Awareness and use of telephone-based behaviour change support services among clients of a community mental health service

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Abstract

Objective: To determine the prevalence of, and factors associated with, awareness and use of telephone-based behaviour change support services among clients of a community mental health service.

Methods: Adult clients (n=375) of one Australian community mental health service completed a telephone interview and self-reported not meeting Australian National Guidelines for smoking, nutrition, alcohol consumption and/or physical activity. Descriptive statistics summarised awareness and use of the New South Wales Quitline® and Get Healthy Service® for participants with lifestyle risk factors addressed by each service. Chi-squares and logistic regressions explored associations between client characteristics, and service awareness and use.

Results: Awareness (16.1%) and use (1.9%) of the Get Healthy Service was lower than that of Quitline (89.1%; 18.1%). Television was the most common source of awareness (39.7% Get Healthy Service; 74.0% Quitline). In the regression models, persons in a relationship were more likely to have heard of the Get Healthy Service (OR:2.19, CI:1.15-4.18), and persons aged 36–50 were more likely to have used the Quitline (OR:5.22, CI:1.17-23.37).

Conclusions: Opportunities exist for increasing awareness and use of both services, particularly the Get Healthy Service, among clients of community mental health services.

Implications for public health: Strategies to optimise reach for this population group are recommended.

Key words: risk behaviours, chronic disease prevention, mental health conditions, telephone services

Worldwide, people with a mental health condition have significantly higher morbidity and mortality from chronic disease[1,2] contributing to a reduced life expectancy of a median of 10 years,[1] compared to the general population. This is in part due to a higher prevalence of lifestyle risk factors that increase the risk of chronic disease development,[3] including tobacco smoking, poor nutrition, harmful alcohol consumption, and physical inactivity.[4] Although people with a mental health condition are interested in modifying their lifestyle factors,[5] many experience difficulty in doing so; this is reflected in lower rates of successful long-term behaviour change compared to the general population.[6] There is a range of contributing factors, including the impact of mental health symptoms, higher social disadvantage and the use of lifestyle risk factors as a coping strategy.[7] One key contributor is less access to effective, evidence-based behaviour change support.[8]

Telephone-based services represent a potential support to address the high prevalence of lifestyle risk factors among people with a mental health condition. Free public telephone services are available in Australia[9,10] and other high-income countries[11-13] to provide personalised counselling or coaching to support positive changes in lifestyle factors. Telephone services overcome the barriers for people with a mental health condition to receiving face-to-face care, such as the costs of care, transportation costs and constraints, and waiting times.[6]

Telephone smoking cessation services (Quitlines) have been widely adopted throughout countries in North America, Europe, Asia and the Asia-Pacific.[13] Quitlines have been reported to be effective in encouraging smoking cessation in the general population in the United States (US)[14] and in Australia.[9] With regard to people with a mental health condition, research undertaken in the US suggests that while the quit rates of callers with a mental health condition

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are lower (22%) than those without (31%), quit rates are substantial.[15] Despite their effectiveness, international research indicates more effort is needed to encourage smokers to use such services.[16] In Australia, for example, despite high levels of awareness of the NSW (New South Wales) Quitline® among the general population (94% of current and ex-smokers), only 10% of smokers who made at least one quit attempt had ever used the NSW Quitline.[17]

Systematic review evidence supports the effectiveness of telephone-delivered interventions in the general population for improving physical activity and dietary behaviours.[18] Such telephone services available at a population level include 'Get Healthy'[11] and 'Live Well Stay Well'[12] in the United Kingdom. In Australia, the NSW Get Healthy Information and Coaching Service (Get Healthy Service®) is an evidence-based, free service providing coaching for nutrition, alcohol, physical activity, and weight-related goals.[10] A pre-post evaluation reported that callers in the general population who completed the coaching program reduced their weight and improved physical activity and dietary intake.[10] While the effectiveness of the Get Healthy Service for people with a mental health condition specifically has not been explored, research indicates that telephone-based support may be effective in supporting people with a mental health condition to make changes to their nutrition[19] and physical activity.[20] As is the case for Quitlines, increasing the reach of the Get Healthy Service remains challenging.[10] The most recent data available from Australian surveys (2010–2012) found the awareness of the Get Healthy Service among the general population was between 14% and 44% (measured during and after a mass media advertising campaign, respectively).[21]

Limited research has explored the awareness and use of telephone support services among people with a mental health condition. People with a mental health condition represent approximately half of all Quitline callers in the US[15] and one-third of such callers in Australia.[22] With regard to the Get Healthy Service , 26% of callers between 2015 and 2017 were reported to have a mental health condition.[23] While such findings suggest people with a mental health condition represent a substantial proportion of callers to telephone services, the awareness and use of such services among people with a mental health condition is not known, nor are the factors associated with awareness and use.

The aims of this study were to:

1. Assess the extent of awareness of, knowledge about, and use of telephone-based behaviour change support services by clients of one Australian community mental health service with at least one of the four lifestyle risk factors addressed by the services (tobacco smoking, poor nutrition, harmful alcohol consumption and/or physical inactivity).
2. Examine socio-demographic and clinical associations with having heard of and used each service.

Methods

Design and setting

A cross-sectional study using baseline data collected in a randomised controlled trial (RCT) conducted in regional New South Wales (NSW), Australia[24] was undertaken. The study was conducted in a community mental health service providing individualised mental health treatment to clients for varying psychiatric diagnoses and acuities. The policy for the health district within which the service is located directs mental health clinicians to assess clients' engagement in lifestyle risk factors (tobacco smoking, poor nutrition, harmful alcohol consumption, and physical inactivity) in accordance with Australian National Guidelines, and where clients are identified as not meeting guidelines, to provide referrals to the free NSW Quitline and NSW Get Healthy Service.[25]

The NSW Quitline was launched as a national service in 1997[9] and as a standalone New South Wales service in 2002,[26] provided by the Cancer Institute NSW. The Quitline is a key element of the NSW Tobacco Control Strategy[27] and has been promoted through mass media campaigns and legislation.[28] The service offers provision of information and resources (a 'Quit Kit' and online resources: 'iCan Quit'), and either a one-off or program of six free individual telephone counselling sessions to support individuals to stop smoking.

The NSW Get Healthy Service was launched in 2009 and delivered under the NSW Office of Preventive Health. While the service has been subject to less mass media promotion than the Quitline, advertising campaigns, such as the NSW Make Healthy Normal Campaign, have promoted the service from inception to 2016.[10,29] The Get Healthy Service offers either brief intervention (information brochures and resources and one free telephone coaching call), or a telephone coaching program that includes up to 13 free individual coaching sessions over six months to assist individuals in setting and achieving healthy lifestyle and/or weight-related goals. Ethics approval for the study was obtained from the Hunter New England Human Research Ethics Committee (16/02/17/4.09) and the University of Newcastle Human Research Ethics Committee (H-2016-0123).

Participants and recruitment

During a six-month period (February–August 2017) community mental health staff identified clients who met the eligibility criteria for the RCT: over 18 years of age and deemed by the mental health team as physically and mentally capable of participating. Participants who took part in the baseline telephone interview and self-reported not meeting the Australian National Guidelines for at least one of the four lifestyle risk factors addressed by the telephone services (smoking, poor nutrition, harmful alcohol consumption and physical inactivity) were included in the present study; this was consistent with the policy of the service that identifies such clients as being eligible for a referral to the telephone services.[25]

Data collection procedures

Eligible clients were mailed a study information statement from their mental health service explaining the study and data collection procedures. The letter provided a toll-free number to call should they wish to opt-out, and clients who did so were removed from the study. Clients who did not opt-out were contacted after two weeks by trained telephone interviewers and invited to participate. For those who agreed to participate, the survey was conducted using a computer-assisted telephone interview (CATI). Socio-demographic (age and gender) and clinical (primary mental health diagnosis and length of current episode of care) characteristics of participants were obtained from electronic service records.

Measures

Data regarding awareness, knowledge and use of the Quitline and Get Healthy Service were obtained via the CATI. Outcomes were calculated for participants who were not

meeting Australian National Guidelines ('at risk') for at least one of the relevant lifestyle factors addressed by the service, being tobacco smoking (for the Quitline), and poor nutrition, harmful alcohol consumption and/or physical inactivity (for the Get Healthy Service); see Table 1 for definitions.

All questions had closed response options. Participants were asked if they had ever heard of each telephone service that addressed the behaviour(s) for which they were at risk (single response: yes; no; don't know). For each service the participant had heard of, they were asked: i) how they had heard of the service (unprompted, multiple responses allowed: Television; Information in the mail; Online advertising or searching; Family/friends; Radio; Newspaper Advertising; General Practitioner; Mental health professionals; Other health professional; Other; Don't know); ii) what they knew about the cost of the service (unprompted, single response: It's free; There is a cost but it's cheap; There is a cost but it's expensive; Don't know; Other); iii) what behaviours the service could help them with (unprompted, multiple responses allowed: Alcohol consumption; Physical activity/exercise; Nutrition/diet; Smoking; Weight; Other; Don't know); and iv) what type of supports the service offers (unprompted, multiple responses allowed: One-off coaching/counselling call; Call-back service/phone coaching program; Information; Online tracking tools; Don't know; Other).

Participants who stated they had heard of a service were asked if they had ever spoken to that service (single response: yes; no; don't know). An additional variable was calculated to determine use among the whole sample at risk for the behaviour(s) addressed by each service, where participants who had not heard of a service were further coded as having not spoken to that service (yes vs. no –haven't spoken to the service/don't know if spoken to the service/no – haven't heard of the service/don't know if heard of the service). Participants who used a service were asked how many times they had spoken with that service in the past six months (single response: none; 1–4; 5–9; 10+; don't know).

Statistical analysis

Data were analysed using STATA 13 (StatCorp LP, College Station, TX). For Aim 1, descriptive statistics were used to describe awareness (heard of each service and how heard), knowledge (of the cost, lifestyle factors

Table 1: Sample characteristics.

Measures	Participants[a] (n=375) n	%
Gender (%)		
Male	205	54.7
Female	170	45.3
Other	0	0
Age (%)		
18-25	65	17.3
26-35	74	19.7
36-50	138	36.8
51+	98	26.1
Diagnosis type (%)		
Psychotic/Schizophrenia	14	38.9
Mood disorders	131	34.9
Anxiety and stress related disorders	56	14.9
Other	42	11.2
Length of time at the service (%)		
Quintile 1 (1−2 months)	83	22.1
Quintile 2 (3−5 months)	86	22.9
Quintile 3 (6−17 months)	76	20.3
Quintile 4 (18−56 months)	78	20.8
Quintile 5 (57−257 months)	52	13.9
Relationship status (%)		
Single	229	61.1
Married/De facto	70	18.7
Separated/Divorced/Widowed	76	20.3
Employment status (%)		
Full-time	31	8.3
Part-time or casual	50	13.3
Household duties/Student	134	35.7
Unemployed	27	33.9
Retired	18	4.8
Other	15	4.0
Highest education level achieved (%)		
Less than school certificate	60	16.0
School certificate	92	24.5
Higher school certificate	65	17.3
TAFE or Diploma	120	32.0
Bachelor/Post Graduate Degree	38	10.1
Identified as Aboriginal and/or Torres Strait Islander (%)		
Yes	42	11.2
No	332	88.8
Socio-economic index of disadvantage		
Least disadvantaged (percentile ≥50)	140	36.1
Most disadvantaged (percentile <50)	248	63.9
At-risk (according to Australian National Guidelines) for behaviours addressed by Get Healthy Service (%)	369	98.4
Harmful alcohol consumption[b]	150	40.1
Poor nutrition (inadequate fruit and vegetable consumption)[c]	356	95.7
Physical inactivity[d]	171	48.0
At-risk (according to Australian National Guidelines) for behaviours addressed by Quitline (%)[e]	282	75.2
Currently smoking	192	51.2
Ex-smoker who quit <6 months ago or quit >6 months ago & concerned may start smoking again	90	24.0

Notes:

ns vary due to missing responses, which were excluded from analysis

a: Included in the presented study were participants who self-reported engaging in at least one lifestyle risk factor

b: Consuming more than two standard drinks on an average day or more than four in one occasion[32]

c: Consuming less than two serves of fruit or five serves of vegetables daily (as an indicator of poor nutrition)[33]

d: Engaging in less than 150 minutes of moderate or 75 minutes of vigorous intensity physical activity, or an equivalent combination of each, weekly[34]

e: Defined as: currently smoking,[35] quit smoking <6 months ago, or quit smoking >6 months ago but concerned they might start smoking again

addressed by, and supports offered by each service), and use (ever spoken and times spoken to each service in the past six months) of the telephone services. For Aim 2, univariate associations (chi-square) and multivariable associations (logistic regression) were assessed.[30] Firstly, chi-squares assessed socio-demographic and clinical characteristics associated with: i) having heard of the Quitline (yes vs. no/don't know); ii) having heard of the Get Healthy Service (yes vs. no/don't know); and iii) use of the Quitline (yes vs. know/don't know; equivalent analyses for use of the Get Healthy Service were not undertaken due to small sample size; see Supplementary Material for results of univariate associations). Characteristics examined were: age (18–25; 26–35; 36–50; 51+ years), gender (male; female), primary mental health diagnosis (schizophrenia/psychosis; other diagnosis), length of time at the service (quintiles of the log transformation, due to negative skewing), education level (up to school certificate; higher school certificate; tertiary), employment status (paid employment; no paid employment), relationship status (partnered; not partnered), socio-economic index of disadvantage (least disadvantaged [percentile ≥50] vs. most disadvantaged [percentile <50]; calculated from residential postcode[31]) and identifying as Aboriginal and/or Torres Strait Islander (Yes; No).

Secondly, all variables with a univariate association $p<0.25$ were entered into multivariable logistic regression models and then a backward elimination and stepwise variable selection method was used to eliminate non-significant variables until only significant variables were included in the model ($p<0.05$[30]).

Table 2: Client awareness, knowledge and use of Quitline® and Get Healthy Service®.

		Quitline®		Get Healthy Service®	
		n	%	N	%
Awareness		n=276[a]		n=360[b]	
Heard of the service	Yes	246	89.1	58	16.1
	No	28	10.1	295	81.9
	Don't know	2	0.7	7	1.9
How heard of the service[c,d,e]	Television	182	74.0	23	39.7
	Cigarette pack	22	8.9	0	0.0
	Online advertising or searching	16	6.5	5	8.6
	Other media/advertising	67	27.2	4	6.9
	Family/friends	11	4.5	1	1.7
	General Practitioner	19	7.7	4	6.9
	Mental health professional	17	6.9	18	31.0
	Other health professional	8	3.3	7	12.1
	Other	5	2.0	1	1.7
	Don't know	10	4.1	2	3.4
Knowledge[c]		n=246		n=58	
Cost of the service[d]	It's free	107	43.5	21	36.2
	There is a cost but it's small/ cheap	0	0.0	0	0.0
	There is a cost and it's expensive	0	0.0	0	0.0
	Don't know	139	56.5	37	63.8
Lifestyle factors addressed[d,e]	Alcohol consumption	7	2.9	2	3.5
	Physical activity / exercise	1	0.4	28	48.3
	Nutrition / Diet	1	0.4	28	48.3
	Smoking	206	83.7	6	10.3
	Weight	0	0.0	6	10.3
	Other	4	1.6	3	5.2
	Don't know	40	16.3	24	41.4
Supports offered[d,e]	One-off coaching/counselling call	16	6.5	3	5.2
	Call-back service/multiple call	82	33.3	14	24.1
	Informational in the mail	10	4.1	1	1.7
	Online tracking tools	4	1.6	2	3.5
	Don't know	149	60.6	42	72.4
	Other	10	4.1	0	0.0
Use[c]		n=246		n=61	
Ever spoken to	Yes	50	20.3	7	12.1
	No	196	79.7	49	84.5
	Don't know	0	0.0	2	3.5
Times spoken to (last 6 months)	None in the last 6 months	35	70.0	5	71.4
	1-4	12	24.0	1	14.3
	5-9	1	2.0	0	0.0
	10+	1	2.0	1	14.3
	Don't know	1	2.0	0	0.0

Notes:

a: Of participants who were at-risk for tobacco smoking (n=282), 97.9% (n=276) provided data regarding awareness; n=6 participants with missing data.

b: Of participants who were at-risk for poor nutrition, harmful alcohol consumption, and/or physical inactivity (n=369), 97.6% (n=360) provided data regarding awareness; n=9 participants with missing data.

c: Asked of participants who stated they had heard of the service.

d: Not prompted i.e. response options not read aloud.

e: Multiple responses allowed.

Results

Participants

A total of 811 clients met RCT inclusion criteria and 48.0% (n=389) took part in the telephone interview. A total of 375 participants reported at least one of the four lifestyle risk factors and were included in the present study (Supplementary Material contains participant flow diagram). The mean age was 40 years (SD 12.9 years), 54.7% were male, and the most common diagnosis was psychosis and/or schizophrenia (38.9%).

Aim 1: awareness, knowledge and use

Descriptive statistics regarding awareness, knowledge and use of the telephone services are presented in Table 2.

Quitline

Of participants at risk for smoking, 89.1% had heard of the Quitline. The most commonly reported source of awareness was via television (74.0%). Of those who had heard of the Quitline, 43.5% knew it was free and 83.7% knew that the service could help them quit smoking. Most participants (60.6%) stated they did not know what supports the Quitline offered. One-third of participants correctly identified that the Quitline offered a call-back service (33.3%), while a small proportion identified one-off counselling calls (6.5%) or information in the mail (4.1%). Participants who had heard of the Quitline were asked if they had ever used it, with 20.3% stating they had. When assuming that participants who had not heard of the

Quitline had not used it, this equates to 18.1% of all at-risk participants having ever used the service.

Get Healthy Service

Of participants at risk for nutrition, and/or alcohol consumption and/or physical inactivity, 16.1% had heard of the Get Healthy Service. The most commonly reported source was via television (39.7%). Of those who had heard of the Get Healthy Service, 36.2% knew it was free, while 48.3%, 48.3%, 10.3%, and 3.5% reported they knew the service could help them with their physical activity, nutrition, weight and alcohol consumption, respectively. The majority who had heard of the service (72.4%) did not know what supports it offered. Approximately one-quarter (24.1%) correctly identified that the service offered a call-back service, while a small proportion identified a one-off coaching call (5.2%), information in the mail (1.7%), or online tools (3.5%). Participants who had heard of the Get Healthy Service were asked if they had ever used it, with 12.1% stating they had. When assuming that participants who had not heard of the Get Healthy Service had not used it, this equates to 1.9% of all at-risk participants having ever used the service.

Aim 2: Associations with having heard of and used the services

Heard of the Quitline

Education and employment status had univariate associations of $p<0.25$ and were entered into a multivariable logistic regression model for having heard of the Quitline (see Supplementary Material for univariate associations). After backward elimination, no factors were significantly associated with having heard of the Quitline.

Heard of the Get Healthy Service

Age group, diagnosis, gender, education level, index of disadvantage, and relationship status had univariate associations of $p<0.25$ and were entered into a multivariable logistic regression model for having heard of Get Healthy Service. After backward elimination, those in a relationship were significantly more likely than those without a partner to have heard of the service (OR 2.19, CI 1.15-4.18; $p=0.017$; Table 3).

Use of the Quitline

Age group, diagnosis, and identification as Aboriginal and/or Torres Strait Islander had univariate associations at a p-value of <0.25 and were entered into a multivariable logistic regression model for use of the Quitline. After backward elimination, those aged 36–50 years were significantly more likely than those aged 18–25 to have used the Quitline (OR 5.22; CI 1.17-23.37 $p=0.031$; Table 3).

Discussion

To the authors' knowledge, this study is the first to explore awareness and use of telephone-based behaviour change support services among people with a mental health condition. In our sample of clients from one community mental health service, a large proportion (89%) had heard of the Quitline, while only 16% had heard of the Get Healthy Service. Regarding use, 18% had ever used the Quitline and 2% had ever used the Get Healthy Service. While further research is warranted to explore these measures in a larger, representative sample, such results suggest there may be a need to explore avenues for increasing awareness and use of telephone services among people with a mental health condition with lifestyle risk factors.

The lower awareness of the Get Healthy Service might be expected, given that the service was launched in New South Wales in 2009 and is relatively new compared to Quitline, which was launched in 1997.[9] In addition, multiple mass media campaigns and legislation may have contributed to increased knowledge of the Quitline.[28] Comparatively, mass media promotion of the Get Healthy Service was only funded to 2016,[29] with a more recent investment of resources into promoting referrals by health professionals.[36] Fewer than half of participants correctly identified that each service was free (44% Quitline and 36% Get Healthy Service). Given that cost has been cited as a barrier for people with a mental health condition in accessing healthy lifestyle support,[6] increasing knowledge that the telephone services are free may be one strategy to increase their use.

The high level of awareness of the Quitline found in this sample of clients of one community mental health service (89%) is comparable to that of the general population reported in a New South Wales population survey (94%).[17] Comparing the awareness of the Get Healthy Service in this sample (16%) to data from the general population is difficult due to variability in survey methodologies and the lack of more recent data for the latter. In 2012, following the roll-out of mass media campaigns, prompted awareness, where participants were described relevant advertising and asked about their recognition, was 44%.[21] Participants in a relationship were two times more likely to have heard of the Get Healthy Service compared to those not in a relationship. While not explored in this study, future research may consider the potential role of partner support in influencing whether people with a mental health condition are aware of and access telephone services.

Although referral to each of the telephone services is directed by Health District policy

Table 3: Socio-demographic characteristics significantly associated with having heard of the Get Healthy Service® and use of the Quitline® : final logistic regression models after backward elimination.

Variable	% (n)[a]	B	SE	OR [95%CI]	p
Model 1: Heard of the Get Healthy Service[b]					
Relationship status					
Partnered	26.15 (17)	0.79	0.33	2.19 [1.15, 4.18]	0.017
No partner	13.90 (41)			1.00	
Model 2: Used the Quitline[c]					
Age (years)					
18-25	6.45 (2)			1.00	
26-35	20.37 (11)	1.31	0.81	3.71 [0.77, 17.98]	0.104
36-50	26.47 (27)	1.65	0.76	5.22 [1.17, 23.37]	0.031
51+	14.93 (10)	0.93	0.81	2.54 [0.52, 12.38]	0.248

Notes:

Analysis undertaken regarding awareness of the Quitline® found no significant associations after backward elimination (variables with univariate associations of p<0.25 and entered into logistic regression model for having heard of the Quitline: education and employment status).

Equivalent analyses regarding use of the Get Healthy Service® were not undertaken due to small sample size.

a: Reports the %(n) of participants who had heard of/used the service, within each response category.

b: Variables with univariate associations of p<0.25 and entered into logistic regression model for having heard of the Get Healthy Service: age, diagnosis, gender, educational level, index of disadvantage and relationship status.

c: Variables with univariate associations of p<0.25 and entered into logistic regression model for having used the Quitline: age, diagnosis, and identification as Aboriginal and/or Torres Strait Islander

for the participating community mental health service,[25] fewer than one-third of participants reported hearing of the Get Healthy Service from a mental health professional and only 7% for the Quitline. Previous research has similarly indicated the need to increase the provision of referrals to behaviour change supports by mental health services.[37] Additionally, mode of entry into telephone services significantly impacts on participant outcomes, with those referred by health professionals being significantly more likely to achieve positive behaviour change than those who self-refer.[38] This highlights the need to identify effective strategies to encourage mental health services to refer their clients to telephone services.

With regard to use, 18.1% of at-risk participants had used the Quitline. This is approximately two times the rate of use by current or ex-smokers in the general population (10% in 2014).[17] This may support the success of current service promotion strategies in encouraging use by clients of this community mental health service. In the present study, age was significantly associated with use of the Quitline, where participants aged 18–25 years were least likely to have used Quitline. This is consistent with previous research undertaken in the general population finding that Quitline callers are predominately (79.2%) over the age of 30.[39] Future research could explore strategies to increase use of telephone services in younger age groups such as including the integration of text messaging or app-based technologies as an adjunct to the service.[40] Regarding the Get Healthy Service, comparable data regarding use in the general population is not available. However, the low proportion of participants having used the service (2%) suggests that an opportunity exists to promote use of the Get Healthy Service to this population group.

A large proportion of participants had heard of the Quitline and Get Healthy Service through advertising. Advertising and mass media campaigns tailored for this population group may be an effective strategy for helping people with a mental health condition make positive changes to their lifestyle risk factors, warranting further research. For example, Prochaska and colleagues[41] found that exposure to advertisements focusing on an ex-smoker with a mental health condition was associated with increased attempts to quit smoking among people with a mental health condition.

Compared to face-to-face services, telephone-based behaviour change support services have been suggested to have a number of advantages for both the general population[42] and specifically for people with a mental health condition[6]: they are widely accessible, free and highly convenient (e.g. by removing needs for transportation and wait times for face-to-face appointments). However, such telephone support may need to be tailored to consider the specific needs and characteristics of people with a mental health condition, such as the impact of mental health symptoms and psychiatric medications on lifestyle factors,[43] as well as the increased risk of social isolation.[44] Future research is needed to explore the relative appropriateness and effectiveness of different modalities of providing healthy lifestyle support for people with a mental health condition, such as face-to-face, telephone-based, online and text-messaging-based services.

The limitations of this study include it being undertaken with a convenience sample of clients of one community mental health service participating in a larger RCT, limiting the generalisability of findings. Sample characteristics of the present study are largely similar to those of previous population-based surveys of people accessing mental health services in Australia;[45] however, the rate of unemployment was higher in the present study, which may further limit generalisability. Future research is required in a larger sample to achieve thorough statistical analysis and representativeness of the findings.

Conclusion

While there is need for further research with a larger and more representative sample, this study indicates that there may be a need to increase awareness and use of telephone-based behaviour change support services among clients of a community mental health service, particularly for nutrition, physical activity and alcohol. Mass media campaigns optimised to target people with a mental health condition could increase awareness and use. Increasing referrals to telephone services by health services, particularly mental health services, is also recommended.

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Supporting Information

Additional supporting information may be found in the online version of this article:

Supplementary Figure 1: Participant flow diagram.

Supplementary File 1: Results of univariate associations.