Adapted smoking cessation, physical activity and nutrition interventions

Study reference

DeBate *et al.* 2004;[289] Plescia *et al.* 2008[288] (Charlotte REACH)

Setting

USA; north-west corridor of Charlotte, NC

Inclusion criteria

Resident of the study communities of Charlotte; men or women aged ≥ 18 years

Study type

Quasi-experimental evaluation design compared residents assessed by annual cross-sectional survey with African Americans across the state; community-based research

Description of population

Ethnicity: African American; not reported how ethnicity assessed

Age (years): Charlotte REACH population: 18–34 years: 20.2%, 35–44 years: 17.3%, 45–54 years: 19.6%, 55–64 years: 16.2%, ≥ 65 years: 26.0%; state-wide Behavioral Risk Factor Surveillance System (BRFSS) population: 18–34 years: 33.1%, 35–44 years: 20.9%, 45–54 years: 19.0%, 55–64 years: 11.8%, ≥ 65 years: 14.4%

n: Charlotte REACH 4730, state-wide BRFSS 9814

Sex: Charlotte REACH 63.4% female, state-wide BRFSS 55.8% female

Income: Not reported

Description of intervention and control

Intervention in an African American community and its effect on three behavioural risk factors for heart disease and diabetes: low fruit and vegetable consumption, low physical activity and cigarette smoking

Lay health advisor (LHA) programme: LHAs chosen by leaders of 14 neighbourhood associations and three community-based organisations (26 LHAs trained, all African American, 80% were aged > 50 years); they led community-based exercise classes, walking groups, smoking cessation classes and religion-based nutrition programmes

A farmers' market was held to improve access to fresh fruit and vegetables (operated 8 months per year); physical activity programmes were expanded into community settings; a culturally specific mass media campaign was conducted with a local African American-owned public relations firm; and health promotion changes were advocated for by contacting political leaders about the importance of raising state tax on tobacco products and banning smoking in restaurants and bars

Theory: Socioecological model – community and policy change were emphasised; logic model used to assess progress in addressing health disparities through five progressive stages; community-oriented primary care model; Charlotte REACH designed on an ecological model (see DeBate *et al.*[289])

Approaches to adaptation

- Culturally specific mass media campaigned conducted with local African American-owned public relations firm
- Addressed legacy of racial discrimination through coalition processes and inclusion of grassroots
- Community partners
- LHA programme intended to promote inter- and intrapersonal change through culturally tailored individual and group interaction

Outcome measures and results

Follow-up: Annually for 5 years

Quit rates: Smoking rates decreased in both populations but only northwest corridor women reached statistical significance (26.8% in 2001 vs 20.9% in 2005; $p = 0.03$)

Changes in fruit and vegetable consumption: Fruit and vegetable consumption increased in northwest participants and decreased in state-wide participants

Changes in physical activity: Improvements were statistically significant for physical activity in women ($p = 0.02$) and physical activity among middle-aged adults ($p = 0.01$)

Conclusions

Authors: Findings from this study supported the emerging role of policy and community environmental change and community participation as strategies to improve health behaviours in African American communities and to reduce health disparities. Statistically significant declines were demonstrated in physical inactivity and smoking among women and in physical inactivity among middle-aged adults. Decreases in physical inactivity and increases in fruit and vegetable consumption were significantly greater in the northwest corridor sample than in the state-wide African American sample. These findings are important as few well-designed studies have documented community-wide improvement in cardiovascular risk and protective behaviours among African Americans. Two factors were integral to the project's success: community participation and environmental change. DeBate's qualitative assessment: those who participated in REACH activities indicated that improvement in social health through fellowship was the main reason why they continued to participate. Observed interpersonal-level changes among target area residents who participated and changes in knowledge, attitudes and behaviours regarding CVD and diabetes prevention strategies

Reviewers: It's difficult to conclude whether the community-based activities are what contributed to the observed outcomes because of the study design (cross-sectional surveys); however, because the comparison was with the state-wide data (secular trend) it would suggest that the effects observed may be attributable to the intervention activities

Comments and limitations

The preferred profile for a LHA is female and aged > 50 years. Farmers' markets in the north-west corridor can greatly promote fruit and vegetable consumption, particularly if this is categorised as a 'food desert'. The legacy of racial discrimination in the southern community was a difficult issue in the collaborative process. As the project matured, some LHAs began to work in institutions such as churches and the local health centre

CVD, cardiovascular disease.