

A review of practical cooking skills activities which focus on promoting an affordable healthy balanced diet for adults, young people and their families within low-income communities in Scotland

Executive Summary

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Glossary

Agents	Individuals such as course leaders, support workers, youth leaders etc. who might deliver or reinforce cooking skills and behaviours.
Assets Based Approach	Service planning and delivery approaches, which build upon the existing assets of individuals, groups and communities and their environments http://www.healthscotland.com/documents/5535.aspx Similar to strength based approaches.
Behaviour Change Theory	Behavioural change theories are attempts to explain why behaviour change occurs using learning from academic fields such as sociology or psychology.
Behaviour Change Model	Visual or narrative models used to illustrate behaviour change theories.
Behaviour Change Concepts	This is used in the review to refer to sub elements of behaviour change theories that are used to explain the factors and approaches that support or mediate behaviour change (such as self efficacy and social norms or goal orientation).
Community Development Approach and Community Learning and Development	Community Development approaches aim to build the capacity of communities to meet their own needs, engage with and influence decision makers; Community Learning and Development aims to empower people individually and collectively through learning; http://www.scotland.gov.uk/Publications/2012/06/2208/0
Context	Contexts include factors such as the settings courses are delivered in, the various content and activities that make up the cooking skills course, the target groups or aspects of the external environment that may impact on an intervention.
Cooking Skills Activity	This is used to refer to the wide range of things that are undertaken to encourage cooking skills (including drop ins, events, classes and cooking courses).
Cooking Skills Course	A planned and structured programme of cooking skills classes aimed at increasing cooking knowledge and skills.
Empirical (data or evidence)	Learning or information based on, concerned with, or verifiable by observation or experience rather than simply theory or logic.
Grey Literature	In general literature which is unpublished and/or not peer reviewed such as reports, plans, lesson plans, etc.

Intervention	An activity, project, programme or policy that purposefully aims to change something (e.g. a health related behaviour).
Intervention fidelity	Consistently implementing an intervention in line with the agreed plan and/or evidence.
Intervention Theory	Used in this review to describe the explanation that practitioners put forward to explain how and why their cooking courses (the intervention) works.
Personalisation agenda	An aspect of public service reform that includes a strategic shift towards early intervention and prevention, with the aim that every person who receives support, whether provided by statutory services or funded by themselves, will have choice and control over the shape of that support in all care settings.
Primary Outcome Data	Data produced from the evaluations of the cooking courses included in this review.
Realist Synthesis/review	<p>Realist synthesis is a review process that tries to reduce complexity and focus on and identify the theories that underlie social interventions. Realist review findings therefore do not decree that any intervention works or does not work. Instead these reviews are exploratory and attempt to uncover which elements of interventions work (or do not work) for particular sub-groups of the target audience in particular contexts, and why. Realist reviews also try to identify theories and learning that can be applied across groups of similar programmes or target audiences (called mid-range theories). Realist approaches therefore generate the types of insights that are useful in helping to inform decisions on how to design and improve future programmes and to target and tailor interventions to achieve particular outcomes for specific groups in key contexts.</p> <p>Realist review uses the terminology of contexts, mechanisms and outcomes.</p>
Realist Theory /middle range theory	<p>Theories are the underlying ideas held by commissioners, practitioners and participants and represented in the literature about the activities involved in an intervention and how, why, and in what contexts and for whom it is believed to work.</p> <p>Middle range theory is a theory that might apply across a range of similar programmes.</p>
Reinforcement	<p>Reinforcement activity is when practitioners provide rewards or encouragement (often via significant others) to embed or sustain a positive behaviour or outcome.</p> <p>The reviewers are using reinforcement in this review also to include contexts that allow on-going opportunities to embed behaviour change by exposing</p>

	participants to multiple strategies and opportunities for support from peers or significant others beyond the immediate cooking skills course.
Robust data	By robust – the reviewers mean outcome data gathered consistently using validated tools and analysed taking account of response rates and possible selection bias that could be easily combined or subjected to meta-analysis.
Scottish Index of Multiple Deprivation (SIMD)	<p>The Scottish Index of Multiple Deprivation identifies small area concentrations of multiple deprivation across all of Scotland in a consistent way. It allows effective targeting of policies and funding where the aim is to wholly or partly tackle or take account of area concentrations of multiple deprivation.</p> <p>The SIMD ranks small areas (called datazones) from most deprived (ranked 1) to least deprived (ranked 6,505). People using the SIMD will often focus on the datazones below a certain rank, for example, the 5%, 10%, 15% or 20% most deprived datazones in Scotland.</p>
Specificity	Used in the review to refer to precise and clear detail of Contexts Mechanisms and Outcomes of the cooking skills courses and activities.
Strategies	Planned activities used by cooking skills practitioners to achieve specific outcomes amongst the cooking skills participants (e.g. a strategy such as eating together at the end of the class may be used to boost self esteem and confidence through positive feedback from the group)
Strengths-based Approach	Service planning and delivery approaches, which build upon the existing strengths of individuals, groups and communities and their environments. http://www.iriss.org.uk/resources/strengths-based-approaches-working-individuals . Similar to assets based approaches.
Supported setting	This term is used in the review to refer to cooking skills contexts where there are (relatively) longer-term relationships between practitioners and participants. For example where the participants have been referred by a health or social worker or community worker who may have a prior and/or on-going relationships or in residential or on-going wider community projects.
Tailoring	Tailoring relates to adapting a course or intervention to reach an individual based on characteristics that are unique to that person.
Targeting	Targeting involves the development of an intervention for a defined population subgroup that takes into account the characteristics shared by the members of

	that sub group for example, translating recipes into a different language for non-English speakers.
Theories of Change	A theory based evaluation approach that uses intervention theory to drive the choice of evaluation methods. Logic models are often used to represent the stakeholders' theories and assumptions and to prioritise key evaluation questions for subsequent testing.
Typology	A grouping of projects similar in terms of target group, context or content.

Executive summary

Background

Community Food and Health (Scotland) (CFHS) is part of NHS Health Scotland (NHSHS) and aims to ensure that everyone in Scotland has the opportunity, ability and confidence to access a healthy and acceptable diet for themselves, their families and their communities.

To achieve this, CFHS support work that improves access, availability, affordability to, and uptake of, a healthy diet within low-income communities. Their work includes the promotion of cooking skills and addressing food culture.

Cooking activities are a popular activity run by community groups and agencies such as local authorities and NHS teams within low-income communities. They deliver cooking activities in the form of cooking courses, drop in sessions, and as part of activities such as independent living skills programmes or when supporting people on a one-to-one basis. CFHS has provided development funding for 100s of cookery courses and activities since 1997. In recent years, CFHS has focused on improving practice, supporting the development of self-evaluation and developing the evidence base around cooking skills activities.

Many of the local agencies delivering front line cooking activities lack the funds and skills to conduct rigorous evaluations of their programmes. As a result there is limited robust knowledge of the effectiveness of cooking skills courses and crucially of what sorts of activities work or don't work, for whom, how and why.

In September 2014 CFHS commissioned a review of Scottish community cookery skills activities aimed at low-income communities using a realist synthesis approach. This is the Executive Summary of that review. It is intended that the review findings will be used to inform or support improvements in practice in Scotland. Thus the key audiences for the learning contained in this report are community food initiatives, and agencies and managers embarking on, or involved in, funding, planning or delivering cooking skills courses.

Aims and objectives

The aim of the research was to analyse grey literature, using a realist synthesis approach, to find out what contexts and mechanisms within community cookery skills activities helped achieve or improved the outcomes for the participants from low-income communities. The outcomes of interest included the development of skills, knowledge and confidence around preparing and cooking healthy and affordable meals, intentions to change behaviour, and non-nutritional outcomes.

CFHS commissioned the review team to analyse existing grey literature gathered from cooking skills activities in Scotland.

The review was undertaken to understand how the contexts and mechanisms within community cookery skills activities help achieve or improve the outcomes for participants from low-income communities.

The review used a realist approach to learn from the range and complexity of activities used to teach cooking skills across Scotland and the many ways in which practitioners adapt their activities to address community, target group and participants' needs.

The objectives were to:

- Explore the mechanisms of cooking activities that improve or achieve outcomes for participants.
- Explore the contexts of cooking activities that improve or achieve outcomes for participants.
- Explore what is learned from working with different participant groups and mixed groups.
- Explore any impact beyond participants to their families and communities.
- Ensure that an equalities perspective runs through the review process.

In other words the purpose of the review was to learn about what types of cooking courses or activities work or don't work for different target groups in varied settings and to gain understanding about how and why they do or don't work.

Methods

Realist synthesis

Realist synthesis is a review process that tries to reduce complexity and focus on and identify the theories that underlie social interventions. Theories are the underlying ideas held by commissioners, practitioners and participants and represented in the literature about the activities involved in an intervention and how, why, and in what contexts and for whom it is believed to work.

Realist review findings therefore do not decree that any intervention works or does not work. Instead these reviews are exploratory and attempt to uncover which elements of interventions work (or do not work) for particular sub-groups of the target audience in particular contexts, and why. Realist reviews also try to identify theories and learning that can be applied across groups of similar programmes or target audiences (called mid-range theories). Realist approaches therefore generate the types of insights that are useful in helping to inform decisions on how to design and improve future programmes and to target and tailor interventions to achieve particular outcomes for specific groups in key contexts.

Realist review uses the terminology of contexts, mechanisms and outcomes. Contexts include factors such as the settings courses are delivered in, the various content and activities that make up the cooking skills course, the target groups and so on. Mechanisms are the responses of the participants to the various cooking skills activities including issues such as their levels of engagement and their motivations and early reactions that result in them learning and changing their cooking behaviour. Outcomes are the changes that are anticipated as a result of the intervention such as increased knowledge, confidence, skills, intentions to change and actual behaviour change. The theories developed in realist approaches are often described in terms of contexts, mechanism and outcomes configurations (CMOs). These configurations propose that certain contexts result in mechanisms in specific target groups leading to particular outcomes. For example, a CMO might be that in

family contexts, cooking with children (rather than only adults) reduces their fussiness (a mechanism) over food and so is more likely to lead to the transfer of cooking skills into the home.

The review process

The review used a realist approach to learn from the range and complexity of activities used to teach cooking skills across Scotland and the many ways in which practitioners adapt their courses to address community, target group and participants' needs. The methods were based on the key steps highlighted in Table 1.

Table 1: Key steps in the Realist Review Process.

Steps	Sub steps	Relationship with CFHS realist review stages
Define the scope of the review	With the commissioners identify and refine the key question of the review	Stage one: Identification, quality sifting of grey literature by CFHS, transfer of this to reviewers for data extraction, evidence building and theory development and refinement
	With the commissioners clarify the purpose(s) of the review	
	Find and articulate the programme theories	
Search for and appraise the evidence	Focusing the search for the evidence	
	Appraise the evidence	
Extract and synthesise the findings	Extract the results	
	Synthesise the findings	
Draw conclusions and make recommendations	Concluding the theories development from the realist review	
		Report writing and dissemination

Most realist reviews involve searching published databases and extracting papers that will inform the review questions. They may also include searching grey literature. This review differed in that it focused solely on a selection of unpublished grey literature.

The grey literature

The literature was, in the main, funding applications, and implementation and evaluation reports from cooking skills courses and activities carried out in Scotland

between 2010 and 2014. One hundred and fifty of the total 169 sets of reports read by CFHS related to projects funded in part or wholly by CFHS and 19 were funded through other sources and were therefore external to CFHS. Some of this documentation was submitted to CFHS from May to September 2014 in response to a request sent out to practitioners, community food projects, NHS Boards and third sector organisations earlier in 2014.

CFHS forwarded 81 sets of documentation onto the reviewers from the 169 that they read and reflected upon. The sub set of literature passed onto reviewers was from 74 different organisations. The grey literature selected for inclusion in the review by CFHS were those reports which CFHS felt provided sufficient detail about the cooking skills interventions, contexts, and associated evaluations to inform the outline review questions. The focus on preselected grey literature necessitated some adaptations to a standard realist review process and tools.

Identifying and refining the review purpose

The reviewers initial reading of the 81 sets of documentation passed on by CFHS highlighted a wide range of contexts, mechanisms and outcomes of possible interest and numerous and varied groups targeted.

The reviewers conducted a second reading of the literature and simultaneously coded information about the cooking skills courses and activities, using a coding framework developed by the review team and refined and approved by CFHS and the advisory group. In total the reviewers coded circa 195 variables to show whether or not information was available and to give some indication of what was reported in the grey literature. The coding covered issues about contexts (e.g. setting, target groups, course content, methods and strategies used), mechanisms (e.g. take up, adherence, early responses) and outcomes (e.g. increased confidence, cooking at home etc.). The variables were all things that might influence the effectiveness of cooking skills activities.

The reviewers met with CFHS to reflect on what had been uncovered from the above process and the apparent similarities and variations in the courses and activities and the contexts in which they were delivered. This reflection allowed CFHS to highlight the gaps in knowledge and prioritise the types of theory testing and key questions that were of most interest to CFHS and practitioners from the wide range contained in the grey literature.

A key issue that influenced the prioritisation process was substantial limitations in the quality and robustness of the outcome data within the grey literature. CFHS, the advisory group and the reviewers were aware of these potential limitations prior to commissioning the review. All parties discussed the potential implications of these but agreed that even with these the review could produce valuable learning.

The limitations meant that theories uncovered in the grey literature could not be validated by reference to the primary data collected by the cooking skills projects. As such any testing or validation of the theories that was feasible as part of this review had to be done with reference to the existing published data on what works for behaviour change programmes in general. Within the field of health improvement there is a substantial amount of published research presenting and testing the

efficacy of various social and psychological theories (represented as behaviour change models and associated psychological or social concepts or constructs). The reviewers have used the recommendations associated with research into these models and concepts to help validate the theories in this review.

Following discussion CFHS prioritised theories that concerned variations in the amount of targeting, tailoring and reinforcement that appeared to exist in different settings. It was felt that learning about strategies used for tailoring, targeting and reinforcement would be relevant to most deliverers and commissioners of cooking skills activities and would deliver what Pawson et al., 2004 describes as middle range theory. This focus also satisfied the range of objectives identified in the tender.

The refined review, purpose and key questions and their relationship to the initial review objectives are shown in Table 2.

Table 2: Prioritised review purpose and key questions linked to CFHS objectives

CFHS Objective	Type of theory testing	Key related review questions
Explore mechanisms that improve or achieve outcomes	Review official expectation against actual practice	What strategies do practitioners use for targeting, tailoring and reinforcement (and why)? Are the strategies informed by 'evidence based' recommendations?
Explore the contexts that improve or achieve outcomes	Same theories in comparative contexts	Are strategies applied to the same extent and for the same reasons in different contexts?
What can be learnt from working with different groups and mixed groups	Adjudicating between theories	Do some strategies seem to achieve particular responses from particular participants?
Explore impact beyond participants to their families	Adjudicating between theories	Do particular contexts or strategies aid the transfer of cooking skills into the home?
Ensure an equalities perspective runs through the review process	Review official expectation against actual practice	Are courses reaching low income or vulnerable communities?

Finding and articulating the programme theories

The reviewers used their initial reading of the literature and the coding framework to identify and articulate the initial strategies and underlying theories that related to targeting, tailoring and reinforcement. The reviewers used the following definitions for these terms.

Targeting involves the development of an intervention for a defined population subgroup that takes into account the characteristics shared by the members of that sub group for example, translating recipes into a different language for non-English speakers.

Tailoring relates to adapting a course or intervention to reach an individual based on characteristics that are unique to that person.

Reinforcement activity is when practitioners provide rewards or encouragement (often via significant others) to embed or sustain a positive behaviour or outcome. The reviewers are using reinforcement in this review also to include contexts that allow on-going opportunities to embed behaviour change by exposing participants to multiple reinforcement strategies and opportunities from peers or significant others beyond the immediate cooking skills activities.

Table 3 illustrates the range and diversity of strategies used for targeting, tailoring and reinforcement and begins to differentiate these in terms of which were most commonly or less frequently reported as being used within the data. It should be noted that some strategies may overlap and some may be used for targeting, tailoring and reinforcement rather than for one of these exclusively.

Table 3: Range of strategies used for targeting, tailoring and reinforcement

Strategies more often found in the data	Strategies less often found in the data
Allowing participants to choose or influence the selection or order of recipes	Formal self-assessment of diet
Adjusting the focus of sessions to concentrate on specific issues or conditions e.g. mood and health/ diabetes etc.	One-to-one support in addition to class
Using food tasting sessions to widen palate	Food shopping trips
Emphasising the financial benefits of cooking from scratch (relative to buying produced or fast foods)	Volunteering to cook for others
Designing or varying the class length or frequency to address needs	Attending gardening projects and using food for cooking class
Eating together at the end of the class	Attending lunch or breakfast clubs associated with class
Cooking for others -class event and or families at last session	Reinforcement from staff or carers
Taking meals home to family to eat	Follow up from referrers
In house certificates given at the end of class	Formal input on labelling
Recipes to take home	Accreditation or qualifications (e.g. Royal Environmental Health Institute of Scotland Health & Hygiene certificate)
Using informal measures rather than scales	Cook with kids
Simplified or visual recipes	Rewards or incentives or 'giveaways'
	Focus on freezing or bulk buying or low-costs
	Formal goal setting
	Meeting or sharing with others post course

Focusing the search for evidence

A data extraction framework was developed by the reviewers and was informed by decisions about the review purpose and prioritised questions and theories.

Had the primary outcome data in the grey literature been more robust this framework would have used it to evidence which strategies had or had not led to successful outcomes in the various contexts thereby testing theories about which strategies worked for whom, when and why.

In the absence of primary outcome data that are scientifically robust the framework sought to refine and test the theories (the strategies and how, who and for whom they are thought to work) against theoretical concepts taken from behavioural models. There are a wide variety of psychological theories in the form of behaviour

models that have been used to explain and predict behaviour change such as Social-cognitive theory, the Theory of planned behaviour, and the Transtheoretical model etc. Whilst some of the individual models have limitations, various sources suggest that a number of concepts drawn from them are helpful when planning individually focused behaviour change programmes. They include the following concepts:

- Outcome expectancies (i.e. helping people to develop accurate knowledge about the health consequences of their behaviours).
- Personal relevance (emphasising the personal salience of health behaviours).
- Positive attitude (promoting positive feelings towards the outcomes of behaviour change).
- Self-efficacy (enhancing people's belief in their ability to change).
- Descriptive norms (promoting the visibility of positive health behaviours in people's reference groups – that is, the groups they compare themselves to, or aspire to).
- Subjective norms (enhancing social approval for positive health behaviours in significant others and reference groups).
- Personal and moral norms (promoting personal and moral commitments to behaviour change).
- Intention formation and concrete plans (helping people to form plans and goals for changing behaviours, over time and in specific contexts).
- Behavioural contracts (asking people to share their plans and goals with others).
- Relapse prevention (helping people develop skills to cope with difficult situations and conflicting goals).

Such concepts could be used alongside, and to inform, the targeting and tailoring of interventions to suit the needs of target groups and the delivery contexts and to reinforce behaviour change.

The data extraction process to a lesser extent was also used to assess the alignment of cooking skills strategies to value based approaches to health improvement (e.g. strength based and community development approaches).

Appraising and extracting the data

The reviewers re-read the grey literature, this time extracting examples of the various strategies that had been applied to specific contexts, how and why and coded these against the recommended behaviour change concepts. The reviewers extracted data from all of the grey literature forwarded from CFHS. This involved reading and re-reading circa 81 sets of documents.

The data extraction framework provided evidence of whether or not the range of strategies applied by practitioners in cooking skills courses aligned with, and were informed by, recommended behaviour change model concepts. It also allowed an assessment of the frequency with which they were used and in which contexts they were used. In addition, this analytical process also highlighted some of the more detailed underlying theories and assumptions that underpinned the way the practitioners seemed to use the strategies.

Synthesising the findings and concluding the theory development

The learning and theories from the realist review were, in addition, to be informed and refined by the views of practitioners and participants as part of focus group discussions. These groups were purposively selected to further inform the refinement of and conclusions about the programme theories.

The reviewers conducted one focus group with ten practitioners whose work included working with very vulnerable groups (i.e. residents in supported accommodation units, those with mental health issues, offenders, or the homeless etc.). A second focus group was conducted with nine practitioners whose work included providing cooking skills for parents or carers of nursery or school children. Both focus groups lasted one hour.

The learning from these practitioner focus groups further informed our thinking about the prioritised theories and the learning from them was used to inform further testing of theories with participants in two cooking skills interventions; one run with residents (n=4) in temporary accommodation unit and one run with parents (n=5) of nursery aged children in a socially deprived locality. These focus groups sought participants' views on the extent to which the different strategies and approaches were effective in helping them learn to cook and achieve their cooking related goals.

Data from all four focus groups were used to further refine the theories that had been developed from the review of the grey literature.

Summary of main findings

The following findings are based on the overall triangulated data from:

- the grey literature entered into the coding framework
- data extracted from the grey literature and aligned with the concepts from the behaviour change models
- data from the two focus groups with practitioners
- data from the two focus groups with participants.

The majority of cooking skills courses are 'targeting' and appear to be reaching vulnerable individuals and low income communities. This is based on information about the settings, the target populations of those delivering courses, descriptive characteristic of the participants and types of targeting and tailoring being done to address their needs. The range of groups targeted include:

- those in mental health recovery or in temporary accommodation
- those homeless or at risk of homelessness
- those with physical disabilities or additional learning needs
- offenders or their families
- family settings (often targeting nursery or school parents and or children)
- those attending family centres or community centres
- youth clubs
- carers groups
- elderly groups or residents
- NHS settings
- BME groups
- women's aid groups

- those effected by alcohol or substance use.

There was evidence of consistent good practice by course practitioners (e.g. in line with recommendations or evidence for promoting health behaviour change from highly regarded sources) and strength based approaches as shown by:

- evidence of practitioners encouraging participants to influence the course content and methods
- evidence of targeting and tailoring via many varied strategies
- examples where attempts are being made to reinforce learning and positive behaviours through using multiple strategies and agents.

To enhance the outcomes of the cooking skills courses practitioners used a wide range of strategies. Some of these strategies were more commonly used than others. The strategies used align well with behaviour change model concepts recommended from health behaviour change advisory bodies such as NICE (National Institute for Health and Care Excellence (formerly known as National Institute for Clinical Excellence)).

More general strategies commonly used such as encouraging cooking course participants to influence recipes and encouraging peers to support slower learners also align well with the principles of strength-based approaches.

The following concepts seem to be used more frequently:

- Outcome expectancy
- Personal relevance
- Positive attitudes
- Self efficacy
- Descriptive norms (mainly due to common use of eating together)
- Subjective norms.

The concepts that seem to be used less frequently are: personal and moral norms; intention formation & concrete plans; and, behavioural contracts and relapse prevention. There are practitioners that do apply these concepts but they seem to be less consistently reported or applied than those listed above.

Courses were delivered in a wide variety of settings. Different contexts may facilitate or hinder the use of certain strategies. For example, commissioning organisations such as NHS Boards may restrict the extent to which practitioners tailor and personalise their cooking skills courses through attempts to standardise and improve course delivery and evaluation.

Practitioners had varied theories and assumptions about how strategies work. Similar strategies were often intended to achieve different outcomes or to trigger different mechanism (responses in participants).

There was a lack of clarity and specificity in many of the plans, implementation reports and evaluations of cooking skills courses.

There were limitations in the outcome data reported which necessitated a revision of the review questions and meant that not all of the review objectives could be addressed.

Conclusions

The majority of cooking skills activities included in the review appear to target and reach vulnerable individuals and low-income communities. Despite it not being possible to verify this targeting and the resultant reach of the cooking skills activities through analysis of postcode data the reports, practitioners' descriptions, the target groups of the community food initiatives delivering cooking skills and partners used for co-delivery of activities for larger agencies such as NHS Boards all suggest that vulnerable groups are being reached.

There was evidence of consistent evidence based practice by course practitioners. Many of the strategies used to target, tailor and reinforce activities are consistent with behaviour change model concepts recommended by behaviour change academics and authoritative organisations such as NICE.

Cooking skills courses and activities seem to be informed to a degree by thinking in terms of value-based approaches currently favoured by the Scottish Government e.g. person-centred, strengths or assets based approaches, and community development practice.

The cooking skills courses and activities included in the review (most of which were funded via CFHS) appear from course feedback to have been engaging and enjoyable experiences for those who have participated. Notwithstanding the limitations in the outcome data, participants who have completed course feedback and evaluation forms consistently self-report short-term improvements in confidence, knowledge, intentions to change and in some instances behaviour change.

Many of the strategies were aimed primarily at 'non cooking outcomes' or mediators of future cooking outcomes such as self-efficacy or food's role in social interaction etc. The causal linkages between these mediators and cooking outcomes require further testing.

The practitioners (n=19) who engaged in the focus groups were hugely enthusiastic and reflected deeply about the content and design of their activities.

There is some good evaluation and reporting practice. However there was a lack of clarity and specificity in many of the plans and implementation reports. There are some examples of good evaluation practice although the evaluation practice across the board is not scientifically robust or consistent enough to allow meta-analysis and or to prove the impact of cooking skills activities in Scotland. These issues have limited the review's ability to address all of the original study objectives set by CFHS and the advisory group.

There is scope to significantly improve learning about cooking skills activities through more targeted commissioning and evaluation practice that places understanding and refining theory at the heart of commissioners, funders and practitioners' decision

making.

Recommendations

Key learning for policy makers and commissioners

By policy makers and commissioners the authors mean both national and local government and statutory agencies such as CFHS and NHS Boards.

Via training and mentoring and more creative funding arrangements policy makers and commissioners should where feasible support practitioners and agencies providing cooking skills activities to:

- Use evaluation tools and measures that are appropriate to, and feasible for, their vulnerable target groups but that are also consistent (at least within if not across contexts e.g. child and family, vulnerable client groups etc.)
- Report denominators and completion rates for their own individual and accumulated courses.
- Identify and test more innovative means of following up participants (e.g. via support staff or referrers or via social media).
- Conduct longer-term follow up.
- Exploit possible learning about the strategies applied from natural experiments and case studies for example:
 - purposefully varying specific strategies but keeping practitioners and target groups similar and assessing the impact on specific outcomes
 - verifying the assumed causal relationship between mediators such as self efficacy, reduced isolation and cooking related outcomes
 - pretesting assumptions with intended target groups (e.g. whether taking meals home is actually an incentive to participation for families)
- Test the feasibility of the less frequently used concepts and strategies (e.g. associated with goal setting or checking participants' motivations for involvement) to provide better baselines.
- Increase the duration and sustainability of their cooking skill courses to facilitate the above changes.

A possible means of supporting the above improvements might be to develop local or regional evaluation champions. Such champions might support the analysis and interpretation of data provided by local projects as well as the other changes described above.

Implementation, outcome and evaluation reporting could be improved through the development and use of a standardised planning and reporting framework informed from learning from the coding framework used in this review.

Key recommendations for practitioners

Practitioners should strive to enhance their funding applications, planning and reporting by providing consistent and specific information about their target groups, content, methods, strategies used (including how these are anticipated to achieve change in their participants and in what outcomes).

Practitioners should strive to enhance their monitoring and evaluation by using appropriate but consistent and where feasible validated measures and tools. If

funding allows they should strive to increase course durations (where these are very short), seek to improve baseline information and lengthen follow up through the means and strategies described above.

There are areas where even more reflective practice might lead to activities and courses having a greater impact on participants and may enhance within- and across- course learning. Reflective questions are proposed as part of the report which could be considered by practitioners at different stages of a cooking activity cycle: i.e. seeking funding, planning, recruitment, delivery, evaluation etc.

Practitioners may benefit from making it explicit to funders that the many varied strategies they use for targeting, tailoring and reinforcement have a strong theoretical basis and employ key health behaviour change concepts recommended by authoritative organisations such as NICE.

Practitioners should ensure funders are aware of the reach of their programmes in terms of engaging vulnerable groups. They should where feasible provide explicit evidence for this.

The above recommendations if implemented would begin to enhance both the clarity of practitioners' delivery and theories, and improve to some extent the robustness of outcomes. This in turn might allow more accumulated learning within and across cooking courses and an enhanced evidence base for cooking skills activities in Scotland and elsewhere.

Whilst there is much to be positive about in terms of the delivery of cooking skills activities within Scotland there are still many challenges to be faced and improvements sought.

