Adapted smoking cessation interventions

Study reference

Li *et al.* 1984[357]

Setting

USA; Baltimore City Health Department Family Planning Services

Inclusion criteria

Women smokers invited to participate. Women completed a baseline questionnaire and confirmed if the film had been viewed or physician message received (depending on condition)

Study type

RCT (however, treatment groups were formed post intervention)

Description of population

Ethnicity: 91% black; not reported how ethnicity assessed

Age (years): Mean: 22.24 ± 5.56

n: 1179

Sex: 100% female

Income: Not reported

Other: On average smoked 10.23 ± 7.36 cigarettes per day

Description of intervention and control

Smoking cessation intervention comparing four conditions: (1) baseline questionnaire, (2) baseline questionnaire + media programme, (3) baseline questionnaire + physician message and (4) baseline questionnaire + media programme + physician message

Baseline questionnaire: Targeted heightened awareness and could have also had a motivational function; 9th- to 11th-grade reading level

Media programme: Delivered without interference with clinic activities. A movie called *The Feminine Mistake* was played continuously in the clinic waiting room. A physician message was also delivered, which was brief, was easy to deliver and required minimal training. Physician made individual risk assessment and, using a protocol, gave advice to stop smoking. Message took 3–5 minutes to deliver, provided information about the health hazards of smoking and elicited a commitment to take steps towards quitting (think about quitting, set a target date, enlist help of family and friends and throw away all cigarettes)

Theory: Both media programme and physician message based on social learning principles of behaviour change

Approaches to adaptation

- Participants in all clinics received a pamphlet entitled 'Millions have quit! You can too!' designed specifically for this target population. The pamphlet featured young black females modelling the steps to quitting (techniques, tips on how to carry out the methods, emphasised alternative behaviours to smoking and offered encouragement that the client could quit)
- Posters were displayed throughout the clinic with age- and race-appropriate models encouraging women to stop smoking and emphasising risks and benefits

Outcome measures and results

Follow-up: 3- and 12-month follow-up

Quit rates: Self-reported cessation rates in the two physician message conditions were three times greater than those in conditions 1 and 2 after adjusting for loss to follow-up and cotinine readings (cessation rates were 3.1, 4.8, 9.9 and 9.9 for conditions 1, 2, 3 and 4, respectively). Cotinine-verified cessation rates were 0.09%, 2.4%, 3.7% and 2.1% for conditions 1, 2, 3 and 4, respectively. A total of 12.9% of women who received the physician message reported to have stopped smoking at 3 months, compared with 6.4% in the control conditions

Conclusions

Authors: A message from a physician or nurse-midwife about quitting and instruction on how to quit produced cessation rates two to three times higher than spontaneous quit rates. The media programme alone had a clinically but not statistically significant impact. After adjusting for confounding, the two conditions with a physician message had significant effects. Although the quit rates are conservative, participants' success in quitting is not attributable to a desire to seek help to quit as they were recruited and entered into the study incidentally at a family planning clinic. This study also showed that self-reported behaviour may overestimate treatment effects; future studies need to incorporate biological validation. Physician anti-smoking messages warrant further investigation

Reviewers: This intervention showed greater effectiveness for the physician message than for the other conditions. This suggests that this is an area for potential development

Comments and limitations

Forty-four per cent of those reporting to be non-smokers and 24% of those reporting to be still smokers refused to provide saliva samples for validation. The authors did not explore the reasons why people did not want to provide saliva samples

RCT, randomised controlled trial.

Study reference

Jason *et al.* 1988[404]

Setting

USA; West Garfield area, Chicago, IL

Inclusion criteria

Smoker; resident in West Garfield area, Chicago

Study type

RCT

Description of population

Ethnicity: 96% black in experimental group; 91% black in control group; not reported how ethnicity assessed

Age (years): Mean: experimental group: 41.8; control group: 43.2

n: 218 interested, pre- and post-intervention data available for 78 experimental and 87 control participants

Sex: 55% female

Income: Not reported

Description of intervention and control

Experimental group: Television smoking cessation programme broadcast for 20 days on the mid-day and 9 PM news; distribution of self-help manuals, weekly support meetings and supportive telephone calls. Television programme consisted of 2- to 4-minute broadcasts. Programme was discussed on weekend newscasts. Manuals entitled *Freedom from Smoking in 20 Days* were mailed out. Supportive telephone calls were made urging individuals to follow the manual and the television programme and to come to support groups. Calls lasted from 30 seconds to 15 minutes. The self-help group was co-led by a community member and psychology graduate and was designed to provide social support and to encourage use of the manual and the television programme. Group meetings were held at a neighbourhood health centre three times during the 20-day programme

Control group: Television smoking cessation programme only. Could pick up a manual or request it but were not alerted to the manual by the project staff; 100,000 manuals were distributed free to requesters in True Value Hardware stores

Theory: Not reported

Approaches to adaptation

- Low-income 'blacks' were thought to be good candidates for a television intervention because of a preference for television over newspapers and because they tend to rely on television for their health-care information
- A popular black news reporter and anchor provided the audience with step-by-step procedures to quit smoking

Outcome measures and results

Follow-up: Immediately following the end of the televised intervention and at 4 months

Quit rates: 4 months: 20% of experimental participants were abstinent compared with 9% of control participants ($p < 0.06$)

Number of cigarettes smoked per day: Of those who were still smoking, the experimental participants smoked significantly fewer cigarettes post test than the control participants (mean 10.83 vs 14.43, $p < 0.01$), and directionally fewer cigarettes at follow-up (mean 12.45 vs 14.57) [$F(1,116) = 41.18$]

Conclusions

Authors: An intensive outreach effort in combination with a large-scale media-based smoking cessation intervention was successful in achieving abstinence rates of 8% at post intervention and 20% at 4 months' follow-up. Without the outreach intervention, only 1% of control participants quit by post intervention and 9% by the follow-up. Intensive supplementary opportunities enhanced the participation of low-income smokers in a media smoking programme. Many of the residents of these neighbourhoods will not actively participate in such programmes unless active outreach efforts are initiated, and, when they are, they can increase the chances of successful quitting

Reviewers: The intervention was successful; however, it did not feature many culturally tailored components except for the black news reporter. The authors did acknowledge that they used a television programme because it was a preferred format for the low-income African American population. We agree with the authors that it is difficult to determine exactly what accounted for the quit rate in the control group, who received minimal contact, did not receive a manual and watched fewer programmes. However, it would appear that active outreach is required to increase rates of quitting

Comments and limitations

Not all residents had telephones so the sample might not have been representative. High attrition and differences in pre-intervention motivation levels may explain the difference in cessation rates; however, it could be due to social desirability given the greater contact that experimental participants had with the investigators. There was no biochemical confirmation of the results. About half of the smokers contacted were not willing to talk about the project, as the authors hypothesised, because telephone interviewers were identified as not black. The authors suggested that residents were cautious about talking to strangers on the telephone because their neighbourhood is frequently visited by outsiders (e.g. social workers, police) who are often viewed with suspicion by the community

RCT, randomised controlled trial.

Study reference

Lacey *et al.* 1991[453]

Setting

USA; Chicago, IL, four low-income housing developments

Inclusion criteria

Black women aged 18–39 years living in four Chicago Housing Authority low-income public housing projects

Study type

Pre–post

Description of population

Ethnicity: Black; not reported how ethnicity assessed

Age (years): Range 18–39, but older people were allowed to participate

n: 235

Sex: Classes: women 46, men 15 (61 registered, but only 56 completed by attending at least one class – five men did not attend); visitations: women 117, men 57

Income: Not reported

Description of intervention and control

Intervention was part of a large 20-week televised smoking cessation programme conducted in Chicago from 1986 to 1989. Interested viewers were asked to register and a manual was provided. The supplemental intervention's key objective was to establish interpersonal contact with the target population using women from the community employed as lay health educators to liaise with community organisations and disseminate information about the times of televised segments and the location of supplemental intervention classes. Residents were recruited door to door and encouraged to register. Two intervention strategies were devised: a reminder visitation programme and smoking cessation classes. Reminder visitations were carried out in all four housing developments and classes in three of them. The visitation programme consisted of weekly visits during the course of the television series (over 20 weeks). Reminder cards were left with participants to watch the television programme. The six smoking cessation classes were based on a curriculum that followed the television programme but with population-specific content

Theory: Theoretical support for the use of community members as lay health educators came from *innovation diffusion theory* and was most fully developed in the *health communication–behaviour change model*. The basic tenet is that the effectiveness of health institutions as change agents can be enhanced when their message is communicated by influential local members of the target group

Approaches to adaptation

- Smoking cessation classes were conducted in a facility considered a trusted source of health information
- The use of community residents familiar with the areas and residents was critical for health promotion. Lay health workers have had positive effects in modifying selected health behaviours of low-income minority women. These individuals can help to reduce the cultural resistance to new ideas or practices

Outcome measures and results

Follow-up: Pre and post intervention (time frame not clear)

Quit rates: Of 56 participants in smoking cessation classes, three quit by the end of the intervention. Of 174 allocated for visitation, 85 participated. None of the women in the reminder group quit smoking immediately after the intervention

Conclusions

Authors: The intervention was successful at a community level as indicated by the active involvement and acceptance of the programme by community organisations, groups and prominent individuals; the recruiting of lay health educators; effective dissemination of the programme; and integration of the programme into existing health promotion activities within nurse-run Health Promotion Centres of housing developments in target communities. This approach can be replicated in communities with similar characteristics. At an individual level results were less conclusive or clear-cut. The quit rate was small. Baseline data indicated this population was not motivated to quit

Reviewers: We appreciate the fact that the authors have commented on community and individual successes separately. Having someone personally solicit you to attend a class is much more personal, especially if you can relate to them. It appears that one of the main problems, as described by the authors, is that the population was, in fact, not motivated to quit smoking in light of their competing interests and the fact that smoking is regarded quite positively within their community

Comments and limitations

Central to lay health workers' ability to perform this bridging function is their position as local experts on a relevant topic in naturally occurring social networks. In this position, a locally influential individual is able to facilitate learning and to influence community residents to accept changes. Importantly, focus groups found that smoking is not perceived as a major health threat for this population; rather, smoking had a positive value as it is associated with positive life experiences in general life. The results of this study suggest that in this type of community the lay health educator may be well suited for active, close community contact that can eventually address the motivation issues. Social influences are barriers to smoking cessation, e.g. targeted marketing, etc.

Study reference

Ahijevych and Wewers 1995[454]

Setting

USA; Ohio, urban

Inclusion criteria

African American women, cigarette smokers

Study type

RCT

Description of population

Ethnicity: African origin; not reported how ethnicity assessed

Age (years): Mean: 39

n: 64

Sex: 100% women

Income: 48% income < US$20,000

Other: 52% high school education

Description of intervention and control

The intervention group ($n=21$) received weekly mailings (four in total) of printed smoking cessation materials (including *Quit for Life*, *Freedom from Smoking for You and Your Family* and *Don't Let Your Dreams Go up in Smoke*). A lay African American facilitator and ex-smoker also contacted participants to clarify information and provide them with encouragement (four calls over the 4-week period). There were two control groups: in one participants ($n=22$) received 'one-time' advice only in which a nurse investigator advised individuals to make an effort to stop smoking in the next 6 weeks and in the other participants ($n=21$) were informed that further information would be collected in 6 weeks time

Theory: The authors do not specifically discuss theory but do say that homogeneity in economic, cultural and social characteristics between client and provider has been identified as important in increasing the success of quit smoking programmes and this influenced the approach they undertook

Approaches to adaptation

- Exploratory group of African American women met and their preferences for smoking cessation were incorporated into this intervention. There were four weekly mailings of printed smoking cessation materials and a female lay African American facilitator who was an ex-smoker contacted participants to clarify information and provide encouragement

Outcome measures and results

Follow-up: Baseline to 6 weeks and 12 weeks

Number of cigarettes smoked per day: The intervention group reported a decrease in the average number of cigarettes smoked per day (13.6, 11.4 and 9.9 at baseline and 6 and 12 weeks, respectively) that neared significance ($p=0.08$)

Conclusions

Authors: The authors felt that the intervention had some success. Although there were non-significant trends in the average number of cigarettes smoked in the intervention and advice groups, and in mean cotinine levels in all three groups, it was the participation in the research that may have increased smoking awareness in everyone. These women were in the early stages of change and slight shifts in behaviour accompanied by setting a quit date in the next 3 months showed some success

Reviewers: It is difficult to judge the success of this intervention. There were no significant differences demonstrated but there was positive qualitative feedback on the intervention content and delivery on the exit interview. The lay facilitator was thought to be helpful and more input would have been favourable. The materials were deemed suitable and people looked forward to the programme materials being delivered. Perhaps a more intensive delivery of this type of intervention would have proven successful

Comments and limitations

As commented on by the authors, the group may not have been at the readiness to quit stage: 56% were very interested in quitting at the baseline assessment whereas the rest were somewhat or not interested The lay facilitator was not always able to contact participants and only 13 received the weekly telephone call, only two received two telephone calls and five were not reached at all during the intervention (there were no notes written by the lay facilitator about the other intervention participant). There was a 9% attrition rate from baseline to final data collection, with the intervention group dropping from 21 to 16, the advice only group dropping from 22 to 21 and the control group dropping from 21 to 20

RCT, randomised controlled trial.

Study reference

Royce *et al.* 1995[333] (Harlem Health Connection Project)

Setting

USA; Harlem, NY; Sydenham health provider

Inclusion criteria

Patient's eligibility assessed from recruitment card: currently smoking cigarettes, aged >18 years, African American self-identification. Approached patient to request an on-the-spot interview

Study type

Pre–post

Description of population

Ethnicity: African American (sample predominantly African American, 91.4%); self-identification

Age (years): Median: 37

n: 153

Sex: 63% women

Income: Not reported

Description of intervention and control

Aimed to increase smoking cessation rates, quit attempts and cutting down among low-income African Americans using brief clinician advice and socioculturally appropriate self-help cessation/relapse prevention materials

Intervention: Smokers received a personal copy of a project-designed self-help smoking cessation video and companion manual (*Kick It! Stop Smoking Guide*) as well as newsletters with smoking cessation/relapse prevention tips and monthly mailings inviting participation in stop smoking contests. The stop smoking contest format was used to send monthly 'booster reminders' and award prizes to winners of quit date raffles. There were 'Quit and Win' contests for study participants who remained smoke-free for 30 days, which was carbon monoxide validated. Participants received a distinctive bag with the project logo and a 'quit kit' (containing stress tips, sugarless gum and American Cancer Society headless matches). Participants were instructed to turn in their tracking sheet after their appointment. They were reminded of the exit interview and given associated incentives – 10-pack of transit tokens or a money order for US$12.50

Theory: Not reported

Approaches to adaptation

- Collaboration among institutions, including African American institutions, local government agencies, community and professional organisations (e.g. National Black Leadership Initiative on Cancer), local health-care providers and key community leaders
- *Kick It!* video and manual specifically developed for this Harlem Health Connection Project (see Resnicow *et al.* 1997[401] for description)

Outcome measures and results

Follow-up: Baseline interview and 7 months (actual ranges from 6–8 months)

Quit rates: Intervention group reported 21% cessation rate at follow-up

Quit attempts: 66% made at least one quit attempt

Number of cigarettes smoked per day: 27% decreased the number of cigarettes smoked per day

Conclusions

Authors: This study found that appropriate smoking cessation/relapse prevention materials and approaches effectively reached low-income African American women and men. Smokers reported a 21% abstinence rate at 7–8 months post intervention. Designating a quit date with clinician or interviewer encouragement at baseline and being employed played a significant role in cessation. For the additional 27% of smokers who decreased cigarette intake by at least 50% there was evidence that physician advice and materials had an impact. Clinician smoking advice for every patient is said to be warranted

Reviewers: This study was able to show an effect on smoking cessation and a decrease in cigarette intake by 50% in those who did not quit. This is the predecessor to the Resnicow *et al.*[401] RCT by the same name, which showed no effect. However, in that intervention, physician advice was not included in the trial (booster call instead)

Comments and limitations

Incentives for completing recruitment card included a US$250 cash draw and access to a freephone Harlem Health Connection telephone number that offered information about Harlem health and social service organisations. Limitations include the pre–post design without comparison group and the fact that smoking status was not biochemically validated. The sample, although not a probability sample, is representative of the population of Harlem but has limited transferability to other dissimilar populations. Accuracy of patient reports of clinician advice vs clinician reports of giving advice is unknown

Study reference

Stillman *et al.* 1993;[301] Voorhees *et al.* 1996[300] (Heart, Body and Soul Programme)

Setting

USA; East Baltimore, MD

Inclusion criteria

African American churchgoers from 22 churches attending baseline health fair

Study type:

Cluster RCT

Description of population

Ethnicity: African American; not reported how ethnicity assessed

Age (years): Mean: intensive 46 (standard deviation 11.5), minimal 47 (standard deviation 13.5)

n: 22 churches randomly assigned, one dropped out (11 intensive culturally specific intervention; 10 minimal self-help intervention), $n=350$ ($n=199$ intensive, $n=93$ minimal, $n=48$ lost to follow-up); $n=802$ in community reference population survey

Sex: Intensive 68.9% female, minimal 75.3% female

Income: Not reported

Other: Baptist church most common denomination (intensive 78% Baptist, minimal 74% Baptist)

Description of intervention and control

Intensive culturally specific intervention compared with a minimal self-help intervention for smoking cessation

Intensive: Between one and four pastoral sermons given on smoking, had testimony during church services from individuals going through the quit process, training of volunteers as lay smoking cessation counsellors, access to individual or group support supplemented with spiritual audiotapes containing gospel music, and baseline and follow-up health fairs. Evaluation of cardiovascular risk status including feedback about exhaled carbon monoxide levels, cholesterol levels, blood pressure and degree of overweight. Intervention contained elements for individuals in all stages of change and individuals were given tailored quit pamphlets through the churches

Minimal: Participants received identical baseline health fair with the same feedback about health status and were given tailored quit pamphlets through the churches

Theory: Stages of change (Prochaska and DiClemente[455]) and social learning theory and a community wide social action model (described in Stillman *et al.*[301] only)

Approaches to adaptation

- American Lung Association pamphlet entitled *Don't' Let Your Dreams Go up in Smoke*, designed for African Americans
- Needs assessment phase from pastors, church prayer groups, focus group and steering group committees indicated that church members frequently used weekly devotional and inspirational booklets and were receptive to gospel music on an audio cassette – inspirational 'sermonette' developed by church pastor accompanying an original piece of gospel music was taped and distributed
- A smoking cessation devotional and inspirational booklet – *Stop Smoking Inspirations from CURE*, a day-by-day scripturally guided stop smoking booklet (10 sessions each with a different spiritual/smoking cessation theme), a specialists' smoking cessation manual and audio tape developed
- Active involvement of pastors, existing structures within the church and church volunteers. Project staff acted only as facilitators

Outcome measures and results

Follow-up: Baseline and 1 year

Quit rates: (Self-reported, quitters' saliva cotinine and carbon monoxide validated, smoke free = carbon monoxide < 6 ppm and cotinine < 20 ng/ml). Between groups the quit rates were not significantly different ($p=0.32$). Both intensive (27.13%, $\chi^2=1322$, $p<0.0001$) and minimal (21.50%, $\chi^2=63.29$, $p<0.0001$) differed significantly from secular trends among churchgoers in the community reference population (2.87%), assessed through a cross-sectional random digit dialling telephone survey

Conclusions

Authors: This study provides evidence that the intensive intervention was more effective in producing positive progress when controlling for demographic and baseline smoking variables. An additional positive effect was seen for Baptist churches receiving the intensive intervention. The intervention was not stage targeted but included elements for participants at every stage. Although quit rates are not statistically significantly different between the two conditions, they are clinically significant. Strong social norms and sanctions against smoking in Baptist religious organisations may explain why an intensive spiritually oriented intervention was more effective in this group

Reviewers: This study did not show a statistically significant difference between groups for smoking cessation. Smoking cessation rates for both groups were significantly increased compared with a community survey population. A church social support system may have contributed to similar cessation rates in both conditions

Comments and limitations

Up to 1 year of follow-up, all smokers in both churches were offered the opportunity to obtain a small gift at the follow-up health fair. Method of recruitment more likely to yield a greater number of pre-contemplators (community recruitment strategies). No study limitations offered by authors. Low attrition rate possibly due to strong social networks in the church and ability to track study participants through friends

RCT, randomised controlled trial.

Study reference

Resnicow *et al.* 1997;[400] Resnicow *et al.* 1997[401] (Harlem Health Connection Project – Kick It!)

Setting

USA; Manhattan Island, Central Harlem, NY; sites selected from three institutional settings (channels) within the Harlem community: six health-care facilities, four large public housing developments and 16 churches

Inclusion criteria

Sites serving a predominantly (> 80%) low-income African American population considered. Before recruiting individuals, sites were randomly assigned to either treatment or comparison. Inclusion criteria were African American, aged ≥ 18 years, self-reported smokers, provided address or telephone number within five boroughs of New York City and completed an information card during the recruitment period. Participants were later contacted by telephone or through a personal visit and asked to complete a home interview

Study type

Cluster randomisation

Description of population

Ethnicity: African American; not reported how ethnicity assessed

Age (years): Mean: intervention 44, comparison 46.4 (range 20–94)

n: 9311 recruited, ~3000 African American smokers; 1244 (703 intervention and 541 control) completed home interview and were included in the study, follow-up interviews obtained for 1154 (93%)

Sex: Intervention: 58% female, comparison: 65% female

Income: Not reported

Description of intervention and control

Culturally sensitive, low-intensity smoking cessation intervention for low SES African Americans

Intervention: Multicomponent with self-help cessation kit including cessation guide, companion video and several quit aids. The 6-month intervention phase included bimonthly mailings related to smoking and other health concerns. Participants were scheduled to receive one booster call. The cessation guide, a self-help booklet written at fifth-grade level, was entitled *Kick It!* The *Kick It!* video comprised two parts: (1) 'A Message from the Ancestors' – a fictional story about two Harlem smokers who, in a dream sequence, are summoned by a tribunal of figures from black history, (2) a well-known local internist and media personality providing instruction (and modelling) on how to quit, how to maintain quit status and how to start over for relapsers

Control: Health education materials not directly addressing tobacco use but, instead, substance use, HIV/AIDS (human immunodeficiency virus/acquired immune deficiency syndrome), diet, heart disease and cancer and a 10-minute cholesterol education video were developed for African Americans. Booster calls were made encouraging the use of the materials and brief motivational counselling provided dependent on participants' stage of change

Theory: Each chapter of the booklet corresponds to one of the major stages of change delineated by Prochaska and Diclemente[455]

Approaches to adaptation

- Interviews with community leaders and community analysis used to identify project sites
- Design of video and companion printed guide informed by formative focus group with ex-smokers living in Harlem to explore attitudes, language, experience, reactions and feelings regarding smoking and cessation. This group was also used to develop and test the project name (Kick It!) and logo
- Video script and draft guideline pre-tested with two groups of Harlem smokers
- Materials designed for inner-city African Americans with low educational attainment and income; assumed SES heterogeneity
- Messages and images in video and guide reflect the range of ethnic and cultural backgrounds found within the African American community, e.g. fictional characters wearing Kente-pattern clothing and assigned Afrocentric names, others in American clothing and with European American names

Outcome measures and results

Follow-up: Baseline interview and 6 months post intervention

Quit rates: Primary outcome: point prevalence quit rate at 6 months post test: 11.2% intervention group vs 7.9% control group; not statistically significant

Quit attempts: Secondary outcome: quit attempts in past 6 months – did not differ significantly between the intervention and the control groups

Stages of change: Calculated using three items asked at baseline: (1) Do you plan on making any changes in your smoking habits in the next 6 months? (2) How much do you want to quit smoking in the next 6 months? (3) How many times in the past year have you been able to stay off cigarettes for at least 24 hours?

Conclusions

Authors: Results were mixed. No significant effects observed for the entire treatment cohort at 6 months' follow-up

Reviewers: This study did not show a significant difference in quit rates or quit attempts between the two groups (see limitations)

Comments and limitations

Low completion rate for booster call and design limitations, follow-up data collected only at 6 months post test, point prevalence only was assessed. Longer-term follow-up would have provided a more comprehensive assessment. Quit rates determined by self-report and not validated

SES, socioeconomic status.

Study reference

Schorling *et al.* 1997[456]

Setting

USA; two rural Virginia counties: Buckingham County – intervention community, Louisa County – control community

Each county has about 35 churches that were identified as primarily serving black residents

Inclusion criteria

Considered if they had smoked at least 100 cigarettes in their lifetime (current smokers were those who had smoked at least one cigarette per day for the past 7 days, occasional smokers were classified as smoking intermittently but less than one cigarette per day for the past 7 days), African American, > 17 years

Study type

Two-group pre–post test, population survey

Description of population

Ethnicity: African American; how ethnicity assessed not reported

Age (years): Mean: Louisa: 41.5, Buckingham: 40.1

n: 3744, all adult members of each sampled household; 965 smokers identified, 898 selected for interview, 652 (73%) completed baseline survey. Louisa: $n = 304$, Buckingham: $n = 344$; $n = 648$ personally interviewed

Sex: Louisa: 56.3% male, Buckingham: 53.5% male

Other: 90% Baptist; Louisa: employed 56.8%, high school graduate 46.3%; Buckingham: employed 59.9%, high school graduate 46.4%

Description of intervention and control

Community-based smoking cessation project with smoking cessation intervention delivered through a coalition of black churches

Intervention: Core smoking cessation programme: one-on-one counselling, self-help materials and community-wide activities provided by two smoking cessation counsellors trained from participating churches. Counsellors were also asked to discuss the programme with the congregation at large. Self-help programme designed by project staff with assistance from coalition members (Call It Quits) – based on a calendar-style handout, each page contains a goal for 1 day with 7 days preparing to quit and seven pages relevant to 7 days after quitting. Each page can be torn off and carried as a reminder of the day's task. Counsellors trained to give brief active follow-up counselling. Guide can be used alone as a self-help guide as well. Coalitions were formed consisting of community leaders. Additional smoking cessation programmes were developed to address other local priorities, including church booklets, Gospel quit nights, educational contests in schools and an annual community-wide cessation contest

Control: Community chose to address hypertension (they were not allowed to choose smoking). Smoking was not addressed by the volunteers or by any coalition activities

Theory: Guided by principles of community empowerment

Approaches to adaptation

- Use of church coalition – churches are strong institutions in many rural African American communities
- Churches were used as sites of intervention
- Emphasised children as an influence to quit, addressed by having annual educational contests in the schools
- Church coalition members were all African Americans. Coalition assisted with design of the intervention. They purposefully chose an inclusive approach despite all members of the coalition board being African American. They did not want their name or the intervention to be exclusively associated with churches or with the African American community

Outcome measures and results

Follow-up: Baseline and 18 months, door-to-door survey, population-based cohorts of smokers in each county; $n = 452$ (70%)

Primary: Whether or not smoking cessation interventions would increase smoking cessation rate of church members exposed to intervention (direct impact). Intervention effects measured at population level; church attendance used as proxy for exposure

Secondary: Whether or not community-wide smoking cessation rate among African Americans would also increase (indirect impact)

Quit rates: Self-reported 1-month continuous abstinence. In text, smoking cessation rate reported as 9.6% vs 6.2% (difference 3.4%, 95% CI –1.5% to 8.4%). Elsewhere reported as 9.6% vs 5.4% ($p = 0.18$). Among church attendees (at least once a month), quit rate was 10.5% vs 5.9% ($p = 0.20$); for less frequent attendees, quit rate was 8.8% vs 6.4% (difference 1.8%, 95% CI –5.4% to 9.0%). Trend in intervention county observed for church attendees, but not significant. Adjusted OR of quitting was 1.64 (95% CI 0.79 to 3.40)

Stages of change: Progress along the stages of change in the intervention vs control group was significant. Progress in each county approached significance ($p = 0.06$)

Knowledge: Similar proportions of the population had heard of the church coalition in both counties; there was greater awareness of the smoking cessation programme in the intervention county than in the control county

Conclusions

Authors: Smoking cessation interventions can be implemented with success through a church coalition. Intervention was associated with significant progress along the stages of change. A higher quit rate in the intervention county compared with the control county was not significant. Individuals who attended church were more likely to quit than those who did not attend; however, this too was not significant

Reviewers: Agree with the authors' conclusions. Authors noted the pattern of smoking to be late onset, low rate and high menthol. Programme reported to be active after 12 months. Coalition of churches helped with development and implementation. Counties were randomised to either smoking cessation intervention or not; this health issue was determined before community engagement

Comments and limitations

Baseline survey initially designed to be carried out by telephone with a supplementary in-person interview for those without a telephone; however, this pilot study failed and in-person surveys were carried out instead. Follow-up was only 70%; tracking those in rural communities was difficult, about a quarter did not have a telephone. No biochemical validation

CI, confidence interval.

Study reference

Darity *et al.* 2006[457]

Setting

USA; four sites in the north-eastern and south-eastern parts of the USA

Inclusion criteria

Black adult smokers

Study type

CCT (community intervention with control sites)

Description of population

Ethnicity: African American; not reported how ethnicity assessed

Age (years): Not reported

n: 2544 reported in abstract/2644 reported in body of paper; *n* = sample of 520 for 6 months' follow-up, *n* = sample of 490 for 12 months' follow-up (the 6-month sample was randomly taken from the baseline cohort and the 12-month cohort was another random sample from the cohort excluding those who had participated in the 6 month follow-up), *n* = sample of 1344 for 18 months' follow-up; unknown how many were in the control and intervention conditions

Sex: Not reported

Income: Not reported

Description of intervention and control

Community-based smoking cessation intervention in which both active intervention and passive control areas were exposed to a mass media campaign designed to promote readiness to quit smoking

Active intervention sites: Community organising + mass media. Special area-based intervention activities. Direct interpersonal educational activities: 14 workshops involving 108 participants held. Neighbourhood Health Advocates were recruited and trained to distribute educational materials and to host formal discussion meetings. Professional Advisory Committees were set up in each active site to gain support and cooperation of key professionals. Project staff made presentations to organised social groups and held informal small-group discussion meetings

Passive control sites: Mass media only

Theory: Health belief and diffusion of innovation models

Approaches to adaptation

- Special attention given to African American media outlets

Outcome measures and results

Follow-up: Baseline and 6 months, 12 months and 18 months after baseline

Quit rates: Absolute difference of 4.9%; 41.5% greater point prevalence rate of non-smoking in the active vs the passive group ($p = 0.012$)

Quit attempts: 6-month period prevalence of quit attempts was 33.8% in the active group and 26.2% for the passive group, with an absolute difference of 7.6% which was statistically significant ($p = 0.003$)

Number of cigarettes smoked per day: There was a difference in the decrease in number of cigarettes smoked between the active and passive groups, with an absolute difference of 1.6 fewer cigarettes smoked daily in the intervention group ($p = 0.004$); this represents a 400% greater reduction in cigarettes smoked in the active intervention group

Conclusions

Authors: Analysis of process variables strongly suggests that, within this African American community, 'hands-on' or 'face-to-face' approaches combined with mass media, mailings and other less personal approaches were more effective in reducing personal smoking behaviour than mass media, mailings and other impersonal approaches alone

Reviewers: The study suggests that more active contacts with study participants can increase cessation rates. It would be beneficial to have more information about the informal meetings to determine whether it was the way in which communities were engaged that increased cessation rates rather than any personal contact alone. Furthermore, cohort retrospective analysis showed increasing effect of the intervention on cessation rates (6, 12 and 18 months, with little effect at 6 or 12 months), which suggests that sustained community intervention (18 months) may be necessary to increase cessation rates. Need to compare with other long-term community-based studies

Comments and limitations

Very minimal cultural tailoring in this case, with only media outlets being contacted where appropriate. Three other analyses were performed and reported (but are not extracted here): cohort retrospective analysis (trend of little effect in first 6 months, appreciable in second 6-month period and important additional effect for final 6 months), a sequential cross-sectional analysis and several validity comparisons

CCT, clinical controlled trial.

Study reference

Ahluwalia *et al.* 1998;[355] Ahluwalia *et al.* 1998[356]

Setting

USA; Atlanta, GA; inner-city hospital serving a low-income, predominantly African American population

Inclusion criteria

Self-report of being African American, having smoked a minimum of 10 cigarettes per day continuously for at least the past year, at least one previous quit attempt, a home address, a telephone number and weight > 100 lb, and if they reported being self-motivated to quit

Study type

RCT (double blind, placebo controlled)

Description of population

Ethnicity: African American; self-reported

Age (years): Patch group: 48.7, placebo group: 46.7

n: 410 randomised, 205 into each arm of the study

Sex: 65% female (patch 65.9% female, placebo 64.4% female)

Income: Not reported

Description of intervention and control

Double-blind, placebo-controlled RCT to evaluate efficacy of nicotine patch as an adjunct to brief counselling and education in an inner-city population

Placebo/transdermal nicotine patches with following schedule: 21 mg/day for 6 weeks, 14 mg/day for 2 weeks and 7 mg/day for 2 weeks (10 weeks total); these three doses provided an average steady-state plasma nicotine concentration of 17, 12 and 6 ng/ml. Patients who relapsed to smoking were advised to discontinue using the patch and to set another quit date. At randomisation, patients received an initial 2 weeks of 21 mg/day patches and 1 hour-long visit with a counsellor for instructions on the use of the patch and brief education about the risks of smoking and the benefits. All patients received a bag with the programme logo and clinic telephone number; the bag also contained additional material (one-page patch tip sheet written at sixth-grade reading level with pictures, and a diary for everyday recording). Patients received a written guide, *The 6–2–2 Committed Quitters' Programme: How to Quit Smoking Using Nicoderm* (seventh-grade reading level). At follow-up visits, issues related to relapse were discussed, compliance was encouraged, it was determined if participants had any adverse reactions and participants' diaries were reviewed. Placebo: pharmacologically irrelevant amount of nicotine in the drug reservoir to mimic the odour of active systems; delivered < 1 mg of nicotine in 21 hours

Theory: Not reported

Approaches to adaptation

- *Pathways to Freedom* book, a culturally sensitive smoking cessation guide written at sixth-grade reading level, presents characteristics of cigarette smoking among African Americans, instructions on how to quit smoking and suggestions for how communities can combat tobacco dependence by working collaboratively
- One-page patch tip sheet written at sixth-grade reading level, and pictures, created for those with lower literacy skills

Outcome measures and results

Follow-up: 1, 2, 6 and 10 weeks after quit day; final visit at 6 months

Quit rates: 10-week quit rates were 21.5% in the patch group and 13.7% in the placebo group ($p = 0.03$); at 6 months, self-reported quit rates were 17.1% in the patch group and 11.7% in the placebo group ($p = 0.08$)

Conclusions

Authors: Using *Pathways to Freedom*, a guide specifically designed for low literate African American smokers, was thought to be comparable in terms of use to the manufacturer's product guide. This study highlights that poor, inner-city African American smokers were interested in smoking cessation. The patch significantly improved 10-week smoking cessation rates, but more relapse prevention is needed to ensure abstinence to 6 months and beyond. With the placebo patch, 10-week quit rates were two to three times higher than national quit rates

Reviewers: The 6-month quit rate was not significantly different with and without an intention-to-treat analysis. Follow-up was low. The authors state that this may be because of a disenfranchised population, but it may also be a result of too frequent follow-up. A good point is made by the authors that reduction in the number of cigarettes smoked should also be recorded; smoking cessation (reduction) not a discrete event

Comments and limitations

Lack of biochemical verification. 6-month follow-up rather than 1 year. Did not assess the literacy level of patients or ability to comprehend the intervention materials. Use of one-sided statistical analysis limits reporting of risk ratios with 95% CIs. Only outcome measured was total abstinence. Smoking should be viewed as a dynamic process rather than a discrete event. Any reduction in the number of cigarettes smoked may reduce harm

CI, confidence interval; RCT, randomised controlled trial.

Study reference

Orleans *et al.* 1998;[347] Boyd *et al.* 1998[306]

Setting

USA; four communities: Durham, NC, Philadelphia, PA, Houston, TX and Birmingham, AL

Inclusion criteria

African American, smoker or recent quitter (past 30 days), ≥ 20 years, no previous use of *Pathways to Freedom* guide, consent to 6 months'/12 months' telephone follow-up

Study type

RCT

Description of population

Ethnicity: African American; not reported how ethnicity assessed

Age (years): > 20 (62% 20–39, 26% 40–49, 12% ≥ 50)

n: 1422 (*n* = 445 at 12 months)

Sex: Both sexes; however, percentages of men and women not reported

Income: Not reported

Description of intervention and control

Targeted communications campaign: radio and television advertisements and some community outreach to increase telephone call volume from African American smokers to the Cancer Information Service (CIS) for smoking cessation

Intervention: 'Tailored' counselling and guide, *Pathways to Freedom*

Control: 'Standard' CIS quit smoking counselling and guide, *Clearing the Air*

Theory: Not reported

Approaches to adaptation

- Targeted guide – sixth-grade reading level, African American models, targets African American smoking patterns and obstacles to quitting (lack of information, social norms, higher life stress); interactive style counselling, targets African American motives and barriers
- Pre-tested advertisements, addressed the most common African American barriers to smoking and to using the CIS as a smoking cessation resource; targeted advertisement times and radio stations; community outreach

Outcome measures and results

Follow-up: 1 week, 6 months and 1 year

Quit rates: 6 months: no significant difference in self-reported abstinence – 9.1% control vs 10.1% intervention; 12 months (*n* = 445): significantly higher quite rate – 15.4% control vs 25% intervention

Quit attempts: At 6 months more participants had set a quit date, made quit attempts and undertaken pre-quitting behaviours, e.g. reduction in number of cigarettes per day

Conclusions

Authors: Paid targeted advertising, using radio as a primary channel, is an effective method of reaching African American smokers to increase call volume to a smoking cessation helpline. Results show some promise for a culturally tailored approach to boost quit attempts in African American smokers: there were more quit attempts and greater use of pre-quitting strategies, and significantly higher self-reported quit rates at opportunistic follow-up at 12 months in the tailored intervention group (although no differences in self-reported 1-week abstinence at 6 months)

Reviewers: Paid targeted advertisements were hugely successful in increasing call volumes to CIS by African American smokers (radio > television) and the advertisements had a very high reach (> 88%) – despite this, overall the uptake was still low (0.1–0.2%), especially in lower socioeconomic groups. Promising results of a tailored telephone smoking cessation counselling intervention for African American smokers; follow-up at 12 months in a subgroup showed significant differences in self-reported quitting rates

Comments and limitations

Gender was reported at baseline for only half of the participants. Half of smokers were in contemplation stage or had recent quit attempts (< 30 days), which reduced chances of successful quit attempt; 85% smoked within 30 minutes of awakening suggesting high level of nicotine addiction – yet NRT was not a direct part of the study (used by ~25%). Young group (62% in 20–39 years age group) – possibly not generalisable to other/older age groups. Results relied on self-reported abstinence, which is less reliable than biochemical verification. Adaptations were mostly personalised rather than culturally adapted

NRT, nicotine replacement therapy; RCT, randomised controlled trial.

Study reference

Lipkus *et al.* 1999[358]

Setting

USA; Durham, NC

Inclusion criteria

Random sample of 3490 adult patients of Lincoln Community Health Center, aged ≥18 years, who visited the centre within the 18 months up to November 1993. Final sample consisted of 1318 men and women at baseline, 266 were African American smokers of whom, 160 were able to be contacted and completed the final interview

Study type

RCT

Description of population

Ethnicity: African American; not reported how ethnicity assessed

Age (years): 18–49

n: 160; 266 were recruited, 257 were alive at the time of follow-up and 160 completed the final interview

Sex: 46% male

Income: Not reported

Description of intervention and control

Provider prompting intervention: The Medical Record (TMR) is a comprehensive computer system with a computerised health maintenance tracking system that generated printed physician prompts to provide patients with stage-based behavioural messages. Providers were trained and asked to follow the Ask–Advise–Assist–Arrange follow-up model developed by the National Cancer Institute to promote smoking cessation

Tailored print communications (TPCs) were sent to patients around the time of their birthdays (an oversized tailored birthday card with a picture of the clinic staff on the cover and a personalised 'Healthy Birthdays' newsletter). Both were written for fifth-grade reading level

Tailored telephone counselling: Men received one call per year, women could receive two calls if they were due for breast or cervical cancer screening and were also smokers; female counsellors

Three arms: Provider prompting alone, prompting + TPC, and prompting + TPC + tailored telephone counselling

Theory: Research guided by the transtheoretical or stages of change model[458]

Approaches to adaptation

- Tailored birthday card message with messages written with the realities of the clients' lives in mind. Message about life stresses reflected the fact that a majority of the clients were low income or indigent. Religious and familial themes also included
- The art was especially tailored for African Americans using graphics designed by a local African American artist. Graphics were also tailored for gender
- TPCs pre-tested extensively with the target population. Data from baseline surveys combined with information from the TMR and a library of specific messages designed to respond to different variables and provide specific recommendations to help participants think about their smoking and quit smoking. Over 7 billion combinations of messages could be generated for any given smoker

Outcome measures and results

Follow-up: Baseline and 16 months after last intervention

Quit rates: Of 160 participants, 35 (21.9%) quit smoking. Provider prompting + TPC group was more likely to result in quitting at follow-up ($n = 18$, 32.7%, $p < 0.05$) than provider prompting alone ($n = 7$, 13.2%) or prompting + TPC + tailored telephone counselling ($n = 10$, 19.2%, $p < 0.05$)

Conclusions

Authors: Overall, the results provide encouraging support for the use of TPCs with African Americans. Compared with the provider prompting intervention alone (least intensive intervention) or those who received all three intervention components (most intensive intervention), smokers in the provider prompting intervention group who also received TPCs were more likely to report having quit at follow-up (32.7% quit rate). The effects of the provider prompting intervention with TPCs remained significant after controlling for different variables. Stage of change was most powerfully related to quitting at follow-up. Contemplators at baseline were eight times more likely to report having quit at follow-up than pre-contemplators. When stage of change and intervention group were both included in the multivariate model, the OR for the tailored print intervention arm was even higher (OR = 6.56). It is unclear why the addition of telephone counselling did not increase cessation rates above those achieved in the group that received the provider prompting intervention and TPCs

Reviewers: Although the authors did not report findings from an intention-to-treat perspective, 21.9% had quit at follow-up. The quit rate of 32.7% using TPCs is, according to the authors, comparable to results of recent studies using tailored interventions with African American smokers. The findings indicate that smokers who received provider prompting with TPCs were more likely to report having quit than smokers who received the provider intervention alone. It appears that there is value here and, promisingly, that this is a cost-effective method of increasing quit rates (vs telephone counselling)

Comments and limitations

Unclear as to the precise mechanisms whereby, and situations in which, TPCs may be effective. Compliance rate was 48%. Approximately one-third were lost to follow-up (reflects difficulty of conducting intervention with low-income, transient African American populations; however, refusal rate of 3% low)

OR, odds ratio; RCT, randomised controlled trial.

Study reference

Ahluwalia *et al.* 2002;[345] Harris *et al.* 2003;[344] Harris *et al.* 2004;[342] Manning *et al.* 2005[343] (Kick It at Swope)

Setting

USA; community-based health-care centres

Inclusion criteria

African American or black, at least 18 years of age, smoked at least 10 cigarettes per day, interested in quitting in the next 30 days, speaks English and had a permanent home address with working telephone. Only one smoker per household allowed to enrol

Study type

RCT

Description of population

Ethnicity: Black American; self-described

Age (years): mean 44; bupropion: 44 (SD 10.9), placebo: 44.4 (SD 11.3)

n: 600; bupropion 300, placebo 300

Sex: 70% female; bupropion 70.7%, placebo 69.3%

Other: ≤ high school graduate: bupropion 50.3%, placebo 49.7%

Description of intervention and control

Trial to compare a sustained-release form of bupropion (bupropion SR) with placebo for smoking cessation among African Americans. Both groups received eight in-person 45-minute brief motivational counselling sessions [at baseline, quit day, weeks 1 and 3, end of treatment (week 6) and by telephone at day 3 and weeks 5 and 7]. In general, counselling was provided by the same person. Dose was 150 mg of bupropion SR or placebo twice daily for 7 weeks. Participants were instructed to continue taking pills for the full 7 weeks regardless of smoking status

Theory: Not reported

Approaches to adaptation

- Focus groups, a community advisory board and a small pilot study maximised cultural sensitivity and enhanced recruitment and retention
- For recruitment, spoke at churches and posted signs in local minority-owned businesses
- Used *Pathways to Freedom*, a culturally sensitive smoking cessation guide
- All counsellors were African American, had a master's degree, received training in motivational interviewing and followed semi-structured counselling scripts. All on-site staff members were African American and were trained to provide a friendly, positive and non-judgemental environment
- Study setting: health centre was trusted by the African American community (mostly African American staff)
- Media outlets with the largest African American audiences were targeted with press kit

Outcome measures and results

Follow-up: Weeks 6 and 26 following quit day

Quit rates: At week 26, quit rates were 21.0% in the treatment group and 13.7% in the placebo group (7.3% point difference, 95% CI 1.0 to 13.7%, $p = 0.02$). Continuous abstinence was significantly higher for the bupropion SR group at weeks 1, 3 and 6 ($p < 0.001$) and 26 ($p < 0.01$)

Number of cigarettes smoked per day: At week 26, reduction in number of cigarettes smoked per day was 8.3 (SD 10.3) vs 7.9 (SD 8.8) ($p = 0.61$) for the treatment group vs the placebo group

Conclusions

Authors: Bupropion SR was effective for smoking cessation among African Americans and may be useful in reducing health disparities associated with smoking. Difficulty in locating participants within an acceptable time frame, combined with counting those lost to follow-up as smokers, may underestimate the actual quit rate. Alternatively, may have had higher relapse rates due to the high stress associated with lower-income populations. However, quit rates in the placebo group were comparable with those in other studies. This is the largest treatment-based trial of smoking cessation in any ethnic minority conducted to date

Reviewers: From the primary paper,[345] the study showed an effect on smoking cessation for the bupropion group compared with the placebo group. The intervention was equitable; however, difficulty in locating participants for participation and follow-up may exclude some who may not have a permanent telephone/mailing address. The intervention was feasible; however, additional behavioural/motivational counselling requires additions that 'regular care' practices may not be able to sustain

Comments and limitations

Limitations: Findings cannot be generalised to all African Americans and although community based it remains a single-site study. The majority of participants were women and this may result in a lower overall quit rate in the study population because African American women appear to have lower quit rates in the short and long term. Smokers are self-selected who are motivated to quit

CI, confidence interval; RCT, randomised controlled trial; SD, standard deviation.

Study reference

McBride *et al.* 2002[374]

Setting

USA; inner-city community health clinic (Lincoln Community Health Center) in an urban county in North Carolina; serves low-income residents and African Americans comprise 83% of patients

Inclusion criteria

Self-identified as African American and smoked at least one cigarette per day in the previous 7 days. Would consider genetic testing

Study type

RCT

Description of population

Ethnicity: African American; self-identified

Age (years): Mean (SD): 44.5 (12.3)

n: 557 smokers identified; 185 enhanced usual care, 372 biomarker feedback

Sex: 40% male

Income: Not reported

Other: 64% had one or more chronic illness

Description of intervention and control

A multicomponent intervention with feedback about genetic susceptibility to lung cancer to increase risk perceptions and rates of smoking cessation compared with a standard intervention. All smokers received a self-help manual and, if appropriate, nicotine patches; refills were provided as needed

Biomarker feedback: Offered blood test for genotyping the glutathione *S*-transferase 3 (GST3) gene (*GSTM1*) as well as a tailored feedback booklet (eight pages, fifth-grade reading level) about genetic susceptibility to lung cancer. Those who refused testing were sent the same booklet. Participants received telephone counselling (up to four times) with a health educator over a 12-week period. The first call discussed their results and the importance of cessation; calls two to four encouraged steps towards quitting and reinforced the test results

Enhanced usual care: Received provider advice to quit smoking and referred to smoking specialist who assessed stage of readiness to quit and whether NRT was appropriate

Theory: Mentions social cognitive theory training for callers

Approaches to adaptation

- Self-help manual designed for African American smokers entitled *Pathways to Freedom*
- *Pathways to Freedom* tailored at fifth-grade reading level
- Test results thought to personalise health communications, increase the salience of smoking risk and motivate cessation

Outcome measures and results

Follow-up: Baseline and 6 and 12 months

Quit rates: Smoking cessation (prevalent abstinence) was significantly greater for the biomarker feedback arm than the enhanced usual care arm (19% vs 10%, $p<0.006$) at 6 months but not at 12 months (15% vs 10%, $p=0.12$) (unadjusted). After adjustment for desire to quit, chronic illness and smoking within 30 minutes of waking, the difference in the 6-month cessation rate between the groups was still significant ($p=0.03$) and the 12-month difference was still not significant ($p=0.34$)

Quit attempts: Not reported

Conclusions

Authors: Smokers agreed to genetic feedback as part of the multicomponent cessation programme. Although the short-term cessation rate in the biomarker feedback arm was increased compared with standard intervention, genetic feedback of susceptibility may not benefit smokers with high baseline risk perceptions

Reviewers: This study compared a genetic feedback arm with an arm that cannot be considered 'standard'. This study was not effective in sustaining long term (12 months) the cessation that was observed at 6 months. There is the potential for ceiling effects in this older population, with 64% having at least one chronic disease

Comments and limitations

Feedback from the pilot study may not have had powerful impact because 45% of smokers did not fully understand the test results. Low education level of target group warranted need for follow-up telephone counselling. However, in pilot study this figure was unchanged following telephone calls. Future studies should evaluate other graphical approaches for communicating results

NRT, nicotine replacement therapy; SD, standard deviation; RCT, randomised controlled trial.

Study reference

Ma *et al.* 2004[349]

Setting

USA; Delaware Valley region of Pennsylvania and New Jersey

Inclusion criteria

Male, Chinese, between 14 and 19 years and in the summer youth programme recruited from community-based Asian-American organisations that participated in an Asian Community Cancer coalition

Study type

Pre–post quasi-experimental

Description of population

Ethnicity: Chinese American; not reported how ethnicity assessed

Age (years): 14–19, mean (SD): 17.7 (2.2)

n: 17 standard intervention; 14 culturally modified intervention

Sex: Male

Income: Not reported

Other: Approximately 67% of participants were in grades 9–12

Description of intervention and control

Smoking cessation for Chinese American adolescents

Culturally modified programme [Asian Adolescents Choose Tobacco-Free (ACT)]: Conducted through a community-based organisation that served high-risk youth. Used a buddy system (participants received monetary rewards if they brought their buddies); additional incentives (t-shirts, gift certificates) if they continued to attend the sessions – 10 sessions (one session per week) lasting 50 minutes

Standard smoking cessation curriculum (SC): First recruited into a 6-week summer programme. All joined the SC programme: one 50-minute session each week for 10 weeks

In total, 17 of 17 in the SC group and 9 of 14 in the ACT group completed the programme

Theory: Not reported

Approaches to adaptation

ACT applied principles of:

- Interdependency and collective orientation; harmony (e.g. harmony is promoted in Asian families and may influence a teen's desire to smoke, especially if members of the family smoke; youths learned ways to communicate their needs to parents and elders while maintaining harmony and respect)
- Persistence, hard work, success and education – used to encourage teens to quit smoking
- Asian pride and social norms, e.g. trivia questions on the achievements of famous Asian Americans. ACT developed to maintain sensitivity to bicultural Western and Eastern attitudes that may be present in the participants

Outcome measures and results

Follow-up: Baseline, post intervention, 3 months

Quit rates: 23.1% cessation rate among the SC group and 18.2% among the ACT group ($\chi^2 = 0.09$)

Number of cigarettes smoked per day: The ACT group showed a greater reduction in typical weekday (mean 6.7, SD 5.9) and weekend (mean 6.0, SD 6.5) tobacco use than the SC group

Conclusions

Authors: Given the positive results among this high-risk group, ACT programme needs to be tested among a larger population of Chinese Americans. Major challenge to increasing parental involvement is that youth are reluctant to participate in a smoking cessation programme because they do not want their parents to know that they smoke. In the ACT programme parental consent is requested and Asian adults were used to conduct the programme. Cultural modification programmes for Asian American youth are complicated because youth are bicultural and identify with two cultures. The ACT programme was evaluated to be as effective. Further research addressing culturally relevant factors that enhance the efficacy of ACT and the curriculum needs to be implemented among a larger and more representative Asian American group

Reviewers: Based on self-reported quit rates, at 3 months the quit rates for ACT and SC are comparable. We question the value of the culturally tailored intervention if the SC programme worked just as well, or even better in this case. The authors provide a comprehensive list citing the factors that Asian adolescents perceive to be important in helping them quit; however, many of these factors are cited for both the ACT and the SC groups. This intervention was effective in increasing quit rates, but the culturally tailored intervention did not show added value

Comments and limitations

Adolescents were selected from a community-based organisation setting and not from a school setting. Many adolescents were at high risk socially and economically. Small sample size. Higher-risk group than is typical of Asian American youth. The facilitator characteristics most important to smokers in the ACT programme included caring about students, confidentiality, trustworthiness, being non-judgemental; and are likely transferable to other programmes

SD, standard deviation.

Study reference

Ahluwalia *et al.* 2006;[361] Nollen *et al.* 2006;[362] Okuyemi *et al.* 2007;[363] Okuyemi *et al.* 2007;[364] (Kick It at Swope II)

Setting

USA, KS; Kansas City metropolitan area

Inclusion criteria

Self-identified African American or black, at least 18 years old, smoked ≤ 10 cigarettes per day for at least 6 months prior to enrolment, smoked at least 25 of the last 30 days, interested in quitting in the next 2 weeks, speaking English, with a permanent home address and working telephone

Study type

RCT

Description of population

Ethnicity: African-American; self-identified

Age (years): Mean: 45 (range 19–81); nicotine gum + motivational interviewing (MI): 45.2 (SD 10.7), nicotine gum + health education (HE): 43.5 (SD 11.8), placebo gum + MI: 46.5 (SD 10.0), placebo gum + HE: 45.2 (SD 10.0)

n: 755 light smokers

Sex: Female: nicotine gum + MI: 66.1%, nicotine gum + HE: 68.3%, placebo gum + MI: 65.1%, placebo gum + HE: 68.1%

Income: Not reported

Description of intervention and control

An 8-week double-blind placebo-controlled smoking cessation intervention for African Americans. At randomisation, participants were assigned to an 8-week supply of either active 2 mg nicotine gum or placebo. Instructions given for gum usage depended on the number of cigarettes smoked at baseline. In general, participants received counselling from the same person for all six counselling sessions (three in person, three by telephone, 20 minutes each). Participants were encouraged to set a quit date for the day following their randomisation visit

HE: Standard counselling approach based on current treatment guidelines that focus on providing information and advice. Trained counsellors used the *KIS II Quit Smoking Guide*

MI: Counsellors followed scripts that discussed pros/cons of smoking/quitting, motivation and confidence to quit

Theory: Theories of HE and MI; values clarification strategy of Miller and Rollnick[459]

Approaches to adaptation

- *KIS II Quit Smoking Guide* – 36-page booklet developed for African American light smokers. Culturally sensitive guide developed by project investigators through an iterative process of expert feedback and cultural relevance analysis using the suitability of assessment materials (SAMS) – this is a tool to assess the difficulty and suitability of education materials for patients with low literacy skills. Seventh-grade reading level

Outcome measures and results

Follow-up: Weeks 1, 3, 6, 8 and 26

Quit rates: 194 participants reported quitting at week 26 across all four groups; of these, 95 were confirmed quitters (salivary cotinine ≤ 20 ng/ml) Quit rates for nicotine gum were no better than for the placebo group (14.2% vs 11.1%, $p = 0.232$) at 6 months; however, a counselling effect emerged, with HE performing significantly better than MI (16.7% vs 8.5%, $p < 0.001$). These results were consistent across time points (weeks 1, 8 and 26)

Conclusions

Authors: The nicotine gum was not effective for smoking cessation in this sample of African American light smokers. Failure to detect an effect of the gum may be a result of inadequate dosing or underdosing: 2 mg was used as opposed to 4 mg and it was prescribed for a maximum of 10 pieces per day. African American light smokers randomised to HE were more likely to return for counselling visits than those randomised to MI. Those in the HE group had higher quit rates than those in the MI group. HE was perceived as more relevant. MI was better with a population who are resistant, whereas this population was highly motivated

Reviewers: Interesting conclusion, seemingly validated in other studies, that HE is more effective in highly motivated participants than MI, which works better among people who are resistant/angry/poorly motivated. The integrity of the respective counselling protocols was maintained and each session was tape-recorded to maintain fidelity and consistency

Comments and limitations

Randomisation and follow-up occurred at a single community health centre and participants were required to have a home address and telephone. Participants were all highly motivated to quit. Study staff did not begin to document the various recruitment sources until 5 months into the study

RCT, randomised controlled trial; SD, standard deviation.

Study reference

Fang *et al.* 2006[332]

Setting

USA; south-eastern Pennsylvania

Inclusion criteria

Smokers were eligible if they were of Chinese or Korean ancestry, had smoked at least one puff of one cigarette in the past 7 days (i.e. 7-day point prevalence), were ≥ 18 years and possessed a telephone

Study type

RCT

Description of population

Ethnicity: Chinese and Korean; not reported how ethnicity assessed

Age (years): Mean (SD) (range): intervention: 43.97 (17.21) (18–77), control: 48.35 (16.47) (19–83)

n: 66; intervention 34 (Chinese 56%), control 32 (Chinese 53%)

Sex: Intervention: 9% female, control: 0% female

Income: Not reported

Description of intervention and control

Theory-based smoking cessation intervention + NRT

Intervention: One in-person session (90–120 minutes) and targeted cognitive-affective reactions to smoking and cessation. Participants were encouraged to explore their risk perceptions for cancer and other smoking-related diseases, probed for their beliefs about quitting and asked about their values and goals (e.g. reasons for quitting). Past smoking cessation efforts, identification of personal smoking triggers and cultural barriers to quitting were also discussed

Control: General health counselling (nutrition, exercise and the harmful effects of tobacco) + NRT as a time and attention control

Theory: Cognitive-social health information processing (C-SHIP) model[460]

Approaches to adaptation

- Cultural barriers to quitting were discussed – specific concerns to Asian Americans including cultural norms that support or promote smoking among Asian men
- Race-related issues considered, including stress associated with recent immigration, adaptation to American life and difficulty in obtaining employment as a non-US resident
- Cultural values and culturally appropriate quitting strategies, such as the importance of familial support, concerns relating to children's health and having a healthy Asian diet, were employed to assist and encourage participants during quit attempts
- All study procedures and assessments were conducted in the participants' native language (Korean, Cantonese or Mandarin)

Outcome measures and results

Follow-up: Follow-up assessments were conducted by telephone at 1 week, 1 month and 3 months post counselling

Quit rates: 38% reported quitting at 3 months' follow-up

Conclusions

Authors: No difference in cessation rates by ethnic group at each time point. Quit rates were relatively high in both the intervention and control groups. At 1 month, a significantly higher proportion of intervention participants (56% or 19/34) reported having quit smoking than control participants (31% or 10/32) ($\chi^2(1) = 4.06$, $p < 0.05$). At 3 months, 47% (16/34) of intervention participants and 28% (9/32) of control participants had quit smoking but this difference was not statistically significant [$\chi^2(1) = 2.51$, $p = 0.11$]. Because of the characteristics of this population (e.g. long work hours, often 7 days a week) it was important to develop an intervention that was brief and time-efficient for it to be acceptable to the targeted condition. The intervention increased self-efficacy and decreased negative attitudes towards quitting. Self-efficacy was the only significant predictor of smoking status. The intervention may have been successful in motivating individuals to make a quit attempt but not in preventing smoking relapse, particularly among Chinese smokers. A brief culturally adapted intervention can yield changes in smoking-related cognitions among low-income, hard-to-reach Chinese and Korean smokers

Reviewers: The intervention did not produce sustained quit rates at 3 months. The trend among Chinese participants was different from that observed for Korean participants; the authors do not comment but there may be more subtle cultural differences that could be explored

Comments and limitations

Quit rates may have been high because participants were recruited through community organisations and networks in which an informal support system was already in place. Limited by self-reported smoking status, small sample size and including predominately men. A longer follow-up period (6–12 months) would have been preferred. Future interventions need additional support during the critical period following initial abstinence. Research on factors that contribute to smoking cessation among Asian American women is needed

NRT, nicotine replacement therapy; RCT, randomised controlled trial; SD, standard deviation.

Study reference

Andrews *et al.* 2007;[461] Andrews *et al.* 2007[462]

Setting

USA; Augusta-Richmond County, GA; two subsidised housing developments

Inclusion criteria

Non-pregnant/non-breastfeeding African American women, >18 years, current daily smoker, planning to quit smoking within the next 6 months, resident of the intervention or control community or a female relative or close friend of a resident of these communities

Study type

Quasi-experimental repeated measures design with comparison group

Description of population

Ethnicity: African American; how ethnicity assessed not reported

Age (years): Mean (range): 40.2 (18–85)

n: 103; 51 intervention, 52 comparison

Sex: 100% female

Description of intervention and control

Community smoking cessation intervention for African American women with three major components

Nurse-delivered weekly behavioural/empowerment group counselling for 6 weeks (1 hour) with a booster session at weeks 12 and 24. Participants who progressed to the preparation stage were assisted to set a quit date (week 2)

Free NRTs for 6 weeks

Community health worker (CHW) made personal weekly contact (face-to-face or by telephone) outside of group sessions for 24 weeks to enhance smoking cessation self-efficacy and provide social support and spiritual well-being

Comparison participants received self-help written material, *You Can Quit Smoking*, at baseline and group attention during the study period – group education from a nurse on self-image, exercise, hypertension, smoking cessation; groups had 10–12 participants and lasted about 1 hour

Theory: Curriculum for group behavioural counselling was adapted from the US Public Health Service (PHS) treating tobacco dependence guideline[463] and empowerment educational principles from Freire[256,464]

Approaches to adaptation

- Behavioural-based programme modified to reflect the cultural preferences of African American women, which included food at meetings
- Ethnically appropriate graphics and content
- Low-income housing development – all activities with participants took place in the community centre in each respective community
- CHWs were instructed to use their own language and cultural style and share testimonials and personal experiences
- Inclusion of kinship (e.g. mothers, daughters, sisters) and the mediating variables proposed in the intervention (social support, self-efficacy and spiritual well-being)
- Spiritual themes and prayers and opportunities for storytelling
- CHWs were African American women, ex-smokers, indigenous to the intervention community

Outcome measures and results

Follow-up: Baseline to weeks 6, 12 and 24

Quit rates: 6-month continuous abstinence: 27.5% and 5.7% in the intervention and comparison groups respectively; OR of quitting was 6.18 (95% CI 1.65 to 23.01)

Stages of change: Measured by stages of change questionnaire

Conclusions

Authors: Women who received the Sister to Sister intervention were six times more likely to quit than women who received group attention and minimum self-help written materials. A total of 27.5% of the women in the intervention group maintained abstinence for a 6-month period as validated by exhaled carbon monoxide measurements. A key finding was that changes in social support predicted cessation. Smoking cessation self-efficacy improved over time and mediated cessation outcomes indicating that building confidence in quitting may explain how the intervention group participants were able to quit. Spiritual well-being was not associated with 6-month continuous abstinence and did not mediate 6-month continuous abstinence

Reviewers: The intervention was successful in showing a difference of effect between the intervention and control groups. The quit rate was significantly higher for the intervention group. However, the use of two communities limits generalisability and there may be potential confounders (as mentioned by the authors)

Comments and limitations

The intervention group differed from the control group: intervention participants were older, had higher monthly incomes and were more likely to have completed high school. The retention rate was 87.4% during the 6-month study period (attrition was seven participants out of the comparison group and six participants out of the intervention group)

CI, confidence interval; NRT, nicotine replacement therapy; OR, odds ratio.

Study reference

Nollen *et al.* 2007[341]

Setting

USA; Atlanta, GA

Inclusion criteria

African American, > 18 years, wanting to quit smoking in the next 30 days to 6 months (preparation/contemplation stage of change), smoking > 10 cigarettes per day, weight > 100 lb, having a home address and access to a telephone and video cassette recorder (VCR)

Study type

RCT

Description of population

Ethnicity: African American; self-identified

Age (years): Mean: 43

n: 500

Sex: 55–65% female

Income: Not reported

Description of intervention and control

Intervention: Culturally targeted videotape and print guide (The Harlem Health Connection's *Kick It!* video and *Pathways to Freedom: Winning the Fight against Tobacco*)

Standard care: Videotape (*How to Quit*) and print guide (*Freedom from Smoking*)

Both groups: NRT: 8 weeks of nicotine patches, reminder telephone calls during the first week and at 1 and 3 months; postcards at 3 and 5.5 months

Theory: Not reported

Approaches to adaptation

- Conform to visible ethnic/cultural characteristics as well as norms, values, beliefs and historical, environmental and social forces relevant to African Americans; some examples of this are communalism, religion/spiritualism, connection to family, storytelling and social support

Outcome measures and results

Follow-up: Week 4 and 6 months

Quit rates: No significant differences in smoking outcomes

Conclusions

Authors: Study highlights the importance of greater audience segmentation and individual tailoring to better match intervention materials to the target population, particularly with regards to racial/ethnic identity. Materials (video and guide) had been tested and evaluated in Harlem and Philadelphia but not in Atlanta – the results suggest heterogeneity within the African American population

Reviewers: Homogeneity within African American populations cannot be assumed and interventions need to be piloted in the target population, including assessment of their cultural identification

Comments and limitations

The study considered Netto's fifth principle regarding cultural identification. Alternatively, any effect of the targeted intervention may have been overwhelmed by the success of the nicotine patch. The current study enrolled only motivated smokers (contemplation or preparation stages). There was also potential for cross-contamination between the two groups. Other limitations included the single-blind design, the necessity for participants to have a home address, telephone and access to a VCR and basing quit rates on self-report and carbon monoxide assessments

NRT, nicotine replacement therapy; RCT, randomised controlled trial.

Study reference

Shelley *et al.* 2008[465]

Setting

USA; Flushing, Queens (intervention); Sunset Park, Brooklyn (comparison), NY

Inclusion criteria

Households obtained from the *White Pages* using a list of 867 unique spellings from 622 native surnames identified in consultation with Chinese linguists

Study type

Pre–post quasi-experimental design

Description of population

Ethnicity: Chinese; ethnicity assigned by surnames (unclear if confirmed by participants themselves)

Age (years): 18–34: 27.9%, 35–44: 25.6%, 45–54: 25.8%, >55: 20.7%

n: 2537 at baseline, 1384 at follow-up interview; 617 from Flushing and 767 from Sunset park

Sex: 56.1% male

Income: Not reported

Description of intervention and control

Smoking cessation for a Chinese population

Intervention: Distribution of bilingual posters and Chinese-language educational materials to local businesses, community organisations, health settings. Access to language-specific smoking cessation resources: (1) physician education and distribution of tools kits to 99 physicians in 42 practices; (2) distribution of 305 6-week courses of free NRT patches through two community organisations; (3) implementation of three free Chinese-language smoking cessation programmes that included free pharmacotherapy; (4) a quit and win contest; and (5) smoking cessation workshops. No intervention activities were directed specifically at individuals. Advertised the free nicotine patch programme in Chinese newspapers in both communities

Control: Tobacco control public policy only

Theory: Behavioural theory and evidence-based smoking cessation programmes; community-based participatory research

Approaches to adaptation

- Bilingual posters and Chinese-language educational materials
- Chinese-language media campaigns (e.g. poster, radio)
- Helpline (800 number for information about smoking cessation resources administered by a community organisation)
- Focus groups with Chinese people living in the intervention community and guidance of an advisory board to achieve linguistic and cultural acceptability
- Bilingual interviewer for questionnaire completion; English, Mandarin, Cantonese, Fukinese and other dialects

Outcome measures and results

Follow-up: Not reported

Quit rates: Between 2002 and 2006, overall smoking prevalence declined from 17.7% to 13.6% (23.2% relative decline, $p<0.01$); Flushing 19.5% to 13.7% (relative decline 29.7%, $p<0.01$) and Sunset Park 16.9% to 13.5% (20.1% relative decline, $p<0.01$)

Conclusions

Authors: A community-based tailored intervention may increase the impact of population approaches to tobacco control. Documented an additional 2.8% decline in prevalence over a 2-year period in the intervention community beyond the overall 3.3% decrease across Chinese communities attributable to Department of Health policies and programmes. This study builds on two areas: that tailoring programme content and delivery methods may enhance the effectiveness of interventions when trying to engage non-English-speaking immigrant populations and that citywide policy can be generalisable and effective among an immigrant population. Additional targeted efforts in immigrant populations may enhance general population-based policy approaches. Research is needed to develop an evidence base of cost-effective approaches for reaching subgroups who are at greatest risk

Reviewers: This intervention was successful in that an additional effect was demonstrated in the intervention community; however, high dropout may have biased the findings. The authors did calculate non-response adjustment factors applied to base weights to derive the non-response adjusted follow-up weight

Comments and limitations

Self-reported smoking cessation data and high dropout rate at follow-up. No smokers from Sunset Park enrolled in the free nicotine patch programme. All indices showed trends in differences in favour of the intervention community. Chinese-language community-level social marketing campaigns appeared to have the greatest penetration (intervention receipt index 1.48, 95% CI 1.15 to 1.81)

CI, confidence interval; NRT; nicotine replacement therapy.

Study reference

Webb *et al.* 2008[351]

Setting

USA; home

Inclusion criteria

Self-identified as African American, smoked at least five cigarettes per day, could read English, wanted to quit smoking, not enrolled in a smoking cessation treatment and between 18 and 65 years of age

Study type

RCT

Description of population

Ethnicity: African American; self-identified

Age (years): Mean: standard intervention: 43 (SD 9.80), culturally sensitive (CS) intervention: 44 (SD 10.79)

n: 260; 128 standard, 132 CS; *n* = 182 completed follow-up

Sex: Female: standard 64%, CS 52%

Income: < US$10,000: standard 49%, CS 44%

Other: Smoking: cigarettes per day: standard: 16 (SD 8.87), CS: 17 (SD 9.42); years smoking: standard: 23 (SD 11.04), CS: 22 (SD 12.13)

Description of intervention and control

CS intervention: *Pathways to Freedom: Winning the Fight against Tobacco*, a smoking cessation guide designed for African American smokers, written at sixth-grade reading level, which discusses how smoking impacts African Americans, provides cessation advice and strategies and encourages community organisations to work against the tobacco industry

Standard: Culturally sensitive aspects of the CS book were modified to create a generic intervention. Modifications: replacing most of the African American images with cartoons, Caucasians or race-neutral smoking-related pictures; replacing religious and cultural quotations with motivational quotations; using epidemiological data used that addressed the general population; discussion of tobacco marketing for multiple populations, including adolescents and women; replacing the discussion of menthol cigarettes with one of light cigarettes; and no emphasis on history

Theory: Not reported

Approaches to adaptation

- Discussion of targeted tobacco advertising and a discussion of menthol cigarettes
- *Pathways to Freedom*, a sixth-grade reading level guide, encourages community organisations to work against the tobacco industry and has a collectivist (family/community) orientation, uses culturally specific history and communication patterns, includes religion and spirituality (quotes), uses culturally specific pictures and statistics and includes discussion of targeted tobacco adverts and of menthol cigarettes

Outcome measures and results

Follow-up: Baseline and 3 months

Quit attempts: Under intention to treat, 14.2% of participants in the sample reported 24-hour smoking abstinence, including 13.7% of the CS group and 14.7% of the standard group. A total of 10% of the sample reported 7-day PPA, including 10.7% of the CS group and 9.4% of the standard group; 39% reported making an attempt to quit

Conclusions

Authors: It is very important to acknowledge the intra-ethnic heterogeneity and differing influences of acculturation. These findings suggest that individual differences in levels of acculturation to the dominant culture affect receptivity to culturally sensitive written interventions. Acculturation had a moderating effect on smoking status but not in the hypothesised direction

Reviewers: The authors do not delve too much into whether the intervention was successful or not, as the moderating effect on smoking status was not in the hypothesised direction, such that less acculturated smokers were more likely to achieve 24-hour abstinence if they received the standard materials. No other outcomes were significant. This is a very interesting finding and the reasons given by the authors warrant further analysis

Comments and limitations

Findings may not generalise to African Americans of higher income or who are in other geographical locations. Follow-up duration was too short. Smoking status not biochemically verified

PPA, point prevalence abstinence; RCT, randomised controlled trial; SD, standard deviation.

Study reference

Wong *et al.* 2008[466]

Setting

USA; San Francisco Bay Area, CA

Inclusion criteria

Participants who reported using a cigarette, cigar or tobacco pipe during the 3 months preceding the baseline interview were considered smokers. Speaking either English or Chinese, not engaging in other assisted smoking cessation efforts and not cognitively impaired

Study type

RCT

Description of population

Ethnicity: Chinese American; not reported how ethnicity assessed

Age (years): Mean: 58.3 ± 16

n: 464

Sex: 8.6% female

Other: 57.9% < high school education, 30.6% high school/trade/some college, 11.4% bachelor/master/doctorate

Description of intervention and control

Smoking cessation intervention for Chinese American population

Intensive intervention (2.5–3 hours of contact): physician advice, 45-minute bedside nurse counselling including video and self-help manual, five telephone contacts within 90 days (at 2, 7, 21, 45 and 90 days), each 10 minutes in length, with NRT and one repeat relapse counselling session with one additional telephone contact for individuals who relapsed. Community collaboration throughout all phases of work. *Victory over Smoking* manual was recommended. Telephone calls: messages about proper nutrition, physical activity and also enlisting support from family members and friends

Minimal intervention (30 minutes of contact): a strong message to quit smoking from primary care physician and/or research nurse, self-help manual with information on pharmacotherapies and a list of smoking cessation programmes available in the San Francisco Bay Area

Theory: Social learning theory. Based on social learning theory, the intervention included self-efficacy with three additional resources: (1) information about the health risks of smoking delivered by a nurse or a physician, emphasising the benefit of quitting for the smoker's particular medical condition, (2) practical information about ways to stop smoking, (3) coping skills to deal with stressful situations to prevent relapse

Approaches to adaptation

- Community advisors – well-respected and active members of the local Chinese health-care community as advisors
- Cultural elements to improve programme effectiveness included involving smoker's physician and family (joint counselling sessions offered) and emphasising concern for health of the family, especially young children
- Research staff were bilingual; also, bicultural nurses and health educators
- Culturally appropriate tobacco education material [developed and tested in the San Francisco Chinese community by the Chinese Community Smoke-Free Project (CCSFP)], smoking cessation booklet and videotape, *Victory over Smoking* (in Mandarin and Cantonese), and a relaxation audiotape (in Mandarin and Cantonese)
- Activities conducted in familiar environments located in Chinese neighbourhoods to increase comfort, familiarity and programme accessibility

Outcome measures and results

Follow-up: 6, 12 and 24 months

Quit rates: Unpublished: self-reported abstinence at 12 months: outpatient ($n = 196$) intensive arm 34 (SD 0.30) ($p < 0.05$); outpatient minimal arm 27 (SD 0.25) ($p < 0.05$); inpatient ($n = 89$) intensive arm 22 (SD 0.46), inpatient minimal arm 24 (SD 0.48); overall abstinence rates appeared higher at 12 months than at 6 months among outpatients: 28% vs 20% (in both arms)

Conclusions

Authors: The intensive intervention outperformed the minimal condition at both 6 and 12 months for outpatient but not for inpatient smokers. In contrast to other smoking cessation treatment studies in which abstinence rates decreased over time, the overall abstinence rates appeared to be higher at 12 months than at 6 months, particularly among outpatients [28% vs 20% (in both arms)]. In contrast to previous smoking cessation studies in which 1-year abstinence rates were reported as approximately 25%, the self-reported 1-year abstinence rates in this study were approximately 35% (will need to be verified with saliva cotinine levels)

Reviewers: The self-reported abstinence would suggest that the intervention was successful for outpatients in the intensive arm at 6 and 12 months; however, this was not validated with saliva cotinine levels. It also seems that the analysis has been separated by inpatients and outpatients as a post hoc analysis. It appears that the intensive intervention did not show effect when comparing both inpatients and outpatients in the intensive group with inpatients and outpatients in the minimal group. These preliminary study data are currently being analysed; they have not been peer reviewed and were supplied by the authors through personal contact

Comments and limitations

Paid US$40 for completing baseline interview as well as 6- and 12-month telephone assessments of smoking. Additional US$20 paid for completing a 24-month telephone assessment

NRT, nicotine replacement therapy; RCT, radomised controlled trial; SD, standard deviation.

Study reference

Larson *et al.* 2009[467] (REACH Nashville)

Setting

USA; Nashville, TN

Inclusion criteria

African American residents of North Nashville, TN and African American and white residents of Tennessee who were >18 years

Study type

Observational study

Description of population

Ethnicity: African American (97–100% between 2001 and 2005); not reported how ethnicity assessed

Age (years): 18–24: 23.5%, 23–54: 37.5%, 55+: 39.0%

n: 4578

Sex: 60.9% female (range 59.0–64.0%)

Income: Not reported

Description of intervention and control

Nashville's REACH 2010 initiative developed community partnerships to promote awareness, education and participatory programmes to prevent and decrease smoking among residents

Community-level strategies to increase awareness and knowledge about the effects of smoking; messaging campaigns, including presentations, seminars and documentary-dramas at community centres, senior citizen facilities, neighbourhood association meetings, churches, public schools, universities and medical centres. (1) Physical cues placed in the environment: 'dump a pack' garbage cans to encourage people to throw away their cigarettes as a first step toward quitting, (2) initiatives to include awareness of second-hand smoke exposure at work sites including clinics, day-care centres and at public places, (3) 'never take another puff' referral cards for smoking cessation classes distributed at businesses and community events

Individual-level strategies to enlist and train community members to become advocates, lead smoking cessation classes and encourage current smokers in quit attempts. (1) Recruitment and training of volunteers from businesses and profit and non-profit organisations to facilitate and lead smoking cessation classes, (2) 'readiness to quit' seminars for smokers held at local businesses, clinics and community centres to discuss the pros and cons of smoking cessation to facilitate readiness to change. Youth-based strategies that included individual cessation and prevention pledges and contracts

Strategies directed to changing policy through education and partnership building; impacting policies at the business or organisational level

Theory: Socioecological model

Approaches to adaptation

- Smoking cessation classes, including 'Freedom from Smoking' and 'Quit and Win', as well as culturally appropriate approaches including 'Pathways to Freedom' and 'Winning Path' have been held at churches, clinics, businesses and schools
- Smoking cessation support groups offered at local churches and schools for individuals who have quit smoking
- Information featured visual images of African Americans, and statistics specifically for this population regarding the effects of smoking included in brochures and presentations
- 'Readiness to quit' seminars held at local businesses, clinics and community centres

Outcome measures and results

Follow-up: Each year for 5 consecutive years

Number of cigarettes smoked per day: Significant decreasing trend in daily smoking ($p<0.02$) and smoking uptake ($p<0.03$) in North Nashville. In contrast to the North Nashville community, an increasing trend was observed for quitting smoking ($p<0.01$) in Tennessee

Conclusions

Authors: This study suggests that consistent, cumulative, multiple and multilevel strategies targeted to an African American community may impact smoking behaviours, such as reducing the level of smoking. African Americans in North Nashville may have reduced their cigarette use and fewer residents initiated smoking over the study period; these findings were found for men but not for women. The cumulative frequency of community-based tobacco control initiatives over the 5-year study period corresponded to the linear trends observed. The decline in everyday smoking and differences observed in occasional smoking combined with the decreasing trend of those who reported that they have ever smoked suggests a possible 'dose–response' effect of the intervention to decrease heavy smoking and prevent the initiation of smoking. Prevalence of quitting increased among both white men and women in Tennessee whereas no trend of smoking cessation was found in Nashville overall. The existence of the anti-tobacco community campaign for several years in our geographical area suggests a contributory effect on reducing smoking among our population

Reviewers: Developing an intervention with strategies at the policy, community and individual level may help to promote smoking cessation and smoking reduction and prevent smoking uptake in African American smokers

Comments and limitations

Analysis here does not allow for causal interpretation. No countrywide data. Small sample size of African Americans state-wide reduced the statistical power to detect any differences over time. Self-reported data may have been affected by social desirability. Telephone surveys exclude certain populations (institutionalised individuals and those without landlines)