed to deliver MECC and thus may require more intensive training compared to healthcare professionals. Implementation of MECC outside of healthcare is particularly established in the North East and North Cumbria (NENC) region, including the TSE (Harrison et al., 2022). Although regional approaches vary, within the NENC a blanket approach to MECC training is adopted whereby the MECC training programme offered to service providers across healthcare, local authority, and the TSE is fundamentally the same, although the specific topics and examples may be tailored to the sector (Rodrigues et al., under review). For example, MECC training for the TSE sector may focus more on the social determinants of health and show an example of a MECC conversation within a TSE setting. NENC is also a diverse area with services facing challenges relevant to UK overall and beyond including rurality and associated challenges in accessing services (Thirkle et al., 2023), widening health inequalities regionally and between other regions (Corris et al., 2020), and instability of funding (Harrison et al., 2022). Thus, the NENC was identified as an appropriate and comprehensive scope for such an evaluation. Furthermore, it was of particular importance that any evaluation included the service user voice, often excluded from MECC research (Parchment et al., 2021).

Methods

The protocol for the current study was pre-registered prior to recruitment *via* Open Science Framework (available: https://doi.org/10.17605/OSF.IO/45JYG). Given that research on the application of MECC within the TSE is in its infancy, a qualitative design was selected as the most appropriate for assessment of barriers and facilitators to allow for emergent findings and in-depth understanding. Primary (interviews) and secondary (training resources) data were analysed for TDF domains and BCTs, respectively. Next, existing tools that explore links between TDF domains and BCTs were applied to identify ways to enhance MECC training in the TSE by examining the degree to which the current MECC training tackles the key factors influencing MECC delivery. The study included three distinct stages to achieve this overall aim;

1. Identification of barriers and facilitators to MECC delivery within the TSE using the TDF
2. Identification of active components (BCTs) within current MECC training offered to the TSE
3. Mapping of the most relevant barriers and facilitators against the active components (BCTs) utilised within the current MECC training, to identify suitability and missed or utilised ities

Patient and public involvement

A person and patient involvement (PPI) panel was formed after the research questions were formed to inform on the topic guides and recruitment strategy and consisted of three service providers from different TSE organisations, recruited through existing connections with the primary researcher (BN) and a social media (e.g. X) advertisement. As a result of the panel meeting, topic guides were amended to define brief interventions and MECC, specifically prompt about the impact of COVID-19 on health and wellbeing conversations, probe about relevant training received in other roles. Additionally, topic guides were piloted and amended prior to interviews.

Stage one: Identification of barriers and facilitators to MECC delivery within the TSE

Participants

Semi-structured one-to-one interviews were conducted with service providers ($n = 15$) and users ($n = 5$) between August 2022 to January 2023. The sampling strategy included purposive, to select a wide breadth of TSE settings, convenience, to optimise existing relationships with service providers from the TSE, and snowball, to gain access to service users. Consequently, the recruitment strategy targeted numerous TSE groups and organisations through social media, advertising *via* a recruitment poster on site, word of mouth, and site visits. A comprehensive description of the participants is available elsewhere, within an additional paper describing a reflexive thematic analysis of the data (Nichol et al., under review). Service users accessed services relating to IT and employment skills ($n = 2$), parenting groups ($n = 2$) or charity groups relating to mental health and chronic conditions ($n = 1$). Service providers were from a variety

of TSE groups and organisations including charities ($n = 8$), youth clubs ($n = 2$), faith-based settings ($n = 3$), informal groups ($n = 1$) and a food bank ($n = 1$). Service providers were volunteers ($n = 7$) or paid workers ($n = 8$), and all participants (8 male, 11 female, and 1 Agender, trans, and non-binary) were from a range of rural ($n = 7$) and urban ($n = 13$) settings from across the NENC. The current study aimed to assess a need for MECC training within the TSE including whether health and wellbeing conversations already occur, thus only three service providers had received MECC training (two of which also delivered MECC training). In line with the model of information power (Malterud et al., 2016), the sample size was estimated from the aim, specificity of sample, use of theory, interviews, and analysis strategy. As the aim was relatively broad, sampling mixed, analysis used an established theoretical framework and took a critical realist approach, and rapport was often already established prior to interview although the primary researcher was new to interviewing, the estimated total required sample size was 20.

Materials

Topic guides were informed by the Theoretical Domains Framework (TDF) and explored conversations around health and wellbeing and the social determinants more generally, only using the term MECC if participants were already familiar with it. The TDF was originally developed to apply to healthcare professionals to better understand their behaviour (Atkins et al., 2017). However, the TDF is also often applied to all relevant stakeholders including service users to develop and evaluate interventions (Cowdell & Dyson, 2019; Rodrigues et al., 2020), particularly when the aim is to improve the implementation and delivery of an intervention that ultimately aims to change service user behaviour (Rodrigues et al., 2020) as in the current study. The semi-structured topic guides (published elsewhere, see Nichol et al. (Nichol et al., under review)) were tailored for service users or providers, although depending on whether there was a clear distinction between both groups within the organisation or group, the guides were used flexibly and in a less binary way. Topic guides asked explicitly about health conversations around alcohol, diet, physical activity and smoking, and the social determinants of health such as finance and housing. They explored the types of conversations within the TSE, the barriers and facilitators to health and wellbeing conversations, what service users or providers would like to see from the organisation or group in the future, and the identification of training that might facilitate such health and wellbeing conversations.

Procedure

Interviews were conducted online ($n = 9$) or in-person ($n = 11$) at the preference of the participants. To encourage recruitment and recognise the time commitment, service users were provided with a £15 Amazon voucher as a reimbursement. Interviews were audio-recorded, transcribed verbatim, and fully anonymised on transcription.

Data analysis

Analysis was conducted *via* NVivo by the primary researcher (BN). To optimise the distinct advantages of two different data analysis methods, a blended approach to qualitative analysis was adopted (Neuendorf, 2018) whereby transcripts were first coded deductively through content analysis, then inductively using thematic analysis (Atkins et al., 2020). First, a directed content analysis (Hsieh & Shannon, 2005) was applied using the TDF (Cane et al., 2012) as a coding scheme. Coding followed the target behaviour of MECC or 'MECC-like' conversations (conversations judged to resemble MECC that occurred in settings that had not received MECC training), and the target individual of anyone (including conversations between service providers, users, and conversations service providers discussed outside of these parameters). The description of MECC-like conversations was any opportunistic conversation around health and wellbeing or the social determinants. Opportunistic was defined by the authors as either the deliverer initiating the conversation or seizing an opportunity within an existing conversation to discuss health and wellbeing or the social determinants with the recipient. Codes were further sorted into barriers and facilitators within each TDF domain and frequencies calculated accordingly. Next, the codes for each TDF domain were further analysed for subthemes using reflexive thematic analysis (Braun & Clarke, 2006). Thematic analysis was selected as an additional analysis to promote an in-depth understanding of the challenges and enablers within each domain through incorporating contextual and relational elements of the data. Reflexive notes were kept throughout interviews and content and thematic analysis. Additionally, the nature of MECC or 'MECC-like' conversations within the TSE were also coded and used to complete the Template for Intervention Description and Replication (TIDieR) checklist (Hoffmann et al., 2014) (Table 1). TDF domains were firstly ranked according to their frequency (number of transcripts), elaboration (number of themes), and conflict within domains (e.g. some report an abundance and other report a lack of resources). From this ranking exercise, seven key domains were identified to include within stage two of the mapping analysis.

A second author (AMR) independently coded the TDF domains of 10% of transcripts to check for inter-coder reliability, calculated using a Cohen's Kappa statistic (Weatherson et al., 2017) and compared against the conservative parameters by Altman (Altman, 1990). Specifically, presence of coding for each TDF domain within a transcript was noted as 'yes' or 'no' for each reviewer. Furthermore, agreement was assessed qualitatively by ensuring coding occurred at the same area of transcript, with any disagreement resolved through discussion. If the Kappa statistic was initially judged as 'Poor' (under .20), it was defined in the pre-registration that the second rater (AMR) would code a further 10% of transcripts until the Kappa statistic exceeded .20. The inter-rater agreement for coding of TDF domains was poor ($\kappa = .133$, $p = .283$). Thus, the primary researcher (BN) re-evaluated all coding. After re-coding, the second researcher (AMR) coded another 10% of transcripts, which demonstrated inter rater reliability to be good ($\kappa = .632$, $p = <.001$) indicating a dramatic improvement in consistency across raters.

To gain an in-depth understanding of the acceptability of health and wellbeing conversations within the TSE, a completely inductive reflexive thematic analysis was

Table 1. Description of MECC modules.

TIDieR checklist item	Description of intervention:
Name of the intervention	MECC essential (Core MECC) and additional (the remaining) modules for NENC regional offer
Why	Modules generally set out the justification for MECC (e.g. health inequalities, theories of behaviour change) before explaining how MECC can be delivered
What	Core MECC: Background of policy context of MECC, health inequalities, and behaviour change theories, description of MECC as a brief or very brief approach and its benefits, and talks through the five core health behaviours (alcohol, smoking, diet, physical activity, and mental health) and health risks and conversation starters for each. Acknowledges barriers to MECC conversations. Works through the 3 As (Ask, Assist, Act) approach and provides examples for each. Provides details of signposting resources (e.g. MECC gateway). A slide asks attendees to identify recent opportunities to apply MECC. Additional resources: video of a MECC conversation and written case studies, asking attendees how they might respond. MECC and Financial Wellbeing: Bolt on training the above Core MECC training. Bitesize training that includes information around financial wellbeing and the link between money and mental health, benefits of discussing money, conversation starters and guidance on discussing money, a case study, and links to Money Helper and other signposting resources (e.g. MECC gateway). Works through the 3 As (Ask, Assist, Act) approach and provides examples for each. Additional resources: case study MECC and Social Isolation: Bolt on training the above Core MECC training. Background of policy context of MECC, health inequalities, and behaviour change theories, description of MECC as a brief or very brief approach and its benefits, provides videos of a MECC conversation around social isolation. Acknowledges barriers to MECC conversations. Works through the 3 As (Ask, Assist, Act) approach and provides examples for each. A slide asks attendees to identify recent opportunities to apply MECC. Signposts to MECC gateway. Additional resources: case study of a MECC conversation around loneliness 40-minute MECC session plan: Shown two videos; in one an opportunity for MECC arises but is missed, in the other the opportunity for MECC is taken. Prompts attendees to identify the opportunity and provide their reflections on the MECC conversation e.g. barriers, facilitators, and consequences.
Who provided	Core MECC: Provided by the NENC regional MECC team, endorsed by the RSPH. Delivered by anyone that has completed the MECC train the trainer programme. MECC and Financial Wellbeing: Provided by Money and Pensions Service. Delivered by trainers (completed the above train the trainer programme) who have watched the webinar on delivering the module. MECC and Social Isolation: Yorkshire and the Humber regional MECC team. Delivered by ant trainer (completed the above train the trainer programme) 40-minute MECC session plan: Information not available
How	Core MECC: Face to face or online, groups of the same or mixed professions and organisations. MECC and Financial Wellbeing: Face to face or online. MECC and Social Isolation: Face to face or online. 40-minute MECC session plan: Face to face.
Where	Core MECC: Setting depends on location of attendees within the region. Remaining modules: Same as above.
When and how much	Core MECC: 1.5 h MECC and Financial Wellbeing: ~30 min MECC and Social Isolation: ~30 min 40-minute MECC session plan: Core MECC condensed into 40 min
Tailoring	Core MECC: Adapted by trainers to suit their style, setting, and organisation. Health inequalities slide adapted to be local to attendees. Focuses further on one of the core behaviours of MECC most relevant to audience. Case studies and example videos can be selected dependent on attendees (e.g. primary care examples). MECC and Financial Wellbeing: Signposting slide to MECC gateway is local to attendees.
Modification	Core MECC: Training is continually adapted according to attendees' feedback by NENC regional MECC team. MECC and Financial Wellbeing: Reviewed annually with Money and Pensions Services MECC and Social Isolation: Reviewed by Yorkshire and the Humber regional MECC team

also applied to transcripts, reported elsewhere (Nichol et al., under review) and following the consolidated criteria for reporting qualitative research (COREQ) checklist (Tong et al., 2007). In accordance with open science practices, all transcripts are publicly available (Nichol et al., 2023).

Stage two: Identification of active components (BCTs) within current MECC training offered to the TSE

Source of data

Document analysis took place in August 2023 and included coding of all available training materials on the NENC 'NHS Futures' website that related to the TSE (e.g. the training module on vaccination and immunisation was not coded). Training materials included power point slides, worksheets, videos, case studies, and group activities.

Materials

The BCT Taxonomy (Michie et al., 2013) consists of 93 BCTs organised into 19 hierarchically clustered groups and was used to code for BCTs utilised by MECC training. Additionally, IFs (Michie et al., 2014) were coded using the BCW which proposes nine approaches to interventions that are not mutually exclusive and can be mapped onto the TDF domains to again identify missed and seized opportunities (Michie et al., 2014).

Data analysis

The primary author (BN) reviewed and coded each resource for BCTs and IFs. A second author (AMR) independently coded 10% of resources. Both coders have completed training on the BCT Taxonomy V1. Furthermore, coder AMR is a behavioural scientist highly experienced in BCT coding. Inter-rater reliability was calculated using Cohen's Kappa (McHugh, 2012). Specifically, coding of each BCT within a resource was noted as 'yes' or 'no' for each reviewer. Any conflicting coding was resolved through discussion. Coding of BCTs again followed the target behaviour of MECC delivery, with the target population as service providers or trainees. Coding of BCTs did not concern frequency of the presence of BCTs within each module, but instead whether each BCT was present or not. Each module and its associated resources were coded separately. The inter-rater agreement for coding of BCTs was good ($\kappa = .646$, $p < .001$). Additionally, the modules were described according to the TIDieR checklist (Hoffmann et al., 2014).

Stage three: Mapping of the most relevant barriers and facilitators against the active components (BCTs) utilised within the current MECC training, to identify suitability and missed and seized opportunities.

Materials

The Theory and Techniques Tool (https://theoryandtechniquetool.humanbehaviourchange.org/tool) was used to access information on the theoretical congruence between the

intervention functions (BCTs and IFs) currently adopted by MECC training. The tool provides the most updated and rigorous available matrix of BCTs as mapped onto TDF domains, triangulating data from a literature review (Carey et al., 2019) and consensus study (Connell et al., 2019), and resolving any remaining conflicts through another expert panel (Johnston et al., 2021).

Data analysis

Next, both sets of analyses (stages one and two) were mapped against each other using existing resources that combine both BCTs and the TDF on one matrix (see materials, above). Theoretical congruence was achieved by applying the aforementioned tool to access the extent to which each BCT identified within current training addressed the key TDF domains. When interpreting the tool, only TDF established links were noted, disregarding 'inconclusive' judgements. BCTs were coded as low congruence (no key TDF domains addressed), medium congruence (one key TDF domain addressed) and high congruence (two or more key TDF domains addressed). Additionally, IFs were mapped onto the seven TDF domains, again to identify missed and seized opportunities (BCTs utilised that align with one or more of the key identified TDF domains). The SBA was used to identify missed opportunities (relevant BCTs that were not utilised) and create example deliveries of each theme that was most relevant to the barriers and facilitators and missed IFs identified (Atkins et al., 2020).

Results

Stage one: behavioural diagnosis and barriers and facilitators to MECC according to TDF domains

Supplementary Material 1 displays a description of MECC or 'MECC-like' conversations within the TSE. Generally, conversations around health, wellbeing, and the social determinants within the TSE do occur, although more frequently for certain topics including mental health, financial concerns, and ill health, and mostly initiated by service users. Rather than encouraging direct health behaviour change, conversations centre more around access, advocacy, and navigation of services that have a direct or indirect impact on wellbeing, and thus signposting and referral are most common features of conversations. Conversations are person-centred but also influenced by the perceived suitability of the context.

Specific barriers and facilitators and their frequency are displayed in Table 2 alongside the ranking for each TDF domain. Seven TDF domains stood out as key (all were cited in 18 or more transcripts, whereas the next most commonly cited TDF domain was only cited by 12); Beliefs about Capabilities (e.g. service users as not willing to change, certain topics as more difficult to raise, a low perceived ability to respond, and professional confidence), Beliefs about Consequences (e.g. belief of negative outcomes if not conducted appropriately, positive outcomes for the recipient particularly when empowered, and a belief that every intervention makes a difference), Environmental Context and Resources (e.g. lack of service capacity for signposting and referral, conversations triggered by an event, prompt, or wider context, a safe and private space, and time

to build rapport), Skills (e.g. transferable skills including motivational interviewing techniques, signposting and referral, the ability to be person-centred, and interpersonal skills), Social/Professional Role and Identity (e.g. MECC not perceived to be the role of service providers and a holistic view of one's role), Knowledge (e.g. knowledge of where to signpost and refer), and Social Influences (e.g. trusting relationships). The key TDF domain Skills only acted as a facilitator, whilst the remaining domains acted as both barriers and facilitators to MECC conversations.

The overall coding framework of the thematic analysis within each TDF domain can be found in Supplementary Material 2, although key themes, codes, and quotes are summarised in Table 3. Service providers displayed a myriad of skills that facilitate and resemble MECC delivery, although were less frequently able to proactively initiate health and wellbeing conversations and provide advice around health behaviours. Particularly, service providers were able to judge when it is appropriate and equally not appropriate to intervene and recognised that an individual's priorities should be addressed first before it is appropriate to raise other health and wellbeing topics. However, service providers were most lacking in their perceived ability to translate these skills into health and wellbeing conversations. Indeed, those who had attended MECC training tended to be more confident in seizing opportunities to discuss health and wellbeing and were aware of the boundaries of MECC. The setting was also a key determinant for health and wellbeing conversations, namely a private, safe, and relaxed space, although psychological safety was important too, such that some recipients were reported as more comfortable when engaging in another task. A perception of service users as not wishing to change was a key barrier, as service providers were acutely aware of possible negative consequences if they encouraged the conversation too heavily. For a minority of participants, their extensive knowledge and awareness of health inequalities, gained through their experience within the TSE, acted as a barrier to initiating health and wellbeing conversations, as participants felt that recipients are less able to change their behaviour due to the social determinants of health such as poverty and its psychological burden.

Stage two: IFs and BCTs

The document analysis identified four MECC training modules (Table 1) as relevant to the TSE (Core MECC, MECC and Financial Wellbeing, MECC and Social Isolation, and a 40-minute MECC session plan), three of which (Core MECC, MECC and Financial Wellbeing, MECC and Social Isolation) taught the three A's (Ask, Assist, Act). Analysis of BCTs within MECC training identified a total of twelve BCTs and five IFs (see Supplementary Material 3 for the coding for each module). Modelling was the only IF utilised by all five training modules, followed by Education, Training, and Environmental Restructuring ($n = 4$ each), then Persuasion ($n = 3$). The Core MECC module utilised the most BCTs ($n = 10$), which also utilised the most IFs along with MECC and Social Isolation ($n = 5$). The only BCT identified across all modules was Behavioral practice/rehearsal, although Instruction on how to perform a behaviour, Demonstration of the behaviour, and Adding objects to the environment were also commonly utilised ($n = 4$).

Table 2. Prioritisation of TDF domains in terms of the number of transcripts they were identified in (No. transcripts), the number of themes within them (No. themes), and whether the domain can be both a barrier and facilitator to MECC conversations (Conflict within domain). Barriers and facilitators are displayed within each domain in order of the number of transcripts they were identified within (exact number in brackets).

Ranking	TDF domain	No. transcripts	No. themes	Conflict within domain	Barriers	Facilitators
Joint 1st and 2nd	Beliefs about Capabilities	20	4	Yes	Recipient is not willing or able to make changes (11) Certain topics more difficult to raise (9) View of 'I'm not a qualified professional' (7) Low confidence in the topics (7) Power differentials (2) Low confidence to deliver advice (2) Belief that others would be more capable (2)	Confidence in professional role (11) Belief in abilities required for MECC conversations (e.g. active listening, initiating, and interpersonal skills) (7) Recognition that you don't need to be an expert to deliver MECC (i.e. MECC is not safeguarding or specialised help) (6) Service user believes you can help (5) Belief in ability to change behaviour (3) Healthcare background increases confidence (2) Ability to communicate boundaries of role (1) Service user believes they could talk to service providers about anything (1)
	Beliefs about Consequences	20	4	Yes	Belief of negative consequences if not conducted appropriately (7) Safeguarding and liability concerns (4) Belief that delivering MECC conversations will significantly increase burdens of time and responsibility (3) Fleeting nature means it is difficult to observe (any) outcomes (3) Belief of no effect of MECC conversations (2)	Belief in positive outcomes for the recipient (health and wellbeing, confidence and empowerment, navigation of services, circumstance, motivation, confidence, behaviour change) (14) Belief that positive outcomes occur when recipients feel equal, empowered, and supported (12) Belief that every intervention makes a difference- no harm in trying (9) Fulfilling for the deliverer (and encourages them to reflect on themselves) (6) Positive prediction of MECC conversations (goes well, results in signposting) (5) Belief that health behaviours are central to wellbeing (2)
Joint 3rd and 4th	Environmental Context and Resources	20	3	Yes	Lack of and low capacity of services for signposting (6) Time (4) COVID prevented interactions (3) Lack of funding for MECC training (3) Suspicion of motive towards faith-based groups and organisations (2) Move to online (2) Some topics viewed as less relevant to the setting than others (2) Healthcare settings more suitable for health promotion (1) Service users have limited resources to change (1) Turnover of volunteers (1) Small community limits confidentiality (1)	Private and safe space (12) Triggered by the wider context, a prompt, or event (12) Prompts, partnerships, and in-house services for signposting (11) Time to build rapport and for flexible conversations (10) COVID amplified need (7) Setting perceived as a community hub (3) COVID facilitated new interactions (3) Psychological safety of talking whilst doing something else (2) Need for an intervention (2) COVID encouraged MECC conversations (2) Funding for signposted services (2) Service users perceive health promotion to be relevant to the service (2) Adversity makes health more relevant for individuals (1) Standardised training (1) Templates for MECC conversations (1)

Table 2. Continued.

Ranking	TDF domain	No. transcripts	No. themes	Conflict within domain	Barriers	Facilitators
	Skills	19	3	No	Belief that MECC training may formalise a natural conversation (1) Online training as less engaging (3) Problem of staff turnover (1)	Existing transferable skills: Interpersonal skills (17) Ability to provide signposting and referral (14) Person-centred (12) Select appropriate moments (11) Seize the opportunity (11) Ability to initiate (9) Advice without judgement (6) Motivational interviewing (5) Selection of appropriate approach Ability to pick up on cues (5) Boundaries of when to refer (4) Advice provision (3) Problem solving (3) Efficiency (3) Needs evaluation (2) Delineate MECC from safeguarding (2) Address social determinants (2) Sharing to encourage sharing (1) Receipt of similar training (5) Shared learning during training (3) Interactive training (2) Don't know what you don't know until you attend training (2) Refresher training (2) Visuals and examples during training (1) Comprehensive training (1)

(*Continued*)

Table 2. Continued.

Ranking	TDF domain	No. transcripts	No. themes	Conflict within domain	Barriers	Facilitators
5	Social/ Professional Role and Identity	19	3	Yes	Not my role (11) Volunteer role limits depth of response (4) Lack of integration with healthcare (1) Uneven power dynamics (1)	Holistic view of role (10) Role as to empower and inspire change (4) Role to help and make an impact (4) Role to support (4) Going above and beyond specified role (4) Active listening as part of role (3) Catching a gap (3) Service users expect to discuss certain topics (2) Healthcare role (2) Faith-based role (particularly for mental health) (2) MECC as part of and not separate to role (1) Signposted as expected (1) Service providers' perspective as valued (1) Strong sense of pride as a volunteer (1)
Joint 6th and 7th	Knowledge	18	2	Yes	Conflicting messaging (1) Knowledge of health inequalities (1) MECC conflated with safeguarding (1) No awareness of available training (1)	Knowing where to signpost and refer (9) Knowledge increases capability to respond (9) Knowledge of the context and individual (8) Awareness of the links between mental health, physical health, and social determinants (6) Learning from service users (1) Lived experience (1)
	Social Influences	18	2	Yes	Reluctance to make judgements about the behaviours of others (4) Social norms of pride and denial (1)	Relationships (13) Peer support (11) Common experiences (8) Service users sharing information (4) MECC implementation done with rather than done to (2) Service providers sharing learning (2) Social norms of openly talking about health and wellbeing (2) Endorsement from a prominent person (1) Group setting provides psychological safety (1)

(*Continued*)

Table 2. Continued.

Ranking	TDF domain	No. transcripts	No. themes	Conflict within domain	Barriers	Facilitators
8	Goals	12	2	No	–	Aims to: Achieve holistic health and wellbeing promotion (5) Help (5) Receive training (3) Achieve a shared purpose of social justice (2) Conduct health promotion conversations (2) Build confidence and empowerment (2) Be a place where people can ask (1) Be a community hub (1) Latch onto different topics (1)
9	Emotion	10	2	Yes	Dependent on the mood of the recipient (4) Apprehension towards eliciting guilt and shame in recipients (3) Sense of frustration and unjustness around health inequalities (2) Fear and anxiety of recipients towards opening up (2) Pride and denial of recipients (1) Feelings of hypocrisy (1)	Passion towards helping others (2) Empathy (1) Feeling of privilege towards discussing health and wellbeing with recipients (1)
10	Behavioural Regulation	5	1	No	–	Reflect on and refine MECC conversations (2) Assign time to MECC conversations (2) Top-down targets for health promotion (1)
11	Reinforcement	5	1	Yes	Single interactions don't allow for positive reinforcement of seeing benefits (1) Negative outcomes break trust and reduce probability of future conversations (1)	Reinforcement of positive outcomes of conversations (4)
12	Intentions	3	1	No	–	Service user that intends to change (2) Intention to talk to the people who need it (1)
13	Memory, Attention, and Decision processes	2	1	No	–	Ensure service users expect conversations (2)
14	Optimism	0	–	–	–	–

Table 3. Summary of the key themes, codes, and quotes for the seven key TDF domains from the overall coding framework (Supplementary Material 2).

TDF Domain	Key themes	Key codes	Key quotes
Beliefs about capabilities	Capability dependent on the recipient as willing and empowered to help themselves	• Depends on whether the recipient wants to change • Some topics more difficult to raise (e.g. finance, weight) • Less able to change behaviour in the face of health inequalities • More confident in motivational interviewing than advice delivery	SP5: *'I think with everything, if you, as a person are willing to look at change, whether it's through health or finances or whatever it happens to be, then you're more likely to change. If you don't want to change, you're not gonna change'*
	Belief that MECC delivery is specialist	• Belief that other organisations are better able to address health promotion • Not a qualified professional • Confidence in helping only through signposting and referral	SP11: *'Should we do that with things like smoking? Well, we've never done it with smoking, we've never done it with other things, but that's, you know, I think that other organisations do that better than we would do it…. And similarly, we have, I do deal, and have over the years, quite a lot with alcohol abuse… but I would always signpost them to Alcoholics Anonymous, they're the experts'*
Beliefs about consequences	Negative consequences if the conversation is not conducted appropriately	• Potential damaging consequences (e.g. offense, incorrect information) • Need to approach the conversation appropriately	SP4: *'I've got to assess whether or not that is going to be a useful conversation. And going to have the effect that I want it to have. Because if you're not careful it can have the opposite effect. You know, you could turn people away. 'Oh, I'm not going to go there to get lectured at out about this or that or the other"*
	Positive consequences come from equality	• Positive consequences of conversations occur when trust and relationships are built • Positive consequences through empowerment and equality • Support with no judgement	SP3: *'people that you would never have expected to go along and do gym work, or go out for walks, were buddying and up and going along, but they all said 'had my GP said, to go along. I wouldn't have done it'. But it, because it was this nice long process, and they got to know ya, they trusted ya, they did it'*
Environmental context and resources	Contextual cues trigger heath conversations	• Cues in the environment • Wider sociopolitical context (e.g. increased acceptability of discussing mental health) • Events within the service both as a trigger and a reaction	SP4: *'you can't just, pick a, a moment when you know, you can't, you can't just start a conversation about nutrition. It's, it, mebbies we'll have a cup of tea. We always, during the courses or during what we do, it'll be a cup of tea or a cup of coffee, you know, and we might have a debate about sugar'*
	Context of physical and psychological safety	• Importance of a safe and private space • Conversations whilst doing something else increase psychological safety	SP6: *'you have to be really mindful of where somebody's gonna be more able to share, where they're going to be better presented and sometimes it's not sitting in that corner, in an open forum, sometimes you have to take them to one side or arrange a one to one type of meeting'*
	Infrastructure and resources needed for MECC conversations	• Partnerships for signposting, referral, and further support • Time for a flexible conversation	SP3: *'I think third sector are probably best placed to do it. Because they've got the time. And, the NHS is only going to get worse'*

(*Continued*)

Table 3. Continued.

TDF Domain	Key themes	Key codes	Key quotes
Knowledge	Knowledge determines capability to respond	• Knowledge needed to signpost • Background knowledge of the recipient • MECC conflated with safeguarding	SP8: *'We're not constituted to do that, we're not structured to be able to deliver.. to be able to reconcile those problems those individuals have, because we're not the right group. It would come under mental health support services for children, or the safety team at Northumberland County Council'*
Skills	Transferable skills to conduct an appropriate contact	• Similar training (not MECC e.g. guided conversations, mental health first aider, Sage and Thyme) • Interpersonal skills (respectful, non-judgemental, active listener, tactful and subtle, asking twice) • Ability to pick up on cues • Seize the opportunity for health promotion	SP11: 'I *didn't know the person that well. But I felt I could ask questions. You know, what is it about? What is it about that job which you find attractive? What of it appeals? And get them to think about, whether it's just a kind of, ah it sounds good, or whether it was something they could really explore, so I help them to explore the darker side of that new job, or could they still cope with X or Y'*
Social influences	Relational influences	• Relationship facilitates capability to initiate conversations and improves outcomes • Reluctance to pass judgements on health behaviours of others • Bouncing off common ground • Peer delivery of MECC conversations	SP4*: 'when you've got the relationship with people, and it becomes a very easy going friendship if you like, you've got more opportunities to influence them in different ways'* SP14: *'and because you've got something in common, they tend to talk to you and open a little bit more'*
Social/ professional role and identity	Not my role	• Health promotion not their role • Role as to address one area	SP1: *'I'm just here to do this specific thing'*
	Holistic view of professional role	• TSE as catching a gap in services • Mental health as relevant for faith-based settings	SP11: *'I did a Diploma in counselling. So that was because I felt I needed those skills and the skill sets, and all the knock ons which came with it. And I think part of the core training of clergy, it doesn't really address a lot of the real issues around wellbeing that we actually encounter'*

Stage three: Identifying opportunities for optimisation of MECC within the TSE

The seven key TDF domains were mapped onto the coded BCTs. As shown in Table 4, out of the twelve BCTs identified in the MECC training delivered to the TSE, four were highly congruent to existing barriers and facilitators (Instruction on How to Perform a Behaviour, Information About Health Consequences, Information About Social and Environmental Consequences, and Behavioural Practice/Rehearsal) five were moderately congruent (Information about Emotional Consequences, Demonstration of the Behaviour, Prompts/Cues, Pros and Cons, and Adding Objects to the Environment) and three were not at all congruent (Goal Setting (outcome), Monitoring of Emotional Consequences, and Credible Source). The former BCT was linked with the TDF domain Goals, whilst the remaining BCTs have not yet been linked to any TDF domains. Behavioural Practice/Rehearsal addressed two key TDF domains and was present in all five modules. Instruction on how to perform a behaviour was the most appropriate BCT utilised, addressing three of the seven key TDF domains. The BCTs that were highly congruent (addressed two TDF domains) with the barriers and facilitators identified but were not present within the modules were Social Support (practical) and Graded Tasks. All key domains were appropriately targeted by at least two BCTs, although not present across all modules, aside from Social/Professional Role and Identity and Social Influences which were not addressed by any appropriate BCTs and thus were missed opportunities.

As shown in Table 5, five IFs appropriately addressed the key TDF domains (Education, Persuasion, Training, Environmental Restructuring, and Modelling). Although the IFs Restriction and Enablement could be utilised to more comprehensively address the key TDF domains, all of the key TDF domains were appropriately addressed by at least one IF.

A total of 31 BCTs were identified to be linked to one or more of the seven TDF domains. The percentage utilisation of BCTs relevant to each key TDF domain was calculated (see Supplementary Material 4), judged according to whether BCTs were utilised to their full potential (50% or more of the relevant BCTs were utilised) or not (Haighton et al., 2021). MECC training adequately addressed Skills (66.7%) and Knowledge (60%), but not Beliefs about consequences (40%), Beliefs about capabilities (37.5%), Environmental context and resources (28.6%), or Social Influences (0%). Table 6 demonstrates how key themes could be addressed by relevant BCTs. Although there are no BCTs that are linked to Social/Professional Role and Identity, BCTs that would be useful to address Social Influences include Social Support (unspecified and practical), Social Comparison, Information about Other's Approval, and Social Reward.

Discussion

Main findings of this study

The current study aimed to enhance MECC training delivered to the TSE by evaluating the extent to which the behavioural content of existing training addresses the key factor that influence the delivery of MECC in the TSE specifically. Seven key TDF domains were identified, with most frequent barriers including the perception that

Table 4. Seized and missed opportunities according to the congruence between BCTs utilised within MECC training and the key TDF domains identified. TDF domains highlighted in bold are the key seven domains identified from content analysis of barriers and facilitators. If TDF domains were ranked equally, both have been provided with the higher ranking (e.g. 1 if joint first and second). *The integrated matrix maps BCTs onto TDF domains for links between them which can be accessed here: https://theoryandtechniquetool.humanbehaviourchange.org/tool. **Judgement of congruence is according to the number of key TDF domains that are linked with the BCT: low = none, medium = one, high = two or more.

BCT	Number of modules	TDF domains (from integrated matrix*)	Domain Importance ranking	Theoretical congruence with TDF domains**
1.3 Goal setting (outcome)	1	Goals	8	Low
		Intentions	12	
4.1 Instruction on how to perform a behaviour	3	**Beliefs about capabilities**	1	High
		Skills	3	
		Knowledge	6	
5.1 Information about health consequences	2	**Beliefs about consequences**	1	High
		Knowledge	6	
		Intentions	12	
5.3 Information about social and environmental consequences	2	**Beliefs about consequences**	1	High
		Knowledge	6	
5.4 Monitoring of emotional consequences	1	None	–	Low
5.6 Information about emotional consequences	2	**Beliefs about consequences**	1	Medium
6.1 Demonstration of the behaviour	4	**Beliefs about capabilities**	1	Medium
7.1 Prompts/cues	1	**Environmental context and resources**	3	Medium
		Memory, attention, and decision processes		
8.1 Behavioral practice/ rehearsal	4	**Beliefs about capabilities**	1	High
		Skills	3	
9.1 Credible source	1	None	–	Low
9.2 Pros and cons	2	**Beliefs about consequences**	1	Medium
12.5 Adding objects to the environment	3	**Environmental context and resources**	3	Medium

service users are not willing or able to make changes (Beliefs about Capabilities) and MECC not perceived to be part of service providers' role (Social/Professional Role and Identity), and most relevant facilitators including a belief that positive outcomes occur when recipients feel equal, empowered, and supported (Beliefs about Consequences), a safe and private space (Environmental Context and Resources), existing transferable skills (Skills), knowledge of where to signpost and refer (Knowledge), and relationships with recipients (Social Influences). Existing MECC training adequately addressed two (Knowledge and Skills) of the seven key TDF domains. However, MECC training for the TSE should better utilise BCTs associated with Beliefs about Capabilities, Beliefs about Consequences, Environmental Context and Resources, Social Influences, and explore strategies to ensure MECC becomes part of one's Social/Professional Role and Identity. Current training is focused around education on the need for MECC, demonstration of MECC conversations, the chance to discuss how a MECC conversations could be conducted, and provision of signposting resources. However, individuals

Table 5. Opportunities missed and seized in terms of IFs against the key seven TDF domains, using mapping of links between TDF domains and IFs from Michie et al. (1). IFs define the columns and the number of modules they were included in are in brackets. Black = seized opportunity, light grey = missed opportunity.

TDF domains	Education ($n = 3$)	Persuasion ($n = 2$)	Incentivisation ($n = 0$)	Coercion ($n = 0$)	Training ($n = 4$)	Restriction ($n = 0$)	Environmental restructuring ($n = 3$)	Modelling ($n = 4$)	Enablement ($n = 0$)
Knowledge									
Skills									
Social/ professional role and identity									
Beliefs about capabilities									
Beliefs about consequences									
Environmental context and resources									
Social influences									

1.Michie S, Atkins L, West R. The behaviour change wheel: A guide to designing interventions. 1st ed. Great Britain: Silverback Publishing; 2014. 1003-10 p.

Table 6. Recommendations for future training and refinement of current training in light of the missed opportunities identified.

Theme	Recommended BCT	Example of the BCT in practice
Beliefs about capabilities		
Capability dependent on the recipient as willing and empowered to help themselves	Problem solving	Prompt trainees to identity the reasons why the recipient may be reluctant to discuss their health and wellbeing (e.g. fear, uncertainty, social determinants) and discuss ways in which these could be handled using the MECC approach (e.g. just plant the seed by signposting, apply motivational interviewing techniques, provide advice on navigation of services for the social determinants).
Belief that MECC delivery is specialist	Focus on past success	Prompt trainees to come up with examples when they have discussed health, wellbeing, or the social determinants, and emphasise that without knowing it they have already conducted MECC conversations and that they are already capable.
	Verbal persuasion about capability	Highlight to trainees that you need not be an expert in any of the topics that MECC discusses, and that anyone who completes the training can deliver MECC. Acknowledge that even though other groups, organisations, and individuals may be more specialist in certain topics, trainees are still capable of motivating, offering support, and providing information.
	Self-talk	Display some of the transferable skills service providers already demonstrate within their current roles and encourage further suggestions. Ask trainees to remind themselves of these skills they possess every day within their interactions with service users.
Low confidence in capabilities of service providers to respond	Graded tasks	Initially, ask trainees to only discuss topics they are confident in and signpost otherwise. Then, advise trainees to gradually pick up on topics they are less comfortable with, building up to a topic they find most difficult to discuss (e.g. finance or weight).
Beliefs about consequences		
Negative consequences if the conversation is not conducted appropriately	Anticipated regret	Bring attention to the care service providers have for the health and wellbeing of the service users who attend. Prompt trainees to imagine the outcome if they do not take advantage of opportunities they may have to empower service users to improve their health and discuss how regretful they may feel.
Belief in no or negative impacts	Comparative imagining of future outcomes	Prompt attendees to write down the possible outcomes from a) not intervening and b) conducting a MECC conversation. Emphasise that not intervening will most likely mean that person will not change their behaviour and their health could deteriorate. At least if intervening, behaviour change and health promotion is possible.

(*Continued*)

Table 6. Continued.

Theme	Recommended BCT	Example of the BCT in practice
Environmental context and resources		
Context of physical and psychological safety	Restructuring the physical environment	If possible, ask attendees to identity or arrange a private space at their group or organisation that recipients can be taken to during a MECC conversation.
	Restructuring the social environment	Prompt trainees to discuss where and when they would feel comfortable to talk about health and wellbeing and discuss how they might change their approach to fit different preferences (e.g. one to one for people who prefer to talk privately, whilst doing an activity or within a group for those who feel that one to one is too intense).
Infrastructure and resources needed for MECC conversations	Social support (practical)	Set up a regular forum for attendees from the TSE and wider services to create partnerships and connections, to facilitate signposting and referral, and share knowledge of which services are available.
	Restructuring the physical environment	Provide funding to allow TSE services to roll-out MECC training and delivery and create a long-term plan alongside their existing commitments.
Contextual cues trigger heath conversations	Prompts/cues	Encourage attendees to display posters of services related to health, wellbeing, and the social determinants within their respective TSE settings as reminders to opportunistically conduct MECC conversations.
Social influences		
Relational influences	Information about others' approval	Present videos of service users providing their experience and feedback as a recipient of MECC conversations (e.g. did they know they received MECC, how did they feel, did they make any changes to their behaviour afterwards) to show that their experience was positive, and they did not feel judged.
	Social support (practical)	Ensure MECC service users as well as providers are aware of and able to attend MECC training to encourage peer delivery.
	Social comparison	Present a video of a MECC conversation and encourage trainees to role play a MECC conversation, providing feedback. Specifically, encourage trainees to reflect on how the conversation came across (e.g. was it judgemental or caring?) and which approach provided the most empowerment.
Collective learning and development	Social support (practical)	Encourage trainees to talk to their service users to see whether discussing health and wellbeing more is something they would be interested in, gather information about how they might like to talk about it, and what they might like to discuss (e.g. informally, through an online survey or social media post, or hold a forum).

from the TSE would benefit from training that builds trainees' confidence to apply MECC (e.g. Self-Talk), encourages them to consider service user outcomes if MECC is not applied (e.g. Comparative Imagining of Future Outcomes), addresses the need for recipients to feel safe (e.g. Restructuring the Physical Environment), reassures them that recipients will not feel judged if conducted appropriately (e.g. Information About Others' Approval, and encourages peer support and delivery (e.g. Social Support (Practical)). Furthermore, within respective settings, work is needed to alter role expectations. Additionally, training should ensure that the BCTs utilised are consistent across all modules. The intervention function Restriction, which is not associated with any BCTs, could be utilised to address the TDF domains Environmental Context and Resources and Social Influences, for example though altering the TSE environment to encourage health promotion such as removal of foods with low nutritional value and creating alcohol and smoke free spaces. Nonetheless, MECC training does utilise the frequently cited facilitators of existing transferable skills and knowing where to signpost and refer.

What is already known on this topic

Many of the barriers and facilitators as mapped onto TDF domains identified within the current study are similarly most relevant across healthcare settings (encompassing a range healthcare professionals including nurses, physiotherapists, general practitioners, and public health practitioners (Parchment et al., 2021)), namely Beliefs about Consequences, Beliefs about Capabilities, Social/Professional Role and Identity, and Environmental Consequences and Resources (Haighton et al., 2021; Keyworth et al., 2019; Parchment et al., 2021). For example, common barriers include time (Awan et al., 2020; Haighton et al., 2021; Keyworth et al., 2019; Parchment et al., 2021; 2022; Tinati et al., 2012) (Environmental Context and Resources), services users perceived as not receptive (Beliefs about Capabilities) (Keyworth et al., 2019; Parchment et al., 2022), MECC is not perceived to be part of their role (Social/Professional Role and Identity) (Keyworth et al., 2019; Parchment et al., 2021; Vogt et al., 2023), and a belief in negative or no impacts of MECC conversations (Beliefs about Consequences) (Parchment et al., 2021). Facilitators similar across settings include the need for a safe and private space (Keyworth et al., 2019) and resources for signposting (Keyworth et al., 2019) (Environmental Context and Resources), and service users expect to talk about certain topics (Keyworth et al., 2019) (Social/Professional Role and Identity). Skills (Haighton et al., 2021; Hollis et al., 2021; Parchment et al., 2021), Knowledge (Haighton et al., 2021), and Social Influences (Parchment et al., 2021) are also common TDF domains, particularly the facilitator of establishing relationships (Awan et al., 2020; Haighton et al., 2021; Keyworth et al., 2019; Parchment et al., 2021) (Social Influences), although slightly less relevant and consistently identified. With further investigation, the nature of the relevance of some domains differed. For example, Social Influences within healthcare are mainly driven by the need for support from management and leadership (Parchment et al., 2021), whereas equal distribution of power, peer support and delivery, and mutual relationships were more important within the TSE. Overall, the TSE possesses a greater proportion of facilitators within

the key domains, for example TSE settings seem to be advantageous for possessing existing knowledge, partnerships, and resources for signposting. It is generally accepted that range and scope of the work of the TSE is typically much broader than the NHS and other public services. In this context the reality for service providers and users is to think about the acceptability of MECC within a broader set of relationships than normally within healthcare settings. This is demonstrated by the diverse relationships of the various participants with MECC creating a readiness to apply a more holistic approach to incorporating the learning from training seen in previous research (Harrison et al., 2022). Particularly, Environmental Context and Resources was less relevant than has previously been reported within healthcare (Haighton et al., 2021; Parchment et al., 2021), and acted more as a facilitator than a barrier (Haighton et al., 2021). Additionally, whilst Goals was not included as one of the seven key domains, this domain still acted as a common facilitator within the TSE, more so than within healthcare settings (Haighton et al., 2021; Hollis et al., 2021; Parchment et al., 2021). However, the main challenge unique to the TSE is the instability and uncertainty of funding (Harrison et al., 2022).

Also notably, Social/Professional Role and Identity is important to address across settings in different ways. Within healthcare settings, MECC is perceived as adding to workload and a there is a tendency to revert back to a specialised perception of their role as to focus on diagnosis and treatment (Keyworth et al., 2019; Parchment et al., 2021). Contrastingly, whilst service providers within the TSE possess a more holistic view of health and wellbeing, concerns surround overstepping the boundaries of their role and into someone else's role or '*territory*' and not feeling specialised enough to deliver MECC, as some service providers explicitly state that they were not a healthcare professional. Thus, clearly the barrier associated with professional roles is one of perceived appropriateness rather than one role as objectively more appropriate than the other. It is however important to note variability in the perceived role of healthcare professionals, for example physiotherapists (Parchment et al., 2023) and midwives (Keyworth et al., 2019) align more towards a holistic view of health similar to that of the TSE. Also, to some extent the ability of service providers within the TSE to recognise the boundaries of their role and when to refer and signpost is considered a facilitator. Nevertheless, the domain of Social/Professional Role and Identity should be addressed across all sectors. However, addressing identity through individual level interventions appears to be difficult, as a review found little quantitative evidence to support interventions to amend social or personal identity (Barnett et al., 2021), and no BCTs have been linked to this domain (Johnston et al., 2021). Therefore, this domain is likely most effectively addressed outside of MECC training sessions, through changes within the group or organisation the trainee operates within. Thus, more effective approaches to address this domain may address social norms and expectations including incorporating MECC into service providers' role specification or communicating to both service providers and users that MECC is expected as part of service providers' role. Additionally, MECC training across all sectors should focus on altering perceptions towards MECC as *'everyone's business'* (Craig & Senior, 2018). For example, introspective reflective work during MECC training may help to develop a professional identity that includes MECC delivery (Wackerhausen, 2009), such as collaborative reflection with other trainees (Binyamin, 2018).

Another key shared barrier across settings is if service users are not motivated or willing to change their behaviour (Keyworth et al., 2019; Parchment et al., 2022). Particularly worryingly, findings from the current study indicated that those who show readiness to change are more likely to engage in MECC conversations, whereas those not considering change will avoid, deny, or avert such conversations, indicating that those who would benefit most do not receive any intervention with concerns that MECC could widen rather than reduce health inequalities as proposed (Health TAoDoP, 2019; Public Health England, 2016). The TSE may offer a unique potential solution through its facilitation of trusting, long term relationships that encourage collaborative interventions, as touched upon by Harrison et al. (Harrison et al., 2022). Similarly suggested by participants within the current study, MECC delivery could be optimised through a co-production approach (Harrison et al., 2022), whereby service providers and users shape the MECC approach within their respective TSE setting. For service providers, this may increase shared ownership and thus investment in MECC conversations, and for service users such an involvement approach may further help to consolidate their expectations of service providers.

What this study adds

The current study provides the first analysis of available MECC training provided to the TSE against the specific barrier and facilitators experienced within these settings. Furthermore, an additional theme not identified in the previous study of MECC within the TSE (Harrison et al., 2022) is the idea of not only a safe physical space to enable MECC conversations, but psychological safety too. Specifically, that different individuals may vary in when they feel most comfortable talking about their health and wellbeing; whilst some feel most at ease in a private one-to-one setting, others feel most comfortable whilst also engaged in an activity, or as part of a group discussion. This finding is comparable to the increasingly popular 'walk and talk' approach to counselling, as recipients of this approach note a comfort in the informality and a facilitation of the development of an equal relationship and rapport (Newman & Gabriel, 2023). Again, the suitable approach for each TSE setting may be best identified through co-production with service providers and users. Also, it is important to acknowledge that although most of the key TDF domains identified are common across settings, domain level analysis that a strategic behavioural analysis allows for does not account for specific barriers and facilitators. Similarly, even if the same BCTs are identified across TSE and healthcare settings, how each BCT could be best enacted may differ. Thus, a tailored approach to training within the TSE is recommended to target common TDF domains across settings.

This study identified that many service providers within the TSE are highly skilled, drawing upon backgrounds including healthcare, counselling, and education. Many of the identified skills were transferable to MECC, and thus such service providers within the TSE likely only require the minimal MECC training (~1.5 h) as currently applied across settings. However, for service providers without such backgrounds, additional training may be beneficial to ensure the quality of MECC delivery remains consistent across all providers.

Another unique finding was that for a minority of highly skilled participants (~10%), their awareness of health inequalities acted as a barrier to MECC

conversations, as participants noted that it felt unfair or even unproductive to discuss health with service users of low socioeconomic status, given the impact of the social determinants of health. Clearly, the relation of MECC to health inequalities appears to be double-edged, as both the MECC consensus statement (Public Health England, 2016) and a policy position report on health inequalities from the Association for Directors of Public Health (Health TAoDoP, 2019) posit that MECC should be applied to help tackle health inequalities. Thus, to help address this barrier, MECC training should address differences in the characteristics of service users and inform on how to respond to these, as literature suggests a resulting increase in service user satisfaction not only though improved understanding from service providers, but also through encouraging organisations to address structural barriers that make it more difficult for certain communities to engage (Handtke et al., 2019).

Strengths and limitations of this study

One strength of the current study in comparison to the previously published SBA of MECC delivery was the use of the Theory and Techniques Tool which triangulates the findings from a literature synthesis and consensus study, as opposed to the consensus study only (Michie et al., 2014). Thus, the findings of the current study reflect the more rigorous standards applied to link TDF domains and BCTs. Whilst the use of the BCT taxonomy as opposed to the updated BCT ontology (an elaborated, updated, and 'living' version of the original taxonomy) (Marques et al., 2023) may be perceived to be a limitation of the current study, the theory and techniques tool used to map BCTs onto TDF domains is not yet available for the ontology (Marques et al., 2023), thus the BCT taxonomy was most appropriate for the SBA methodology. Nonetheless, some limitations must be acknowledged. Firstly, given the constantly evolving MECC training within the NENC in response to feedback from trainees, the current analysis of included BCTs offers only a snapshot of the training (as of August 2023). However, accreditation from the Royal Society of Public Health of the core MECC modules ensures some stability as the training is limited in how much can be amended whilst retaining the accreditation. Secondly, given that MECC implementation in the NENC adopts a train the trainer model whereby individuals are trained to deliver MECC training, it is possible that subsequent training as delivered within the TSE varies from that which was coded as the training can be tailored to better fit the setting and organisation. However, any tailoring is more likely to be in terms of the topics and area-specific information rather than the mechanisms of training. Thirdly, whilst coding it was often difficult to tease apart participants' everyday role versus barriers and facilitators to MECC or MECC-like conversations in particular. For example, a needs assessment was often integral to participants' role, although the required skills and process of the conversations often closely resembled MECC.

An important limitation to consider regarding the strategic behavioural analysis method using the available mapping tool is that many links have yet to be investigated. For example, the BCTs Monitoring of Emotional Consequences and Credible Source utilised by one or more MECC modules emerged as having low congruence with the seven key TDF domains, although the links between some of those and

each BCT are yet to be investigated. Thus, it is possible that as the tool evolves in response to new evidence, their congruence with the most relevant barriers and facilitators may increase. Similarly, although no BCTs are currently linked to Social/Professional Role and Identity, 31% of BCTs have yet to be tested in relation to their links with this domain. Indeed, of the three IFs that map onto Social/Professional Role and Identity, of the corresponding BCTs according to an expert consensus that may be useful to address this domain but are yet to be investigated in terms of their links, potentially relevant BCTs include Information about Social and Environmental Consequences (already utilised by two MECC modules), Identification of the Self as a Role Model, Feedback on the Behaviour, and Information about Others' Approval. Thus, future work should investigate the links between Social/Professional Role and Identity and the possibly relevant BCTs.

Conclusions

Existing MECC training delivered to the TSE appropriately focuses on building the skills and knowledge needed to deliver MECC. Generally, service providers from the TSE possess most of the skills required for MECC but lack confidence in their ability to apply them. Thus, training should focus on the assurance that you do not need to be an expert in health promotion, all that is required is the ability to listen, ask questions, and signpost and refer to more specialist support, which service providers from the TSE are already capable of. Furthermore, training would benefit from encouraging reflection on professional identity, communicating that service users will react positively and will not feel judged if conducted in the right way, and highlighting the existing resources, partnerships, and knowledge of signposting within the TSE. Finally, work is required within respective groups and organisations across all sectors to communicate that MECC is an expected and integral part of service delivery. Although it is known that MECC training Health Conversation Skills (HCS) significantly improves scores within TDF domains Beliefs about Capabilities, Skills, and Goals (Hollis et al., 2021), to the authors' knowledge no existing research has measured the impact of other approaches to MECC training. Thus, future research would benefit from evaluating the impact of MECC training outside of HCS on the perceived capability, opportunity, and motivation of attendees.

Ethical approval

This study received full ethical approval from the Faculty of Health and Life Sciences at Northumbria University (reference: 49176) and data collection took place between August 2022 to January 2023.

Disclosure statement

The authors have no conflict of interest to declare.

Funding

No specific funding was received for the current study.

ORCID

Beth Nichol http://orcid.org/0000-0002-7642-1448
Catherine Haighton http://orcid.org/0000-0002-8061-0428
Rob Wilson http://orcid.org/0000-0003-0469-1884
Angela M. Rodrigues http://orcid.org/0000-0001-5064-8006

References

Adam, L. M., Jarman, M., Barker, M., Manca, D. P., Lawrence, W., & Bell, R. C. (2020). Use of healthy conversation skills to promote healthy diets, physical activity and gestational weight gain: Results from a pilot randomised controlled trial. *Patient Education and Counseling*, *103*(6), 1134–1142. https://doi.org/10.1016/j.pec.2020.01.001

Altman, D. G. (1990). *Practical statistics for medical research*. CRC press.

Atkins, L., Francis, J., Islam, R., O'Connor, D., Patey, A., Ivers, N., Foy, R., Duncan, E. M., Colquhoun, H., Grimshaw, J. M., Lawton, R., & Michie, S. (2017). A guide to using the Theoretical Domains Framework of behaviour change to investigate implementation problems. *Implementation Science*, *12*(1), 1–18. https://doi.org/10.1186/s13012-017-0605-9

Atkins, L., Sallis, A., Chadborn, T., Shaw, K., Schneider, A., Hopkins, S., Bunten, A., Michie, S., & Lorencatto, F. (2020). Reducing catheter-associated urinary tract infections: A systematic review of barriers and facilitators and strategic behavioural analysis of interventions. *Implementation Science*, *15*(1), 1–22. https://doi.org/10.1186/s13012-020-01001-2

Aveyard, P., Lewis, A., Tearne, S., Hood, K., Christian-Brown, A., Adab, P., Begh, R., Jolly, K., Daley, A., Farley, A., Lycett, D., Nickless, A., Yu, L.-M., Retat, L., Webber, L., Pimpin, L., & Jebb, S. A. (2016). Screening and brief intervention for obesity in primary care: A parallel, two-arm, randomised trial. *Lancet (London, England)*, *388*(10059), 2492–2500. https://doi.org/10.1016/S0140-6736(16)31893-1

Awan, H., Ditta, M. A., McKeown, M., & Whittaker, K. (2020). 'A positive thing by mentioning it': A qualitative study of experiences of brief physical health interventions for individuals diagnosed with severe mental illness in primary care. *Middle East Journal of Family Medicine*, *7*(10), 84.

Baird, J., Jarman, M., Lawrence, W., Black, C., Davies, J., Tinati, T., Begum, R., Mortimore, A., Robinson, S., Margetts, B., Cooper, C., Barker, M., & Inskip, H. (2014). The effect of a behaviour change intervention on the diets and physical activity levels of women attending Sure Start Children's Centres: Results from a complex public health intervention. *BMJ Open*, *4*(7), e005290. https://doi.org/10.1136/bmjopen-2014-005290

Barnett, G., Boduszek, D., & Willmott, D. (2021). What works to change identity? A rapid evidence assessment of interventions. *Journal of Applied Social Psychology*, *51*(7), 698–719. https://doi.org/10.1111/jasp.12776

Binyamin, G. (2018). Growing from dilemmas: Developing a professional identity through collaborative reflections on relational dilemmas. *Advances in Health Sciences Education: Theory and Practice*, *23*(1), 43–60. https://doi.org/10.1007/s10459-017-9773-2

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Cane, J., O'Connor, D., & Michie, S. (2012). Validation of the theoretical domains framework for use in behaviour change and implementation research. *Implementation Science*, *7*(1), 1–17. https://doi.org/10.1186/1748-5908-7-37

Carey, R. N., Connell, L. E., Johnston, M., Rothman, A. J., De Bruin, M., Kelly, M. P., et al. (2019). Behavior change techniques and their mechanisms of action: a synthesis of links described in published intervention literature. *Annals of Behavioral Medicine*, *53*(8), 693–707.

Chisholm, A., Ang-Chen, P., Peters, S., Hart, J., & Beenstock, J. (2019). Public health practitioners' views of the 'Making Every Contact Count'initiative and standards for its evaluation. *Journal of Public Health (Oxford, England)*, *41*(1), e70–e7. https://doi.org/10.1093/pubmed/fdy094

Chisholm, D., Moro, D., Bertram, M., Pretorius, C., Gmel, G., Shield, K., & Rehm, J. (2018). Are the "best buys" for alcohol control still valid? An update on the comparative cost-effectiveness of alcohol control strategies at the global level. *Journal of Studies on Alcohol and Drugs*, *79*(4), 514–522. https://doi.org/10.15288/jsad.2018.79.514

Connell, L. E., Carey, R. N., de Bruin, M., Rothman, A. J., Johnston, M., Kelly, M. P., & Michie, S. (2019). Links between behavior change techniques and mechanisms of action: an expert consensus study. *Annals of Behavioral Medicine: A Publication of the Society of Behavioral Medicine*, *53*(8), 708–720. https://doi.org/10.1093/abm/kay082

Corris, V., Dormer, E., Brown, A., Whitty, P., Collingwood, P., Bambra, C., & Newton, J. L. (2020). Health inequalities are worsening in the North East of England. *British Medical Bulletin*, *134*(1), 63–72. https://doi.org/10.1093/bmb/ldaa008

Cowdell, F., & Dyson, J. (2019). How is the theoretical domains framework applied to developing health behaviour interventions? A systematic search and narrative synthesis. *BMC Public Health*, *19*(1), 1180. https://doi.org/10.1186/s12889-019-7442-5

Craig, L., & Senior, E. (2018). Public health: PART 1 making every contact count. *British Journal of Nursing (Mark Allen Publishing)*, *27*(22), 1318–1320. https://doi.org/10.12968/bjon.2018.27.22.1318

DiClemente, C. C., Corno, C. M., Graydon, M. M., Wiprovnick, A. E., & Knoblach, D. J. (2017). Motivational interviewing, enhancement, and brief interventions over the last decade: A review of reviews of efficacy and effectiveness. *Psychology of Addictive Behaviors: Journal of the Society of Psychologists in Addictive Behaviors*, *31*(8), 862–887. https://doi.org/10.1037/adb0000318

Haighton, C., Newbury-Birch, D., Durlik, C., Sallis, A., Chadborn, T., Porter, L., Harling, M., & Rodrigues, A. (2021). Optimising making every contact count (MECC) interventions: A strategic behavioural analysis. *Health Psychology: Official Journal of the Division of Health Psychology, American Psychological Association*, *40*(12), 960–973. https://doi.org/10.1037/hea0001100

Handtke, O., Schilgen, B., & Mösko, M. (2019). Culturally competent healthcare–A scoping review of strategies implemented in healthcare organizations and a model of culturally competent healthcare provision. *PloS One*, *14*(7), e0219971. https://doi.org/10.1371/journal.pone.0219971

Harrison, D., Wilson, R., Graham, A., Brown, K., Hesselgreaves, H., & Ciesielska, M. (2022). Making every contact count with seldom-heard groups? A qualitative evaluation of voluntary and community sector (VCS) implementation of a public health behaviour change programme in England. *Health & Social Care in the Community*, *30*(5), e3193–e206. https://doi.org/10.1111/hsc.13764

Health TAoDoP. (2019). Policy position: Health inequality.

Hoffmann, T. C., Glasziou, P. P., Boutron, I., Milne, R., Perera, R., Moher, D., Altman, D. G., Barbour, V., Macdonald, H., Johnston, M., Lamb, S. E., Dixon-Woods, M., McCulloch, P., Wyatt, J. C., Chan, A.-W., & Michie, S. (2014). Better reporting of interventions: Template for intervention description and replication (TIDieR) checklist and guide. *BMJ (Clinical Research ed.)*, *348*(mar07 3), g1687–g1687. https://doi.org/10.1136/bmj.g1687

Hollis, J. L., Kocanda, L., Seward, K., Collins, C., Tully, B., Hunter, M., Foureur, M., Lawrence, W., MacDonald-Wicks, L., & Schumacher, T. (2021). The impact of Healthy Conversation Skills training on health professionals' barriers to having behaviour change conversations: A pre-post survey using the Theoretical Domains Framework. *BMC Health Services Research*, *21*(1), 880. https://doi.org/10.1186/s12913-021-06893-4

Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, *15*(9), 1277–1288. https://doi.org/10.1177/1049732305276687

Jarman, M., Adam, L., Lawrence, W., Barker, M., & Bell, R. C. (2019). Healthy conversation skills as an intervention to support healthy gestational weight gain: Experience and perceptions from intervention deliverers and participants. *Patient Education and Counseling*, *102*(5), 924–931. https://doi.org/10.1016/j.pec.2018.12.024

Johnston, M., Carey, R. N., Connell Bohlen, L. E., Johnston, D. W., Rothman, A. J., de Bruin, M., Kelly, M. P., Groarke, H., & Michie, S. (2021). Development of an online tool for linking behavior change techniques and mechanisms of action based on triangulation of findings from

literature synthesis and expert consensus. *Translational Behavioral Medicine*, *11*(5), 1049–1065. https://doi.org/10.1093/tbm/ibaa050

Keyworth, C., Epton, T., Goldthorpe, J., Calam, R., & Armitage, C. J. (2021). Patients' experiences of behaviour change interventions delivered by general practitioners during routine consultations: A nationally representative survey. *Health Expectations: An International Journal of Public Participation in Health Care and Health Policy*, *24*(3), 819–832. https://doi.org/10.1111/hex.13221

Keyworth, C., Epton, T., Goldthorpe, J., Calam, R., & Armitage, C. J. (2019). 'It's difficult, I think it's complicated': Health care professionals' barriers and enablers to providing opportunistic behaviour change interventions during routine medical consultations. *British Journal of Health Psychology*, *24*(3), 571–592. https://doi.org/10.1111/bjhp.12368

Lawrence, W., Vogel, C., Strömmer, S., Morris, T., Treadgold, B., Watson, D., Hart, K., McGill, K., Hammond, J., Harvey, N. C., Cooper, C., Inskip, H., Baird, J., & Barker, M. (2020). How can we best use opportunities provided by routine maternity care to engage women in improving their diets and health? *Maternal & Child Nutrition*, *16*(1), e12900. https://doi.org/10.1111/mcn.12900

Malterud, K., Siersma, V. D., & Guassora, A. D. (2016). Sample size in qualitative interview studies: Guided by information power. *Qualitative Health Research*, *26*(13), 1753–1760. https://doi.org/10.1177/1049732315617444

Marques, M. M., Wright, A. J., Corker, E., Johnston, M., West, R., Hastings, J., Zhang, L., & Michie, S. (2023). The behaviour change technique ontology: Transforming the behaviour change technique taxonomy v1. *Wellcome Open Research*, *8*, 308. https://doi.org/10.12688/wellcomeopenres.19363.1

McHugh, M. L. (2012). Interrater reliability: The kappa statistic. *Biochemia Medica*, *22*(3), 276–282. https://doi.org/10.11613/BM.2012.031

Meade, O., O'Brien, M., Noone, C., Lawless, A., McSharry, J., Deely, H., Hart, J., Hayes, C. B., Keyworth, C., Lavoie, K., McGowan, O., Murphy, A. W., Murphy, P. J., O'Reilly, O., & Byrne, M. (2023). Exploring barriers and enablers to the delivery of Making Every Contact Count brief behavioural interventions in Ireland: A cross-sectional survey study. *British Journal of Health Psychology*, *28*(3), 753–772. https://doi.org/10.1111/bjhp.12652

Michie, S., Atkins, L., & West, R. (2014). *The behaviour change wheel: A guide to designing interventions* (1st ed., pp. 1003–1010). Silverback Publishing.

Michie, S., Richardson, M., Johnston, M., Abraham, C., Francis, J., Hardeman, W., Eccles, M. P., Cane, J., & Wood, C. E. (2013). The behavior change technique taxonomy (v1) of 93 hierarchically clustered techniques: Building an international consensus for the reporting of behavior change interventions. *Annals of Behavioral Medicine: A Publication of the Society of Behavioral Medicine*, *46*(1), 81–95. https://doi.org/10.1007/s12160-013-9486-6

Michie, S., Van Stralen, M. M., & West, R. (2011). The behaviour change wheel: A new method for characterising and designing behaviour change interventions. *Implementation Science*, *6*(1), 1–12. https://doi.org/10.1186/1748-5908-6-42

Neuendorf, K. A. (2018). *Content analysis and thematic analysis. Advanced research methods for applied psychology* (pp. 211–223). Routledge.

Newman, E., & Gabriel, L. (2023). Investigating clients' experiences of walk and talk counselling. *Counselling and Psychotherapy Research*, *23*(1), 125–133. https://doi.org/10.1002/capr.12567

Nichol, B., Haighton, C., Rodrigues, A., & Wilson, R. (2023). *Service provider and user transcripts exploring the acceptability of brief health conversations such as Making Every Contact Count within the Third and Social Economy sector [data collection].* UK Data Service.

Nichol, B., Rodrigues, A. M., Wilson, R., & Haighton, C. (2023). A systematic review of the effectiveness of brief health behaviour change interventions on service users accessing the third and social economy sector. *Health & Social Care in the Community*, *2023*, 1–24. https://doi.org/10.1155/2023/2928228

Nichol, B., Rodrigues, A., Wilson, R., & Haighton, C (2024). 'You go there and you are welcomed and people don't judge': A qualitative exploration of health and wellbeing conversations

such as Making Every Contact Count within the Third and Social Economy sector: A reflexive thematic analysis of service providers' and users' views. *Health and Social Care in the Community*, 2024. https://doi.org/10.1155/2024/6786899

Nichol, B., Wilson, R., Rodrigues, A., & Haighton, C. (2023). Exploring the effects of volunteering on the social, mental, and physical health and well-being of volunteers: An umbrella review. *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, *35*(1), 97-128. https://doi.org/10.1007/s11266-023-00573-z

Parchment, A., Lawrence, W., Perry, R., Rahman, E., Townsend, N., Wainwright, E., & Wainwright, D. (2021). Making every contact count and healthy conversation skills as very brief or brief behaviour change interventions: a scoping review. *Journal of Public Health*, *31*(7), 1017–1034. https://doi.org/10.1007/s10389-021-01653-4

Parchment, A., Lawrence, W., Rahman, E., Townsend, N., Wainwright, E., & Wainwright, D. (2023). 'I can feel myself coming out of the rut': A brief intervention for supporting behaviour change is acceptable to patients with chronic musculoskeletal conditions. *BMC Musculoskeletal Disorders*, *24*(1), 241. https://doi.org/10.1186/s12891-023-06336-7

Parchment, A., Lawrence, W., Rahman, E., Townsend, N., Wainwright, E., & Wainwright, D. (2023). 'Making every contact count'with patients with musculoskeletal conditions: A qualitative exploration of acceptability to physiotherapists. *BMC Health Services Research*, *23*(1), 1125. https://doi.org/10.1186/s12913-023-10126-1

Parchment, A., Lawrence, W., Rahman, E., Townsend, N., Wainwright, E., & Wainwright, D. (2022). Making Every Contact Count with people with MSK conditions: Exploring physiotherapist acceptability. *European Journal of Public Health*, *32*(Supplement_3), ckac131. https://doi.org/10.1093/eurpub/ckac131.328

project Hbc. The theory and techniques tool. Retrieved from https://theoryandtechniquetool.humanbehaviourchange.org/tool

Public Health England. (2016). Making Every Contact Count (MECC): Consensus Statement.

Rodrigues, A. M., Haste, A., Penn, L., Bell, R., Summerbell, C., White, M., Adamson, A. J., & Sniehotta, F. F. (2020). Stakeholders' perceptions and experiences of the National Health Service diabetes prevention programme in England: Qualitative study with service users, intervention providers and deliverers, commissioners and referrers. *BMC Health Services Research*, *20*(1), 307. https://doi.org/10.1186/s12913-020-05160-2

Rodrigues, A. M., Nichol, B., Wilson, R., Charlton, C., Gibson, B., Finch, T., et al (2024). Mapping regional implementation of 'Making Every Contact Count': mixed methods evaluation of implementation stage, strategies, barriers and facilitators of implementation. *BMJ open*, *14*(7), e084208. https://doi.org/10.1136/bmjopen-2024-084208

Salamon, L. M., & Sokolowski, S. W. (2016). Beyond nonprofits: Re-conceptualizing the third sector. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, *27*(4), 1515–1545. https://doi.org/10.1007/s11266-016-9726-z

Thirkle, S. A., Adams, E. A., Harland, J., Kaner, E., & Ramsay, S. E. (2023). *OP07 'The lights are on, and the doors are always open': A qualitative study to understand challenges underlying the need for emergency care in people experiencing homelessness in rural and coastal North-East England*. BMJ Publishing Group Ltd.

Tinati, T., Lawrence, W., Ntani, G., Black, C., Cradock, S., Jarman, M., Pease, A., Begum, R., Inskip, H., Cooper, C., Baird, J., & Barker, M. (2012). Implementation of new Healthy Conversation Skills to support lifestyle changes–what helps and what hinders? Experiences of Sure Start Children's Centre staff. *Health & Social Care in the Community*, *20*(4), 430–437. https://doi.org/10.1111/j.1365-2524.2012.01063.x

Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): A 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care: Journal of the International Society for Quality in Health Care*, *19*(6), 349–357. https://doi.org/10.1093/intqhc/mzm042

Vijay, G., Wilson, E. C., Suhrcke, M., Hardeman, W., & Sutton, S, VBI Programme Team. (2016). Are brief interventions to increase physical activity cost-effective? A systematic review. *British Journal of Sports Medicine*, *50*(7), 408–417. https://doi.org/10.1136/bjsports-2015-094655

Vogt, K. S., Johnson, J., Conner, M., Armitage, C. J., & Keyworth, C. (2023). Barriers and enablers to delivering opportunistic behaviour change interventions during the COVID-19 pandemic: A qualitative study in healthcare professionals. *British Journal of Health Psychology*, *28*(3), 773–792. https://doi.org/10.1111/bjhp.12653

Wackerhausen, S. (2009). Collaboration, professional identity and reflection across boundaries. *Journal of Interprofessional Care*, *23*(5), 455–473. https://doi.org/10.1080/13561820902921720

Watkins, D. A., Msemburi, W. T., Pickersgill, S. J., Kawakatsu, Y., Gheorghe, A., & Dain, K, NCD Countdown 2030 collaborators. (2022). NCD Countdown 2030: Efficient pathways and strategic investments to accelerate progress towards the Sustainable Development Goal target 3.4 in low-income and middle-income countries. *Lancet (London, England)*, *399*(10331), 1266–1278. https://doi.org/10.1016/S0140-6736(21)02347-3

Weatherson, K. A., McKay, R., Gainforth, H. L., & Jung, M. E. (2017). Barriers and facilitators to the implementation of a school-based physical activity policy in Canada: Application of the theoretical domains framework. *BMC Public Health*, *17*(1), 835. https://doi.org/10.1186/s12889-017-4846-y

Whatnall, M. C., Patterson, A. J., Ashton, L. M., & Hutchesson, M. J. (2018). Effectiveness of brief nutrition interventions on dietary behaviours in adults: A systematic review. *Appetite*, *120*, 335–347. https://doi.org/10.1016/j.appet.2017.09.017

WHO. (2020). *Global health estimates 2020: Deaths by cause, age, sex, by country and by region, 2000–2019*. WHO Geneva.

WHO. (2021). Saving lives, spending less: The case for investing in noncommunicable diseases.

WHO. (2022). Invisible numbers: The true extent of noncommunicable diseases and what to do about them.