‘You need a support. When you don’t have that . . . chocolate looks real good’. Barriers to and facilitators of behavioural changes among participants of a Healthy Living Program

Holly Ann Russell\textsuperscript{a,\,*}, Cheryl Rufus\textsuperscript{b}, Colleen T Fogarty\textsuperscript{a,\,b}, Kevin Fiscella\textsuperscript{a,\,b} and Jennifer Carroll\textsuperscript{a,\,b}

\textsuperscript{a}Department of Family Medicine, University of Rochester School of Medicine and Dentistry, 777 South Clinton Avenue, Rochester, NY 14620 and \textsuperscript{b}Department of Family Medicine, Westside Health Services/Anthony Jordan Health Center, 322 Lake Avenue, Rochester, NY 14608, USA. 
*Correspondence to Holly Ann Russell, Department of Family Medicine, University of Rochester School of Medicine and Dentistry, 777 South Clinton Avenue, Rochester, NY 14620, USA; E-mail: holly\_russell\@urmc.rochester.edu

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Background. Health behavioural change is complex, especially for underserved patients who have higher rates of obesity and physical inactivity. Behavioural change interventions that show high efficacy in clinical trials may be difficult to disseminate and may not be effective in the office.

Objective. We sought to identify factors that facilitate or hinder behavioural change among past participants of a healthy lifestyle intervention in an urban underserved health centre.

Methods. Between March and October 2011, we conducted five focus group sessions with a total of 23 past participants. The focus group transcripts were analysed with a framework approach using the Social Ecological Model as a coding structure.

Results. We found four interconnected levels of social contexts: individual, interpersonal, programmatic and community levels. Themes of social support and the importance of relationships for making and maintaining behavioural changes were found at all levels.

Conclusion. Social support and relatedness were key facilitators of healthy lifestyle changes and influenced individual motivation and perseverance. Harnessing the power of social support and motivation may be a way for future behavioural change interventions to bridge the gap between efficacy and effectiveness.

Keywords. Exercise, health behaviour, medically underserved area, obesity, qualitative research, social support.

Introduction

The translation of findings from health behaviour trials for practical use in ‘real world’ clinical and community settings represents a major challenge for primary care doctors. Extensive literature documents the efficacy of interventions to promote weight loss and physical activity; yet, effective tools to promote behavioural change remain limited.\textsuperscript{1,2} As the global health burden of obesity grows to include 1.4 billion adults, it becomes imperative to focus on cost-effective and accessible weight-loss interventions.\textsuperscript{3}

A recent review of lifestyle modification for obesity and overweight identified a comprehensive approach, including caloric restriction, physical activity and behaviour therapy as the first line approach for weight loss.\textsuperscript{4} Some evidence for primary-care-based weight-loss programmes has been positive,\textsuperscript{5} whereas other evidence points to commercial programmes as cost-effective methods for weight management.\textsuperscript{6}

Making lifestyle changes can be even more challenging for members of underserved populations, who additionally carry a disproportionate burden of obesity and physical inactivity.\textsuperscript{7,8} For the purpose of this study, we define underserved populations as those who do not have adequate access to health care and the term includes those who are poor, uninsured, underinsured and who live in areas where there is insufficient access to health care. Racial and ethnic minorities are not necessarily underserved but are
frequently found among these groups. Emphasizing social support in behavioural interventions may be an effective strategy to promote healthy behaviours and chronic disease management in underserved populations. Social environment and level of social support have been associated with physical activity; increased social support has been shown to improve diabetes management among African Americans.9

The objective of this study is to identify factors that facilitate or hinder behavioural change in a sample of underserved adults by eliciting their perspectives up to 1 year after completion of a healthy lifestyle intervention. Our goal is to gain a deeper understanding of the characteristics of the person, the group and the environment, which can positively or negatively influence sustained healthy lifestyle changes.

Methods

Context

The Healthy Living Program (HLP) is a behavioural change intervention that uses group support, health education and organized group exercise. Common participant goals include weight loss, increased physical activity and improved diet. The HLP was developed by the University of Rochester Center for Community Health to promote healthier dietary practices and physical activity in urban underserved areas of Rochester. The curriculum was adapted in part from the Stanford University Patient Education Research Center’s Living a Healthy Life with a Chronic Condition10 and modified for a local audience with input from a community coalition.

The HLP consists of 24 biweekly 90-minute sessions, with each session including a 60-minute group-based physical activity programme and a 30-minute interactive health promotion/behavioural change topic including nutrition, preventive health services, stress reduction and smoking cessation. The HLP’s unique features include the focus on lifestyle changes and personal goals rather than weight loss as measure of success, the location of the programmes in accessible community-based settings and the inclusion of structured physical activity. For this study, we focused on participants from Westside Health Center, a community health centre serving a primarily underserved population in Rochester, NY, where all authors except HR have their clinical practice.

Participants

Each HLP session enrols ~25 participants. Participants are referred to the programme by their primary care physician for a variety of reasons, most frequently for obesity or obesity-related medical conditions. We followed a purposive sampling strategy in order to select ‘information-rich’ cases. For each focus group, we invited all past participants who had completed a particular 12-week HLP session together. We defined completion as attending at least 8 of the 24 sessions. We chose to conduct focus group sessions with individuals who had undergone the intervention together as the participants already had a rapport that facilitated the focus group discussions. Participants ranged from 25 to 70 years of age, were 83% Black or African American and were 91% women. Between March and October 2011, we conducted five focus group sessions, with a total of 23 past participants. We invited a total of 52 participants, with a 44% response rate.

Protocol

The focus group sessions spanned 60–90 minutes and were led by HR and CR. We used a semi-structured interview guide with eight questions to prompt discussion. The guide was modified based on our experiences with the first two focus group sessions. The focus group discussions were audio-recorded and transcribed verbatim; names and identifying data were removed.

Analysis

The data were analysed using a framework approach. Preliminary review of the data demonstrated interconnected levels of social context acting as barriers to and facilitators of the participants’ experiences with lifestyle changes. We framed our subsequent analysis around the Social Ecological Model11 to examine and code the data. This thematic framework recognizes that human behaviour results from multiple spheres of influence on the individual. Using a phenomenological approach to describe the HLP participants’ ‘lived experience’ of success, we applied the Social Ecological Model to understand the various themes describing facilitators of and barriers to healthy lifestyle changes. A concept was identified as a theme if it was described more than once during the data collection process. HR did the primary data analysis and thematic checking was done by CF and JC. Differences were resolved by discussion and a consensus was reached on the coding of each transcript.

The study was approved by the Institutional Review Board of the University of Rochester Medical Center.

Results

‘Knowing that with the support that I could do it, that there were no barriers. And definitely being open minded . . . to learn something different and something new. Something that really never entered my mind. Also, knowing that I need this at this time in my life. That it’s going to help me be a better person mentally, physically and emotionally, okay. It’s going to allow me probably to stay on this Earth a little bit longer to enjoy my family and stuff.’ FG-3
In applying the Social Ecological Model to our data, we found four interconnected levels of social context: individual, interpersonal, programmatic (Healthy Living Program) and community levels (see Fig. 1). We found themes of social support and the importance of relationships for making and maintaining lifestyle changes at all levels (see Tables 1 and 2).

**Individual level**
Participants identified multiple individual-level facilitators of healthy lifestyle behavioural change. Many of the participants who considered themselves successful at reaching their goals related a sense of internal motivation and perseverance. They also described ‘pride and self-esteem’ from reaching their goals as leading to a sense of ‘competence’ that encouraged them to continue with healthy changes.

Many participants noted the start of a new medication or a new diagnosis (e.g. diabetes or hyperlipidemia) as the catalyst for their behavioural change. Exemplifying the interaction between the individual and interpersonal levels, participants described their desire to be a ‘role model’ for family and friends who were struggling with similar conditions. Several participants mentioned faith or spirituality as an individual-level facilitator for behavioural change. They also commented on the role of stress and negative emotions as a barrier to healthy choices.

Participants frequently discussed ‘willpower’. A ‘lack of willpower’ was described as the primary individual-level barrier to healthy change, especially involving exposure to something that they considered a weakness. This was noted by many of the same participants who reported high degrees of internal motivation and this seemed to be more of a temporary barrier, existing in response to certain stimuli.

**Interpersonal level**
On the interpersonal level, several factors that facilitate healthy lifestyle changes emerged, where the absence of the factor was also noted to be a barrier. For example, ‘family support’ was noted to be a facilitator of healthy changes, whereas ‘resistant family members acted as a barrier’. Similarly, having or losing a ‘work-out buddy’ was also noted as a factor that could promote or hinder successful changes. Family ‘traditions surrounding food’ can also act as a facilitator or barrier to healthy lifestyle changes.

Participants cited ‘competing time demands’ as a major barrier. They described the challenges of homework assistance and maintaining a household, in addition to the lack of childcare options if they wanted to go to the HLP or the gym. For others, competing time demands involved the exhaustion of a long workday and the difficulty in making time for exercising or for cooking nutritious meals.

“**I am persistent, if there is something I want to do, I target it and go for the jugular.**” FG-1

“It’s a mind thing – setting my mind to do it. My mother passed at 49 from a heart attack. I have a daughter and don’t want to die before my time.” FG-2

“**Stress will kill you, will pile on the weight.**” FG-3

“It’s hard to say no. My plate is overflowing with other commitments.” FG-5

“I learned to add spices and experiment with foods I had not been introduced to. I didn’t even know butternut squash was a vegetable.” FG-4

“The support more than the exercise is important to me. I like listening to people to get information for living.” FG-2

“We had Rochester WalkFit, but that only lasted 3 weeks, we kept having to postpone because of bad weather.” FG-1

**Figure 1 Conceptual framework using the Social Ecological Model**
Participants identified many programmatic facilitators for healthy lifestyle behavioural change and some barriers to and opportunities for improvement within the programme. Participants cited the importance of HLP group members as key facilitators of success. Several described the group as a place to ‘unload’ and receive validation and encouragement for the stresses of daily life. Participants recognized this support as instrumental in countering stress and negative emotions. Others benefited from the knowledge and advice for healthy living and strategies to overcome common barriers received from other members of the group. This was described as being more effective than receiving similar advice from health care professionals because it was being given by people who had ‘been there’. Some mentioned that the sense of ‘accountability to the group’ acted as a facilitator. For example, they would watch what they ate over the weekend because
they knew Monday evening they would have to report back and they did not want to disappoint the group.

Another programmatic-level facilitator was the specific nutrition information taught during the didactic parts of the sessions. Many participants mentioned reading nutrition labels as a skill that had helped them make the lifestyle changes. Adding high-fibre foods, decreasing sodium intake, eating breakfast, baking rather than frying, experimenting with new vegetables and spices, drinking more water and avoiding fast food restaurants were all mentioned as specific nutrition information that the participants had learned through the HLP.

Additional programmatic-level facilitators were the skill of the instructor and the personal care and attention provided by the programme coordinator. Participants felt that the instructor and the coordinator truly cared about them and believed in their ability to be successful. The credibility of the group leaders and the personal connection was a motivator both to come to class and to continue working towards healthy lifestyle goals.

Despite the success of the HLP, there were several programmatic-level barriers that emerged from the discussions. Access to the programme posed a challenge for some as it was held in the evenings and conflicted with family or work commitments. Participants also noted that the nutritional and lifestyle manual provided to the group was too wordy for participants who do not read well.

Community level
The community-level facilitators for healthy lifestyle change were limited. A few participants noted that they got support from groups at churches they attend; one participant started her own support and exercise group at her church. However, no other community-level facilitators of change emerged from the data.

Participants identified many community-level barriers, primarily environmental, to healthy behavioural change. They described the challenge of finding nutritious foods in their neighbourhoods and the higher costs of healthy fresh food compared with that of processed foods. Other financial barriers included the cost of athletic footwear and the expense of gym membership. Participants also cited inclement weather as a significant barrier to outdoor activity or in getting to the Healthy Living Program location.

Finally, many cultural barriers were described. Some participants mentioned a cultural hesitancy to talk...
Discussion

This study elucidates the facilitators of and barriers to making healthy lifestyle changes among urban, underserved individuals at multiple interconnected social and cultural levels.

We have found that social support or relatedness permeates all levels of the model and influences individual motivation and perseverance. Previous literature on obesity treatment has shown the value of a group for support, accountability and problem solving.\(^\text{12,13}\) Our results replicate these findings and provide evidence for using the group treatment model with reference to an urban underserved population. The importance of social connections and the feelings of competence and autonomy noted when participants were successful with behavioural changes are consistent with the three tenets of the Self-Determination Theory in enhancing intrinsic motivation.\(^\text{14}\)

Highlighting the significance of social relationships, many facilitators and barriers have been found to be connected among the different levels of the Social Ecologic Model. Notably, many participants reported a high degree of internal motivation to get healthier in order to see their children or grandchildren grow up or to serve as a role model for family and friends with similar conditions. Many commercial programmes use group-based motivation and accountability as strategies to support behavioural change, and in one large study, these were found to be more effective than one-on-one primary-care-based interventions.\(^\text{15}\) Additionally, these programmes have been found to be cost-effective considering both health care dollars saved and improved quality of life.\(^\text{16}\) Harnessing the motivational power of social connections may be an inexpensive way for future behavioural change interventions to bridge the gap between efficacy and effectiveness.

Families represent another potential source of support for behavioural change. The HLP was designed for adults only; a family-based programme may be more effective for some participants. Family-based interventions can address the identified barriers of lack of family support and child care for participants, while leveraging the power of family routines.

This study has several limitations. As an exploratory qualitative study, our sample consisted only of participants from one intervention location; validation of the themes in other settings is warranted. By design, the study focused on past participants who had successfully completed the HLP; thus, the findings may not be generalizable to people who did not complete the programme. Classically, focus groups consist of strangers to promote honest discussion through anonymity; however, our participants were very familiar with each other, which may have made them less willing to be critical of the programme, instructor or group. Approximately half of those participants who were invited to the focus groups attended, so there may be different barriers and facilitators for those who chose not to participate. The large majority of the participants in the HLP and in our focus groups were women, so there are probably different characteristics of successful behavioural changes in men.

The use of a series of focus groups spread over several months is a strength of this study because the information collected in the early focus groups was used to inform and modify the interview questions. Participants in the focus groups knew each other well prior to the group sessions, which we believe promoted lively, open and honest discussions. The group rapport provided a natural starting place for the participants to discuss their successes and challenges regarding sensitive topics of lifestyle change.

Conclusion

Focus group discussions of participants who had completed a community health centre-based lifestyle intervention revealed a rich set of interconnected facilitators of and barriers to change. Most striking was the importance of relationships and connections across all social levels in promoting and maintaining healthy choices. Given the epidemic spread of obesity and the challenge of long-term healthy behavioural changes, this finding suggests a crucial focus for new interventions.

The results of this study can be used to inform and validate future group-based obesity programmes. With reference to the facilitation of the group, our participants felt it was valuable that the instructor and programme coordinator both shared their own personal struggles with weight and yet maintained a healthy lifestyle. This was in direct contrast to their personal physicians, who, they felt, did not understand their problems or who had not ‘been there’. Additionally, it was noted that familiarity with location and with staff helped promote attendance and success with the programme. Future studies are needed to look at sustainable interventions that can utilize the power of group support for success in maintaining a healthy lifestyle.

Declaration

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Conflict of interest: none.

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