**CHALLENGES AND OPPORTUNITIES IN BUILDING CRITICAL HEALTH LITERACY**

**BACKGROUND**

Health Literacy is increasingly recognised as a key determinant of health, with low levels of health literacy linked to poorer health outcomes (1). Action to build health literacy has been incorporated as a key strategy in tackling health inequalities (2,3) and as central for the promotion of public health (4). With almost half of Europeans demonstrating poor or inadequate health literacy skills and vulnerable groups most at risk of low levels of health literacy, understanding and addressing health literacy has become a priority for public health (4).

Attempts to understand the causal pathway between levels of health literacy and health outcomes has led to widespread analysis of the concept, revealing a complexity of definitions that go beyond the dominant representation of health literacy as simply the skills held by individuals to access and understand health information. The domain of critical health literacy (CHL) presented in Nutbeam’s typology (5), previously underexplored, is now attracting growing interest with attempts to conceptualise, measure, and develop interventions. This is, in part, because of its potential contribution to addressing social determinants of health and subsequent health inequalities (6-8).

Current conceptual analyses of CHL present it as assets and capabilities present at individual and community level (9,10). Within this conceptualisation exist higher order cognitive skills including abilities to critically appraise health information and understand how health is constructed socially and inequitably (6,11-13). Contemporary understandings of CHL are that it is a transactional concept influenced by, and dependent upon, interactions with professionals and services and subject to numerous contextual influences (10,11,14,15). CHL encompasses both action and agency; to apply information critically; but crucially also individual and community political action on the social determinations of health in pursuit of social justice (10-12,16). In this respect CHL is informed by Freirian ideals of emancipation where people achieve a deepening awareness both of their social cultural reality that shapes their lives and their capacity to transform that reality’ (17,18). According to Freire, the path towards conscientization is through education and processes of reflection and action.

The complexity of CHL is demonstrated in attempts to develop measurement tools where the focus remains on the critical appraisal of information (13,19,20), although indicators of empowerment and political action are becoming increasingly evident (21-23). In the All Aspects of Health Literacy Scale (AAHLS) developed by Chinn and McCarthy (22), attributes of CHL are identified as being critical and questioning about health information, but also include a willingness to assert personal control over healthcare decisions and a positive view about the possibilities of individual contribution to community health outcomes.

Evidence of what works to build CHL is also limited. De Wit et al’s (10) systematic review of CHL in older adults and communities initially found no results, concluding that the term itself was not sufficiently used to capture many relevant evaluations or research. Sykes et al (11) also found few recorded interventions designed explicitly to build CHL. De Wit et al’s review (10) found two practices to be important in effective interventions to develop CHL: collaborative learning and social support. These reflect much of the literature about empowerment for health (24) which also identifies social support, participation and asking ‘why’ or a process of discussion, reflection and action. Participatory, experiential and emancipatory learning processes of community development draw on a Freirian critical pedagogy (25,26) and are committed to building a critical consciousness or, what Cross et al have recently referred to as ‘health conscientisation’ (8 p136), and this informs the few interventions that explicitly seek to develop CHL (7-9,16,27).

This paper seeks to contribute to the evidence base of interventions to build CHL. It reports on an evaluation of a community family learning project that completed in 2012 but which is one of the few examples of a project that explicitly aims to build CHL. It offers reflections on opportunities and challenges for future interventions. The project aimed to increase functional, interactive and critical health literacy, but this paper reports specifically on findings relating to CHL.

The project targeted parents of young children in London without qualifications in Maths and English at level 2 or above and who had typically previously become disengaged from formal education. A family learning model (28) was used based on flexible, informal learning strategies building on strengths and assets of participants, allowing them to identify areas of interest to inform the project programme. The programme took place with three different groups over 12 weeks with each session lasting five hours. Each session focussed on a different topic, incorporating information-based activities, individual and group development tasks and interaction with visiting service providers . Each session also included a shared meal and ended with a group physical activity such as a walk or yoga. In this way, each session followed a similar outline but incorporated space for participant-directed activity and discussion.

**METHOD**

The evaluation aimed to; a) identify the processes used by the project to build CHL and b) assess the impact of the project on the CHL of participants. Providing answers to these questions was important not only to understand the impact of the project but to provide the crucial insight into how and why this impact was achieved. It is from this that learning can be provided for the development of future interventions.

The impact of the project on CHL was measured through the AAHLS measurement tool (22). Chinn and McCarthy (22) do warn however, of the danger in relying on questionnaires that necessarily entail an oversimplification of complex CHL competencies. They recommend complementing AAHLS with qualitative or ethnographic methods to achieve a more nuanced and contextualised assessment of CHL (22). The evaluation therefore used a mixed methods approach combining a pre- and post-intervention AAHLS assessment with participant focus groups and interviews with three project facilitators to capture data on the processes that build CHL . Questionnaire data were analysed to calculate descriptive statistics while the qualitative data were analysed using thematic analysis (29).

**RESULTS**

36 participants began the project and 24 completed the 12-week programme. Fourteen participants completed the AAHLS and participated in one of three focus groups. Participants were from low income households, belonged primarily to minority and ethnic groups with English as a second language and included only one male.

**Processes used to build critical health literacy**

The evaluation identified a number of processes used to build CHL including; an informal and participatory learning environment, supported and independent assessment of the problem, appraising information, familiarisation of health systems and services, and social support. Common to all these processes was learning made relevant to the context of participants’ own lives. The evaluation revealed few processes explicitly to encourage empowerment and political action.

* Participatory learning

The creation of an informal, participatory learning environment that differed from the negative experiences of formal schooling undergone by many of the participants, was seen as important in building confidence and self-esteem crucial to developing personal and social skills:

*‘we used ways of learning for people who had been failed by the education system. So, although we did do some auditory and visual presentations, our emphasis was on experiential learning.’* (Facilitator)

Participants were encouraged to lead discussions with a focus on using and building existing knowledge rather than on filling gaps in their knowledge. Opportunity was given to participants to identify health topics that they wished to explore, all of which were designed to increase self-efficacy:

*‘there were a number of topics that were negotiated.... so they had direct input over the content. One parent wanted help with budgeting food and we worked that into the content.”* (Facilitator)

The data showed that an organised structure for learning existed within the informal learning environment, with a different health issues explored each week, ensuring that CHL knowledge and skills were addressed.

*‘Somebody walking in might find it a bit chaotic, lots of laughing - where's the learning? but in fact there's a lot that goes on which, because there is that structure there, we are very clear about what we want to do, what we want people to go away with.’* (Facilitator)

* Supported and independent assessment of the problem

This planned structure included opportunities for participants to undertake independent research, both during sessions and at home, and this was important in developing abilities to assess issues affecting health. The skill of accessing information was developed each week whereby participants were given a topic to research on their own at home. This required them to find information through the internet, by collecting leaflets from local services or by pulling out the relevant information from resources given in the workshops.

* Appraising information

Participants practised skills in critically appraising information by presenting their research to the group and leading a discussion on it.

*‘People were encouraged to look at the info we brought them but then maybe research it some more and then bring it back to the group and present and in that way they could put it into their own words. Other participants were able to listen and hear it in a plan English way and opportunity for discussion.’* (Facilitator)

The opportunity to present their findings also contributed to the development of their personal and social skills including communication and confidence:

*“We did a group presentation. I did a PowerPoint presentation, I wasn't nervous, people were nervous. Everybody got the chance to do it.”* (Participant)

Participants developed, managed and processed information by developing their own resources relevant to, and useful for, their own lives using the material they researched. For example, participants were concerned about food especially for their children. A

key activity was for participants to develop a book for their children on healthy eating or exercise. These books included information and activities for their children. These activities focussed on going beyond finding information to extracting key elements, summarising and presenting it in a way that they and others could make sense of it. Encouraging this understanding of information was achieved, in part, by contextualising the information as relevant to the lives of participants.

* Familiarisation with health systems and services

A core approach of the project was to introduce participants to health professionals from different services in order to build understanding of health systems and services. External speakers from local services visited each week and offered information on the services available enabling participants to become familiar and comfortable questioning professionals:

*“the cognitive behaviour therapists - that was very very useful. I'm now working with them and it had been mentioned in the past by my doctors and I wasn't ready for it but when they were here they explained it a bit more and it doesn’t mean you're crazy. It was a nicer entry.”* (Participant)

The facilitators used role play and the rehearsing of interactions or appointments to develop strategies for building interactive health literacy and enabling participants to more effectively and critically communicate with health professionals. These included practical techniques such as preparing and writing down questions in advance. In some cases, the facilitators worked with individuals who had health appointments to help prepare them:

*“learnt to speak to the GP without upsetting them, sometimes you, different cultures, different things, the way you approach things, sometimes GP can talk like in medical words, no way we understand, so we learnt how to get more information from GP when we don't*

*understand.”* (Participant)

* Social Support

The inclusion of social activities such as preparing a communal lunch helped build important personal and social skills including confidence, self-esteem and communication skills all of which are important in underpinning and facilitating the characteristics of CHL.

*“I think having lunch, having a meal together and cooking, developed social skills, was really good. People had to work in pairs to prepare meals and was an opportunity to learn those skills”* (Facilitator)

* Health Conscientisation

Fewer activities were in place to develop empowerment and political action, a key attribute of CHL. The project had a stated intention to create an awareness of the social determinants of health and to lead participants to involvement in action for change. Conversations about social determinants of health occurred during the project, but developing this was not built into its structure. One facilitator suggested they had laid foundations and this was perhaps the next stage of work. Facilitators were able to identify opportunities where learning in these areas could have been developed further but identified challenges of understanding, time, funding and external priorities:

*‘We didn't do much on involvement in campaign groups, I think that was the next step.* (Facilitator).

**Impact on critical health literacy competencies**

Data from the pre-and post-intervention AAHLS assessment are displayed in table 1. It is recognised that the numbers included in the sample are very small and that changes between pre-and post-intervention data need to be considered alongside the more exploratory qualitative data. The data shows slight changes in some aspects of CHL but no changes in others.

**Table 1: Results of pre-and post-intervention assessment using the AAHLS tool.**

A key element of CHL is the ability to appraise and analyse health information in a critical or questioning way and apply it to the context of their own lives. Data from the AAHLS shows a slight improvement in these skills. The qualitative data revealed stronger evidence that the project had facilitated such skills. Facilitators felt that participants were taught to develop critical thinking skills and discussions were seen as an important arena where this was demonstrated. They described an example of participants exhibiting a questioning approach in response to a mother who had chosen not to immunise her eight children. The group discussed and researched the issue considering issues such as school admission policy and consequences of illness. On another occasion the evaluation reported that one group read an article warning of dangers associated with mobile phones. This led to a critical discussion regarding reported dangers, potential research bias, when children should be allowed to use phones and for how long. Facilitators also reported several discussions around food content and the food industry with participants questioning the actions of the food industry, particularly in relation to the use of sugar and salt in children’s diet.

Being able to critically question health professionals based on an individual’s own research is also part of CHL. Data from the AAHLS showed only a very small improvement in this but the qualitative data did point to some increased confidence in this area. All the facilitators felt the project taught strategies to articulate health concerns and pointed out that when professionals such as paramedics, dentists and volunteers from the St John’s Ambulance visited the project, participants had felt safe enough to question them. Building self-confidence and confidence in own knowledge was seen as key to this. There were several examples given of participants reporting that they felt more confident when discussing issues with health professionals. One participant with a long-term condition, for example, reported in the focus group how she used the strategies taught when visiting her consultant. She learned that somebody could accompany her, she talked to people before she went and she planned what she wanted to ask in advance leading to a more positive experience. The facilitator also gave an example of a participant who, following a session on food groups, reported her greater ability to have an informed discussion with the health visitor about her child’s intake of milk.

Key to CHL is understanding the determinants of health and involvement in activities to challenge those factors at a structural level. The post-intervention AAHLS assessment showed no significant change in participants’ attitudes about government responsibilities for addressing the wider determinants of health with an equal split in the response to the question regarding determinants of health between those thinking that information and encouragement to lead healthy lifestyles was the most important matter for everyone’s health and those thinking that structural issues of good housing, education, jobs and good local facilities were the priority.

The post-intervention AAHLS assessment showed a slight increase in participants’ understanding of how they could get involved at a political level to address health issues but showed no change in actual participation in such activities. This was supported by feedback from facilitators who gave examples of when current political campaigns were discussed, particularly in relation to changes in the NHS, but the qualitative data does not reveal any direct examples of how participants translated this into action.

**DISCUSSION**

The findings from this prima facie case showed improvement in some, but not all, of the characteristics of CHL and that this had been achieved through a transformative pedagogy that included a mix of informal and structured learning opportunities. The dialogic, rather than banking education described by Freire (18,25), whereby learning takes place through democratic and active dialogue rather than through the imparting of knowledge from an expert teacher to a passive recipient, relies on a collaborative and participatory learning approach. In this project, opportunities were provided to interact with services and practise communication and information skills in a socially supportive environment which was instrumental in improving confidence and helping participants to feel their lives merited reflection. The importance of community-based collaborative learning and social support has been demonstrated in a review by de Wit et al (10) that shows that collaborative learning is crucial for the development of critical thinking.

The project aimed to contextualise learning to ensure its relevance to participants’ lives with a particular focus on the family and the participants’ roles as parents. According to Freire, it is the circumstances in which people live (for these participants,- with low incomes, racial discrimination and marginalised through language) that should be the site for transformation (25). From the learning opportunities taking place not only formally in the community centre but also independently within the participants’ own homes, as well as drawing on the personal and family experiences during the group dialogue, a knowledge-building community of learners was created. Analyses of the concept of CHL have called for attention to be paid to the impact of context on CHL capacities (11,14,30,31). CHL competencies are acquired and applied differently according to the specific contextual conditions which exist and should therefore be studied and understood accordingly (14,32,33). It follows from this that interventions such as this project that; encourage the participants to be active critical investigators into their own lives, which link to life stages such as parenthood, deliberately consider the circumstances of participants’ lives and draw on these in the intervention design and content are likely to be more effective and lead to more sustained change (34).

The project was less successful in building the empowerment and political action element of CHL. Freirian critical pedagogy involves three stages of naming the issue, dialogue and reflection on the causes of the issue, and the promotion of social action, yet the latter stage is the most difficult to implement (35). A critical pedagogy involves not only providing a content that is relevant to the life experiences of the participants but also the critical analysis of its meaning. Facilitators did demonstrate some understanding of this aspect of CHL and the project aims included the ‘building of an awareness of the social determinants of health and to lead participants to the point where they were involved in action for change’. Yet facilitators lacked fully developed strategies for developing empowerment and political action. Nutbeams’ original presentation of the concept of critical health literacy explicitly incorporated within it the ‘*skills which investigate the political feasibility and organisational possibility of various forms of action to address social, economic and environmental determinants of health’* (5 p265).A lack of understanding and awareness of this aspect of CHL has already been reported (11) with interpretations of CHL frequently limited to a higher order cognitive individual skill rather than a driver for political and social change.

There are several explanations why the project was unable to implement a social action approach to developing CHL: firstly, although the project ran over 12 weeks this is a very short time in which to develop an integrated and complete critical pedagogical cycle. Secondly, as Dawkins-Moultin et al (9) point out, participants may not be able to break a culture of dependence and recognise their own agency or indeed may resist working towards a social change agenda (36). Finally, challenges exist in democratising the learning environment and negotiating the necessary power-sharing arrangement and the advanced skills required to achieve this may not be held by the community educators (9,36). This project, illustrates some of the pedagogical challenges in building CHL. Space was created for participants to identify common experiences and to engage in dialogue to create a collective awareness of their situation whether as parents, patients or poor in what has been called place-based learning which allows participants to examine inequalities and oppressive relationships within their own communities (37). There were also some limited examples of this developing into an ongoing critical dialogue about how the causes of their situation are socially determined and beyond their individual agency. Crucially however, the project did not pursue the key goal of critical pedagogy and move participants from critical reflection to collective political and social action. Understanding this pedagogical pathway and building strategies in line with it is essential to the building of CHL and to understanding the potential and limitations of agency-based approaches to health literacy.

**Study limitations and strengths**

Numbers participating in this evaluation are small (14) and represent only 58% of participants completing the project. Despite being designed for parents, only one male participated in the project and evaluation and gender was not discussed in the learning nor the experiences of participants. The drop-out from the project was also quite high at 33%. The reasons given anecdotally for people not completing the project included health and family problems. The small-scale nature of this intervention and evaluation means that any assessment of impact: should be, seen as indicative. The use of the AAHLS, to measure CHL: while offering several advantages, had some limitations. It was still in development at the time of the project but even subsequently it has not been widely used, in part because of the limited number of CHL projects, suggesting that more testing is required to understand its usefulness in measuring the complexity of CHL. Chinn and McCarthy (22) in their testing of the tool suggested that there might be a need for additional constructs around information appraisal and individual autonomy and given the limited ability of projects such as this to develop critical action, the assessment of individual agency and autonomy would have been useful. What is also not clear is whether CHL can stand apart and be measured separately from functional and interactive health literacy. More work is needed to test and develop further measurement tools of CHL. Despite these limitations, this study offers one of the few attempts to evaluate both the impact of a community intervention on CHL competencies and the processes by which this was undertaken. The use of qualitative data alongside AAHLS provides important insight allowing the quantitative data to be placed in context. In so doing, this evaluation has demonstrated the challenges involved in building CHL as well as illustrating the importance of both contextualised group learning processes and more theory-based interventions to better orient communities towards critical thinking and ultimately towards action for change.

**CONCLUSION**

Informal, participatory community learning projects can build the characteristics of CHL. However, the political action element of critical health literacy remains the least well understood and faces particular challenges in its implementation. In order to ensure that CHL is successfully built, interventions should be designed around all of its characteristics, including the empowerment and political action elements and should be informed by contextual influences and a clear theoretical basis that draws on critical pedagogy.

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