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BRIEF REPORT: Addressing smoking and other health risk behaviours using a novel telephone-delivered intervention for homeless people: a proof-of-concept study

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Running title: Phone for Health intervention for homeless

ABSTRACT

Introduction and Aims: Despite substantial health disadvantage, few intervention studies have examined ways to deliver smoking cessation support to homeless people. This proof-of-concept study explored the feasibility and acceptability of a novel, low-cost, telephone-delivered program. **Design and Methods:** Clients aged over 18 years, English-speaking, and currently receiving accommodation support from a homelessness outreach centre were invited to participate in a 'Phone for Health program'. Six sessions conducted once per week provided participants with personalised counselling about smoking cessation or reduction, as well as fruit and vegetable consumption, alcohol use, physical activity, and sun protection. Both clients and staff completed follow-up quantitative surveys, and clients completed qualitative interviews. **Results:** Of 14 eligible participants, 12 consented to taking part and completed baseline measures, 10 commenced the telephone intervention and six completed the intervention program. Average length of telephone sessions was 17.8 minutes and participants completed an average of 3.8 sessions. Findings suggested high acceptability with most participants reporting that the Phone for Health program helped them meet their smoking reduction goals, was convenient, useful and practical. Most participants reported making changes to their health risk behaviours as a result of taking part in the program.

Discussion and Conclusions: Telephone delivery of the smoking cessation and other health behaviours intervention was acceptable and feasible. The results provide pragmatic lessons for the development of future health research and practice with an underserved population markedly difficult to reach and engage.

Keywords: homeless, smoking cessation, preventive care, acceptability, feasibility

Individuals experiencing homelessness are at one extreme end of the spectrum of health inequalities experiencing multiple co-morbidities and high mortality [6-9;15]. A number of studies have found high smoking prevalence rates amongst homeless people up to 80% [11-13]. One survey found high prevalence of smoking 75%) as well as other health risk behaviours, with 50% of respondents not exercising daily, 30% were overweight and 25% were obese, 50% consumed excessive amounts of alcohol, and 75% reported never to using sunscreen [14]. Providing assistance to quit smoking which also capitalises on other health behaviour change has the potential to dramatically improve these health outcomes.

Despite substantial health disadvantage, little intervention research exists that examines ways to improve preventive health care delivery to homeless people [17]. A number of small pilot studies of smoking cessation interventions for people using homeless services have been reported [18-20]. Each of these studies supported the feasibility of delivering smoking cessation support including nicotine replacement therapy (NRT) to homeless people. One study combined a smoking cessation intervention with that for other addictions and life events and found no difference in effectiveness compared to targeting smoking exclusively [18]. This suggests that it may be possible to address multiple health risk behaviours in this population [21,22].

A limitation of these smoking cessation interventions was their high cost, high intensity nature. Given the dispersed nature of the homeless population, it is important that readily delivered and low-cost interventions are considered. There is emerging evidence that telephone-delivered programs can change health behaviours amongst low socioeconomic

groups, however the method has only been tested with fruit and vegetable consumption ().

The aim of this study was to assess the feasibility and acceptability of a low-cost, telephone-delivered program focussing on tobacco smoking, as well as other health behaviours.

METHODS

Design

A small single-group pre-post study was conducted as proof-of-concept.

Setting

The study was conducted through a non-government homelessness outreach centre in a regional centre in New South Wales Australia, between January and April 2011.

Sample

English-speaking clients aged over 18 years, who were currently receiving accommodation support from the participating homelessness centre were eligible to participate. Clients were ineligible to participate in the study if they only attended the service once (i.e. for crisis relief), were pregnant or were too ill to complete the study.

Procedures

Program staff distributed project information to eligible clients. The contact details of interested clients were passed on to the researchers who organised a one-hour information session to explain the research and obtain written consent. Consenting clients completed a baseline survey regarding their socio-demographic characteristics and health behaviours. Participants were asked to nominate their preferred contact telephone number for the delivery

of the program. Clients completed a follow-up survey via telephone interview at the conclusion of the sixth telephone session regarding their health risk behaviours as well as their ratings of the intervention program. A \$20 food voucher was offered for completing the program. The study received approval from the University of Newcastle Human Research Ethics Committee.

Telephone-delivered ‘Phone for Health’ program

The 6-week Phone for Health program delivered Motivational Interviewing (MI) [26] and provided information on smoking cessation or reduction, fruit and vegetable consumption, alcohol use, physical activity, sun protection. The intervention content provided individualised feedback and MI and advice on how to change those behaviours. Given the economic disadvantage of the sample, the intervention aimed to provide local and low cost options for each of the health behaviours of interest. The telephone intervention counsellor was a trained psychology graduate (LT) under the supervision of a clinical psychologist (AB). Each call was made weekly at a date and time nominated by the client. All calls were audio-taped for quality assurance.

RESULTS

Program uptake

Of the 14 eligible respondents referred by service staff to the information session, 12 consented to take part in the study and completed the baseline survey (86%). Contact was unable to be made with two participants for any telephone sessions. Ten respondents (71%) participated in the first session. Overall, participants completed a mean of 3.8 sessions (range = 1 – 6). Six participants completed the follow-up survey (completion rate = 60%) at the end

of week 6. Four participants completed all telephone sessions. The mean duration of each telephone session was 17.8 minutes (range = 10.1 – 26.5).

Sample

All participants were aged between 18-49 years and 41.7% were female. Of the 12 participants completing the baseline survey, 10 were daily smokers, all consumed less than 5 serves of vegetables and 11 consumed less than 2 serves of fruit per day, 7 drank alcohol at risky levels, and 11 used sun protection inadequately. Almost all participants (11) met recommended physical activity levels.

Self-reported health risk behaviour change

As shown in Table 1, most participants reported some type of health behaviour change.

Table 1 about here.

Acceptability of Phone for Health program

Participants who completed the program reported high levels of acceptability (Table 2).

Table 2 about here

DISCUSSION

Like previous smoking cessation proof of concept studies [18-20], this study found that providing a low cost and personalised telephone-delivered health promotion intervention to clients of homelessness services is feasible and acceptable. The retention rate of 60% is similar to that found in previous research. Due to their lack of a fixed and permanent address, homeless people are a difficult to reach and engage population [38]. Accessing participants through homelessness services and supported accommodation appears to be one of the more effective methods of involving them in health programs and research. Other studies have found that higher incentive amounts to retain participants and improve adherence to treatment is an important component of intervention delivery [38]. Future research should explore enhanced use of incentives. The telephone delivery of the health information was rated as appropriate and convenient. Given more people in vulnerable groups are using mobile phones, [39] telephone-delivered services appear to be a highly viable, cost-efficient, and potentially equitable strategy.

Although small, this study is the only published report of a low cost intervention targeting improvement of smoking and other health risk behaviours among homeless people. The results provide pragmatic lessons for the development of future health research and practice with an underserved population markedly difficult to reach and engage.

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Table 1. Post-intervention self reported health behaviour change (n = 6).

	n 'Yes'
Smoking	
In the last month have you tried to quit smoking tobacco products?	0
In the last month, have you tried to cut down the amount of tobacco products you smoke?	3
Did the Phone For Health help you cut down?	3
Fruit & Vegetable intake	
Did you try to increase the amount of fruit you eat?	4
Did you try to increase the amount of vegetables you eat?	6
Did the Phone For Health help you to increase the amount of fruit and vegetables you ate over the last month?	6
Physical activity	
Did you try to increase the amount of physical activity you did in the last month?	2
Did the Phone For Health program help you to increase the amount of physical activity in the last month?	2
Alcohol consumption	
Did you try to reduce the amount of alcohol you consumed in the last month?	2
Did the Phone For Health program help you to reduce the amount of alcohol you consumed in the last month?	2
Sun protection	
Did the Phone For Health program help you to increase the things you do (wear a hat, sunscreen, sunglasses, long sleeve shirt, keep in the shade) to protect yourself from the sun?	5

Table 2. Client ratings of the acceptability of the Phone for Health program (n=6)

Statement	n		
	Strongly agree/ agree	Neither	Strongly disagree/ disagree
It was none of the interviewer's business to ask about my health behaviours	0	1	5
The interviewer should have focused on my other needs.	1	0	5
I liked being asked about my health behaviours by the interviewer.	4	2	0
The Phone for Health service was convenient	6	0	0
The Phone for Health service was useful.	6	0	0
The use of the telephone made the sessions feel impersonal.	2	0	4
The use of the telephone made it hard to connect with the interviewer.	0	0	6
I would prefer the Phone for Health service to be offered face to face instead of over the telephone.	1	2	3
The information provided in the Phone for Health service was useful.	6	0	0
The information provided in the Phone for Health service was specific to my needs.	6	0	0
The information provided in the Phone for Health service was important.	6	0	0
The information provided in the Phone for Health service was practical.	6	0	0
Six weekly sessions was long enough.	4	2	0
The Phone for Health service should have been offered for more than six weeks.	1	1	4
The individual telephone sessions were not long enough to discuss everything I wanted to talk about.	1	0	5
The Phone for Health service helped me to meet my health goals.	6	0	0
I would recommended the Phone for Health service to other clients at [service]	5	1	0
This experience has made me more willing to use other telephone based services in the future.	5	1	0