

Characteristics of people who use telephone counseling: findings from secondary analysis of a population-based study

Abstract

The characteristics of people who use telephone counseling are not well understood. This secondary analysis used data from a nationally representative community survey of 8,841 Australian adults to compare callers and non-callers to telephone counseling services. Callers have a poorer clinical profile, including a higher risk of suicide, than people who do not use telephone counseling. They also use a variety of other mental health services. Repeat calls are associated with anxiety disorders, receipt of mental health care from general practitioners, and social disadvantage. All callers have a potential need for telephone counseling and further population studies that distinguish between telephone services intended to provide crisis (one-off) and ongoing counseling are warranted.

Key words: Telephone counseling; crisis helpline; repeat callers; frequent callers; population-based study

Telephone counseling services, such as Lifeline in Australia, the National Suicide Prevention Lifeline in the US and Samaritans in the UK have been operating worldwide for up to five decades (Lester & Brockopp, 1970).

Telephone counseling refers to a service whereby a trained counselor uses the telephone to provide a client (or group of clients) with support to explore personal situations, problems or crises (Rosenfield, 1997). The mainstream view is that telephone counseling services are crisis-orientated (e.g., Lifeline Australia) and provide support 24-hours a day, seven days a week, in a one-off interaction (Coman, Burrows, & Evans, 2001; Coveney, Pollock, Armstrong, & Moore, 2012; Urbis Keys Young, 2002). However, telephone counseling services that are more issue- or population-specific (e.g., Quitline for smoking cessation and e-headspace telephone for youth, both in Australia) exist and may provide support in an ongoing, longer term therapeutic relationship and within more restricted hours of operation. Telephone counseling is provided by a mix of trained paid professionals, trained volunteers, unpaid professionals and volunteers, and the service is generally free or the cost of the telephone call to the consumer (Urbis Keys Young, 2002). Telephone counseling includes the provision of mental health or emotional support, suicide prevention services and links to practical resources, such as emergency accommodation.

A variety of mental health services are available in Australia: inpatient, residential and ambulatory services that offer clinical care, and the community mental health sector (Australian Institute of Health and Welfare, 2009). Telephone counseling services sit within our community mental health care sector which delivers diverse services (e.g., self-help, support, advocacy, psychosocial rehabilitation) via mental health non-government organizations (NGOs). Mental health NGOs are typically *'not-for-profit, community managed organizations that provide community support services for people affected by mental health problems and*

mental illness' (National Health Workforce Planning and Research Collaboration, 2011), which are funded by the Australian federal and state or territory governments to provide services aimed at improving the mental health and wellbeing of individuals, their families and carers, or the broader community. Mental health NGO services are typically delivered by staff who have a health-related bachelor degree, postgraduate qualification, or a certificate or diploma level qualification (National Health Workforce Planning and Research Collaboration, 2011). Mental health professionals refer consumers to telephone counseling services, but more frequently, consumers self-refer (Urbis Keys Young, 2002). People with mental health issues may also make calls to intake services to arrange for clinical care (e.g., assessment and crisis response, clinical management, and monitoring and rehabilitation); these types of calls are not included in this study but we note that such calls may also provide support to people seeking help.

Callers to telephone counseling services experience high levels of anxiety and depression (Burgess, Christensen, Leach, Farrer, & Griffiths, 2008). Callers consist of a mix of one-off and regular users (Urbis Keys Young, 2002). The latter group make repeated contacts with telephone counseling services in a given year. This sub-group of callers are referred to as chronic, multiple, or frequent callers in the literature, but we use the term repeat callers here. Repeat callers may be a cause of concern to telephone counseling services that aim to provide an immediate (crisis) response because of their increased use of limited resources. High service demand in turn extends waiting times experienced by other callers, who may then decide to disconnect from the telephone queue. Repeat callers may be perceived as unnecessary or difficult to manage (Bartholomew & Olijnyk, 1973; Hall & Schlosar, 1995; Sawyer & Jameton, 1979). We recently identified several predictors of repeat calls to Lifeline Australia, such as being male or transgender, never

having been married, experiencing suicidality, self-harm and mental health issues (Spittal et al., 2014). We also conducted a systematic literature review and found that previous studies of repeat callers have a number of limitations which preclude firm conclusions from being drawn about how repeat callers differ from other callers to telephone counseling services (Middleton, Gunn, Bassilios, & Pirkis, 2014). Many of the studies of callers have been limited to individual service-level calls (i.e., conducted within a single organization) in the USA, are dated and have poorly or inconsistently defined the population of interest and typically viewed them in a negative light.

The present study, which to our knowledge is the first population-based study of telephone counseling, provides an opportunity to objectively examine the characteristics of one-off and repeat callers to telephone counseling services at a national Australian level rather than from the perspective of a single service provider. The study may benefit other countries that provide similar services and ultimately callers themselves. Research aimed at improving our understanding of the characteristics and vulnerability of callers at a population-level can assist telephone counseling services to manage them in an optimal fashion, by meeting their care needs within the confines of the telephone service's resources and the expertise of their staff.

This paper explores whether particular socio-demographic and clinical characteristics and particular patterns of health service use are associated with frequency of calls to telephone counseling services using epidemiological data from the 2007 Australian National Survey of Mental Health and Wellbeing (NSMHWB) (Slade, Johnston, Oakely Brown, Andrews, & Whiteford, 2009). Specifically, our aims were to determine:

- 1) the proportion of participants that use telephone counseling for mental health problems, the recency and frequency of accessing this type of service and the duration of the calls;
- 2) whether certain socio-demographic and clinical characteristics, particularly social isolation and suicide risk, are associated with the use and frequency of telephone counseling for mental health problems;
- 3) whether people who use telephone counseling also make use of other mental health services; and
- 4) whether people who use telephone counseling (with or without other health services) differ from users and non-users of other health services in terms of their potential need for mental health services.

Methods

The NSMHWB was originally conducted to provide information about the prevalence of major mental disorders, level of impairment and service utilization for mental health and not specifically for the purpose of examining telephone counseling. However, use of telephone counseling was elicited as part of its enquiry about use of services (refer to 'Use of telephone counseling for mental health' below), which enabled us to conduct our secondary analysis.

Sampling and procedure

Full details of the 2007 NSMHWB survey design and procedures are available elsewhere (Australian Bureau of Statistics, 2009a; Slade et al., 2009). Briefly, however, the 2007 NSMHWB was a nationally representative, cross-sectional household survey of Australians aged 16 to 85 years, conducted by the Australian Bureau of Statistics (ABS). The ABS used an algorithm that randomly selected potential respondents from a stratified, multi-stage area probability sample drawn from private dwellings across Australia (excluding very remote regions). In order to improve the reliability of survey estimates for younger and older persons, people aged 16-24 years and 65-85 years had a higher probability of being selected. Data were collected via face-to-face, computer-assisted interviews, conducted by trained lay interviewers from August to December 2007. A survey response rate of 60% was achieved, with interviews completed by 8,841 individuals from 14,805 eligible households. Although the response rate was lower than expected, follow-up of a purposive sample of non-responding households suggested that the impact of non-response was small at an aggregate level (Slade et al., 2009).

Use of telephone counseling for mental health

All NSMHWB respondents were asked 'Did you ever use a telephone counseling service (such as Lifeline) for problems with your mental health?' Those who answered 'yes' were then asked 'In the past 12 months, how many times did you use a telephone counseling service?' and 'When you used a telephone counseling service in the past 12 months, about how long did the calls last on average?' The second question allowed us to identify 'repeat callers' and distinguish them from 'single-use callers' and 'non-callers'. Although it is likely that some or most repeat calls were to the same agency, the wording of this question does not preclude the possibility that our definition of 'repeat callers' includes some people who made calls to multiple services for different reasons.

Social isolation, suicidality and other socio-demographic and clinical characteristics

We identified two socio-demographic characteristics collected via the NSMHWB as potentially being informative (at least indirectly) of a person's level of social support (or isolation): whether the individual had a spouse/partner or lived alone (Mullins, Elston, & Gutkowski, 1996). The former question elicited marital status according to six categories: never married, widowed, divorced, separated, married (in a registered marriage) and de facto marriage. For our analysis we converted these responses to create a binary variable: 'spouse/partner' or 'no spouse/partner'. The variable was derived from questions that elicited the number of persons living in the household and the household structure, the responses for which we also converted to a binary variable: 'one person household' or 'more than one person household'.

The survey assessed suicidality by eliciting respondents' experiences of suicidal ideation, suicide plans and suicide attempts 'ever' or 'within the past 12 months' using 24 possible items. All respondents were asked about suicidal ideation and those who did not respond affirmatively were sequenced out of the suicidality section and not asked questions about plans and attempts. Those responding affirmatively to either thoughts, plans or attempts of suicide were asked how old they were the first time it happened, whether it had happened to them within the past 12 months, and if not, how old they were the last time it happened. Those responding affirmatively to suicide attempts were asked about the number of attempts, the intent of the first attempt, and about the intent, consequences (e.g., injury or poisoning, medical attention, hospitalization) and method (e.g., gun, sharp instrument, overdose, etc.) of the last attempt. The interview methodology and its attempt to counter potential biases associated with underreporting sensitive topics is described elsewhere (Johnston, Pirkis, & Burgess, 2009). For the purpose of our study, suicidality was considered present if the person had reported experiencing suicidal thoughts, plans or attempts in the past 12 months based on derived scores from these three dimensions of suicidality.

Other socio-demographic information gathered in the NSMHWB, which we analyzed included respondent gender (male, female), age (16-34, 35-85 years), highest level of education attained (post-school qualification, no post-school qualification), employment (employed, unemployed), and household income. Household income was based on pre-tax (gross) income for each household member and available in deciles in the ABS data files, with the first decile containing the bottom 10% of the population (earning less than \$399 gross weekly) and the tenth decile the top 10% (earning over \$3,321 gross weekly) (Australian Bureau

of Statistics, 2009a). We converted household income into a binary variable: higher (deciles 6-10, more than \$1,360 gross weekly) and lower (deciles 1-5, less than \$1,361 gross weekly) income.

The prevalence of lifetime diagnoses of particular classes of mental disorder was assessed using the World Mental Health Composite International Diagnostic Interview (CIDI 3.0) (Kessler & Ustun, 2004), which is significantly related to independent clinical diagnoses obtained by independently trained clinical interviewers (Andrews & Peters, 1998; Kessler & Ustun, 2004), according to ICD-10 (World Health Organization, 1992) criteria. Twelve-month prevalence was established from combining lifetime prevalence information and responses to questions about symptoms experienced during the past 12 months. The following mental disorders were assessed in the survey: affective disorders (depression, dysthymia and bipolar affective); anxiety disorders (panic, agoraphobia, social phobia, generalized anxiety, obsessive-compulsive and post-traumatic stress); and substance use disorders (alcohol, opioids, cannabinoids, sedatives and stimulants - harmful use and dependence syndrome of each).

The Kessler Psychological Distress Scale (K-10) (Australian Bureau of Statistics, 2003) was used to assess respondents' level of psychological distress during the 30 days before the interview. The K-10 consists of 10 items which elicit from respondents the frequency of symptoms (e.g., tiredness, nervousness, sadness) using a five-point likert scale from one (none of the time) to five (all of the time). Scores ranging from 10-15 indicate low, 16-21 moderate, 22-29 high and 30-50 very high distress. The K-10 has sound precision in the 90th-99th percentile range of the population distribution, demonstrates consistent psychometric properties

across major sociodemographic subsamples and strongly discriminates between cases and non-cases of mental disorders (Kessler et al., 2002).

A measure of 'days out of role' was used as an indicator of disability. It provides a weighted sum of the total number of days out of the previous 30 in which the respondent was either totally unable to perform their normal activities, or had to cut down their activities, due to health problems.

Use of other services for mental health problems

Information about respondents' 12-month use of services for mental health was obtained via the survey. Respondents were asked whether they had consulted each of the following professionals for mental health problems: general practitioners (GPs); psychiatrists; psychologists; mental health nurses; other mental health specialists (including social workers, occupational therapists and counselors); other specialist doctors or surgeons; other professionals providing general services; and complementary/alternative therapists. For each type of professional consulted, respondents were asked whether they had been consulted within the past 12 months for mental health problems. For this study, we grouped providers consulted in the past 12 months into four categories: GPs; psychiatrists; specialist allied health providers (psychologists, mental health nurses, other mental health specialists); and other providers (other doctors or surgeons, other professionals providing general services, and complementary/alternative therapists).

Potential need for mental health services

We derived a binary variable 'potential need for services' (Yes/No), on which potential need was indicated by any of the following: a 12-month ICD-10 mental disorder; high to very high psychological distress (as indicated by K10 \geq 22) in the past 30 days; more than 7 days out of role in the previous 30 days; or suicidality in the previous 12 months.

Data analysis

The 2007 NSMHWB Basic Confidentialized Unit Record File (CURF; April 2009 version) (Australian Bureau of Statistics, 2009b) was provided by the ABS. CURF data were weighted (adjusted) to reflect respondents' probability of being selected to participate in the survey and to enable the calculation of national population estimates. In addition, data were calibrated against population and household benchmarks to ensure they reflected relevant population distributions. The CURF data were analysed using Stata version 11.2 (StataCorp, 2012). Standard errors and 95% confidence intervals (95% CIs) were calculated using jackknife repeated replication, a method used to provide unbiased estimates of sampling error from complex sample data (Efron, 1981). In this paper, numbers of respondents are reported as unweighted numbers, whereas percentages and standard errors are weighted to represent the entire Australian population.

A series of univariate logistic regression analyses were conducted. First, analyses were conducted to compare the characteristics of groups based on their frequency of use of telephone counseling in the past 12 months. We created a dependent variable with three mutually exclusive categories for the previous 12

months: (1) Non-callers; (2) Single-use callers; and (3) Repeat callers (defined as having made two or more calls). Predictor variables included a range of clinical, sociodemographic and service utilization characteristics of respondents, including indicators of social isolation and suicidality. Analyses were run as pairs of binary logistic regression models (Single-use callers vs Non-callers; Repeat callers vs. Non-callers; Repeat callers vs. Single-use callers).

Second, analyses were conducted to compare groups based on the types of services used for a mental health problem in the past 12 months. We created a dependent variable with three mutually exclusive categories: (1) Use of telephone counseling, with or without consultation with mental health or other providers; (2) Consultation with mental health or other providers only; and (3) No service use. Mental health or other providers included: GPs; psychiatrists; psychologists; specialist allied health providers; mental health nurses; general allied health providers; other doctors; and complementary or alternative medicine providers. The predictor variable of interest was 'potential need for services'. Analyses were run as pairs of binary logistic regression models (Telephone counseling +/- mental health or other providers vs. No services; Telephone counseling +/- other providers vs. Mental health or other providers only).

A critical p-value of 0.05 was used to indicate statistical significance. However, because of the reduced statistical power of some relatively small cell sizes, we have noted all associations less than $p < 0.10$.

Results

Prevalence of telephone counseling calls in Australia

Of the 8,841 survey respondents extrapolating to an estimated Australian population count of 16,015,000 (Slade et al., 2009), 3.7% (weighted percentage, s.e. 0.3) reported having used telephone counseling for problems with mental health in their lifetime. This extrapolates to an estimated population count of 598,038 Australians aged 16 to 85 years. Of the 365 respondents who had ever used telephone counseling, 24.6% (s.e. 3.3) had done so in the past 12 months. This extrapolates to an estimated 147,290 Australians aged 16 to 85 years.

Of the 90 respondents who reported using telephone counseling in the past 12 months, 47% (s.e. 7.2) used these services once, 24% (s.e. 7.1) twice, 17% (s.e. 4.7) three to six times, and 12% (s.e. 4.0) seven or more times. These respondents reported that the average duration of their calls ranged from one to 180 minutes, with 54% (s.e. 7.4) reporting an average call duration of less than 30 minutes and 46% (s.e. 7.4) reporting an average call duration of 30 minutes or longer. There was no statistically significant association between frequency of calls and average length of calls.

Of the total sample of NSMHWB respondents, 99.1% (s.e. 0.1) reported no use, 0.4% (s.e. 0.1) reported single-use, and 0.4% (s.e. 0.1) reported repeated use of telephone counseling in the past 12 months (defined

as having made two or more calls). Table 1 shows the characteristics of these three groups and the types of providers consulted for mental health problems in the previous 12 months.

Table 1 here

Characteristics of non-callers, single-use callers and repeat callers

As shown in Table 1, the majority of non-callers had a spouse/partner (63%), whereas the majority of single-use and repeat callers did not have a spouse/partner (64% and 75%, respectively). The majority of respondents across all three groups did not live alone (78% and above). Suicidality was more common among repeat and single-use callers (47% and 30%, respectively) than non-callers (2%). Proportionally more females than males use telephone counseling (71% single-use and 61% repeat callers). The majority of respondents across all three groups were aged 35-85 years (58% and above). Just under half of non-callers and repeat callers, but only one-third of single-use callers, had a post-school qualification. Close to two thirds of non-callers and single-use callers were employed, but only 28% of repeat callers, were employed. Proportionally more callers than non-callers were on a lower household income (59% single-use and 82% repeat vs 50% non-callers). The proportion of respondents who had more than 7 days out of role in the past 30 days increased with call frequency, from 8% of non-callers to 46% of repeat callers. The proportion of respondents with poorer mental health (as indicated by higher psychological distress and the presence of a mental disorder) increased with call frequency. Correspondingly, the proportion of people consulting various providers about their mental health increased with call frequency.

Factors associated with telephone counseling calls

Table 2 compares the profiles of non-callers, single-use callers and repeat callers by providing the results of the univariate logistic regression analyses. This section compares the characteristics of all callers (single and repeat) with non-callers.

Table 2 here

Those without a spouse/partner had higher odds of single- and repeat-use of telephone counseling (odds ratio (OR) = 3.01 and 5.20, respectively) compared to people with a spouse/partner (Table 2, 'Single-use caller vs non-caller' and 'Repeat caller vs non-caller' columns). Individuals who had experienced suicidality in the past 12 months had 20.61 and 42 .00 odds of single and repeat use of telephone counseling, respectively compared with those who had not experienced suicidality. Females had over double the odds (OR = 2.26) of single-use of telephone counseling compared with males. Living alone, age and post-school qualification did not affect the odds of (single or repeat) use of telephone counseling. Unemployed individuals and those on a lower household income had significantly higher odds of repeat use of telephone counseling (OR = 4.97 and OR = 4.69, respectively). However, lack of employment and lower household income did not increase the odds of single use of telephone counseling.

As shown in Table 2 ('Single-use caller vs non-caller' and 'Repeat caller vs non-caller' columns), the odds of using telephone counseling once or more often were significantly higher for people who had: more than 7

days out of role in the previous 30 days (OR = 3.88 and OR = 9.76); experienced high to very high psychological distress in the previous 30 days (OR = 15.92 and OR = 24.93); a 12-month ICD-10 affective disorder (OR = 10.82 and OR = 17.95); a 12-month ICD-10 anxiety disorder (OR = 4.00 and OR = 16.32); or a 12-month ICD-10 substance abuse disorder (OR = 3.39 and OR = 10.43). Correspondingly, people who had consulted GPs (OR = 10.51 and OR = 50.04), psychiatrists (OR = 10.32 and OR = 23.60), specialist allied health professionals (OR = 17.01 and 50.49) or other providers (OR = 9.73 and OR = 22.12) for their mental health in the previous 12 months had significantly higher odds of using telephone counseling.

Factors associated with repeat calls

This section compares the characteristics of repeat and single-use callers (Table 2, 'Repeat caller vs single-use caller' column). Only two characteristics increased the odds of repeated use of telephone counseling: lack of employment (OR = 4.76) and a diagnosis of a 12-month ICD-10 anxiety disorder (OR = 4.08). All other characteristics were not associated with call frequency. People who had consulted GPs for mental health problems in the past 12 months had higher odds of being repeat callers (OR = 4.76). Consulting with specialist allied health professionals in the previous 12 months did not quite reach statistical significance in predicting the odds of repeat calls (OR = 2.97, $p = 0.062$).

Potential need for any mental health service

We categorized NSMHWB respondents according to their potential need for services based on a composite index that takes into account information about their 12-month mental disorder status, levels of distress, days out of role, and suicidality (see Method for further details). Overall, 72.3% (s.e. 0.6) of respondents were classified as having no indicators of potential need, and 27.7% (s.e. 0.6) as having at least one indicator of potential need.

We then examined whether individuals with and without a potential need for services differed in terms of their patterns of service use in the preceding 12 months. Of the total sample of NSMHWB respondents, 0.9% (s.e. 0.1) reported using telephone counseling, with or without consultation with mental health or other providers, 7.3% (s.e. 0.4) reported consultation with mental health or other providers only, and 91.8% (s.e. 0.4) reported no use of services for a mental health problem.

Table 3 shows that 81% of respondents who used telephone counseling with or without other services had a potential need for services, compared to 70% of those who used other services only, and 24% of those who did not use any services. Indeed, compared to people with no potential need for services, people who had a potential need for services had: significantly higher odds of using telephone counseling (with or without other services) compared to no services (OR = 13.85, 95%CI 6.06 - 31.69, $p < .001$); significantly higher odds of seeing mental health or other providers (but no telephone services) compared to no services (OR=7.79, 95% CI 6.17-9.83, $p < 0.001$); and somewhat higher but not significantly different odds of using telephone

counseling (with or without other services) compared to seeing mental health or other providers (but no telephone services) (OR = 1.89, 95%CI .78 - 4.59, p = .155).

Table 3 here

Discussion

Summary and interpretation of findings

Our first aim was to determine the proportion of Australians who had called telephone counseling services for mental health problems, the recency and frequency of accessing telephone counseling and the duration of calls. We found that, around 4% (or 600,000) of Australians aged 16 to 85 years use telephone counseling for mental health issues in their lifetime, 25% (or 150,000) of whom do so in a given year, a further half of whom do so on more than one occasion. It makes sense that a small proportion of the Australian population uses telephone counseling in the context of the 12-month prevalence of common mental disorders, suicidality and treatment rates. One in five Australians experiences a common mental disorder in a 12-month period (Slade et al., 2009). Fortunately, there is a much smaller 12-month prevalence for suicidality, with 2.3% having ideation, 0.6% making plans and 0.4% making attempts (Johnston et al., 2009). Overall, 11.9% of the Australian adult population uses services for mental health problems in a 12-month period (Burgess & Pirkis, 2009). Furthermore, the proportion of people found to use telephone counseling in our study is similar to the small proportion (5.5%) in a sample of 904 of Australians aged over 18 years (selected using a complex quota sampling system) reported to have used Lifeline Australia (IRIS Research, 2006). An association between call frequency and call duration was not found.

Our second aim was to determine whether certain sociodemographic and clinical characteristics, particularly social isolation and suicidality, are associated with the use, and frequency of use, of telephone counseling.

We identified a number of factors that were associated with using telephone counseling once or more

frequently in the previous 12 months: lack of a spouse/partner, suicidality, more than 7 days out of role in the previous 30 days, high psychological distress and a diagnosed mental disorder (anxiety, depression or substance use). Being female was associated with single-use telephone counseling, which may reflect the fact that males are traditionally less likely to seek mental health treatment (Parslow & Jorm, 2000). Lack of employment and a lower household income were associated with repeat-use telephone counseling.

Among callers, we identified only two factors that were associated with repeat calls, namely lack of employment and having an anxiety disorder. The former could indicate that repeat calls are associated with socioeconomic disadvantage and/or the availability of time. The latter is consistent with previous findings (Burgess et al., 2008) and depending on the type of anxiety experienced, could plausibly result in people avoiding face-to-face services, in favor of repeated use of telephone counseling which may be perceived as less anxiety provoking. By contrast, our own previous research has suggested that repeat callers are less likely to have a spouse/partner (Middleton et al., 2014; Spittal et al., 2014) than single-use callers and are more likely to be suicidal (Spittal et al., 2014). Differences in findings are likely to be attributable to methodological differences in our three studies. The present population-based study sample may have included people who made calls to a mix of crisis (one-off) and ongoing telephone counseling services, whereas one of our past studies compared single and repeat callers using data from Lifeline Australia (Spittal et al., 2014), which is not necessarily intended to provide ongoing support. Our other past study was a systematic literature review of 19 studies, many of which were dated, had small sample sizes, did not use validated measures, and varied in their definition of repeat callers (Middleton et al., 2014). However, consistent with the present findings, our literature review study found that single-use and repeat callers

were equally likely to be suicidal (Middleton et al., 2014). By contrast and probably attributable to the reasons noted above, both of our previous studies found that being male was associated with more frequent calls (Middleton et al., 2014; Spittal et al., 2014).

Our third aim was to explore whether people who use telephone counseling also make use of other mental health services. We found that accessing other services for their mental health (such as from GPs, psychologists, psychiatrists, specialist allied health providers and mental health nurses) in the previous 12 months was associated with using telephone counseling once or more often. This suggests that people who use telephone counseling have a high need for mental health services and the various kinds of support that they offer (e.g., supportive counseling and/or after hours availability from telephone counseling services, psychological therapy from psychologists, medication from psychiatrists, overall health care from GPs). Alternatively, or equally, our findings might reflect the fact that mental health providers refer people to use telephone counseling services. However, among callers, consulting with GPs in particular was associated with repeat calls. This could indicate that repeat callers may benefit from being more strongly linked in with other services, such as psychiatrists and community-based organizations designed to promote social inclusion and recovery. It also implies that general practice might be inadequately meeting the mental health care needs of repeat callers possibly at least partially because service provision focuses on overall health care and is typically limited to business hours. Alternatively, repeat callers might simply favor the benefits associated with telephone counseling, such as, the immediacy of service provision, after-hours access, the ability to access the service from any location without having to travel, anonymity, low or no

cost, and empowerment and control (Urbis Keys Young, 2003). Future research could test these explanations with repeat callers.

Our fourth and final aim was determine whether people who use telephone counseling (with or without other services) differ from users and non-users of other health services in terms of their potential need for mental health services. Potential need for services in this study was indicated by either a mental disorder, high to very high psychological distress as measured by the K-10, more than seven days out of role in the previous 30 days, or 12-month suicidality. We found that a potential need for services was associated with use of telephone counseling (with or without other services) and/or accessing mental health or other providers (but no telephone services). This finding suggests that irrespective of call frequency, people with a genuine need for mental health care use telephone counseling and/or other mental health services.

Limitations and strengths

Our study was limited by the possibility that the sample of people who used telephone counseling was not homogeneous. Although the NSMHWB question used to identify callers specifically enquired about use of telephone counseling services, such as Lifeline Australia, which operates using a crisis or one-off call model of service delivery, we cannot be certain that some people who responded affirmatively to this question did not access a telephone counseling service offering support of a more ongoing nature. Our study was also limited by the way in which we defined repeat callers. Due to the small sample size and the distribution of the number of calls, people who used telephone counseling were considered as 'repeat' if they had made two or more calls within the previous year (and it is possible that some called multiple agencies rather than

one agency repeatedly). A more homogenous group of people who use telephone counseling and/or defining repeat callers as having made more than merely two calls per annum may have yielded different results, particularly in terms of differentiating between the profiles of single-use and repeat callers. However, other studies have varied in how they defined repeat callers from those who had previously used the service or called more than once, as was the case in the present study, but over variable or unspecified periods of time, to arbitrarily as those using the service multiple unspecified times, to as many as several times per day for weeks or months (Middleton et al., 2014). Due to small cell sizes, predictor variables could only be partitioned into two categories (e.g., age 16-34 years vs. 35-85 years). The ABS notes that estimates with relative standard errors (RSEs) between 25% and 50% should be interpreted with caution, and those with RSEs greater than 50% are unreliable (Seeley, 1993). In this study, although some estimates had RSEs in the range 25%-50%, the majority of these were at the lower end of this range. Additionally, use and frequency of use of telephone counseling were elicited for the NSMHWB via self-report, which may have been subject to recall bias. The NSMHWB data did not include people younger or older than 16 and 85 years, respectively, while at least one US study has documented that callers to a national 24-hour crisis line, irrespective of frequency, range in age from 10 to 89 years (Ingram et al., 2008). Results for younger and older cohorts could yield different findings, or strengthen our findings because for example, these cohorts are less likely to be employed.

The key strength was that this study was the first to examine the characteristics of people who use telephone counseling, and according to their frequency of use, at a population-level, which means our sample was representative of the Australian population. Previous studies have been limited to individual

service-level data which are likely to be applicable to unique sub-populations (e.g., victims of domestic violence, gamblers, people who abuse substances) for which the individual services are tailored.

Furthermore, validated measures were used in the NSMHWB to assess clinical characteristics, unlike measures used in previous studies (Middleton et al., 2014). Finally, this was the first study to compare the characteristics of repeat callers and non-callers to telephone counseling services and significant differences were identified.

Implications and conclusions

Our findings have important implications in terms of service provision and future research. All callers have a poorer clinical profile than people who do not use telephone counseling and are potentially socially isolated (if relationship status is used as a proxy). They have a genuine need for, and use a variety of other mental health services, but repeat callers are likely to be socioeconomically disadvantaged and GPs and allied health providers are the most common categories of providers with whom they consult for mental health care. The fact that people who use telephone counseling also use other services provides evidence that coordination and integration of health and telephone counseling services could be improved, with careful consideration of privacy and confidentiality issues, in order to provide optimal care. Importantly, repeat and single-use callers are equally likely to be suicidal, which dispels assumptions that repeat callers are merely isolated individuals who contact telephone counseling services for general support (Watson, McDonald, & Pearce, 2006). Therefore, telephone counseling services should carefully assess and manage suicidality with all callers irrespective of call frequency. Our findings suggest that telephone counseling

services are filling a gap for repeat callers and that, where possible, a model of service delivery which combines both crisis response and ongoing counseling is optimal. However, this may not always be possible depending on the remit of individual services.

Further population-based research is needed to identify the characteristics and needs of single-use and repeat callers and their patterns of service use more generally. This research should include gathering information about the triggers (symptoms and events), time and duration of calls. It should also distinguish between telephone counseling services that are intended to provide single-session and ongoing support because repeat callers are problematic for the former and single-use callers would be considered to be insufficiently engaging in the latter. Qualitative research is needed to understand reasons for calls, the extent to which needs are met via telephone counseling and other services, and to explore whether repeat callers would benefit from or use (referrals to) other mental health services. Further research is also needed to understand the impact on service providers of unexpected call patterns and whether there are more appropriate responses that could be implemented.

Our population-based study provides important information to further understanding of the characteristics and needs of people who use telephone counseling. Service delivery models should strive to better address the needs of single-use and repeat callers, while simultaneously taking into account the needs of other callers, and those of staff providing the services.

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Table 1: Characteristics of NSMHWB respondents and the types of providers consulted for mental health problems in the past 12 months according to frequency of use of telephone counseling services

		Non-caller in past 12 months (n = 8,751)		Single-use caller in past 12 months (n = 44)		Repeat caller in past 12 months (n = 46)	
		Unweighted frequency	Weighted %	Unweighted frequency	Weighted %	Unweighted frequency	Weighted %
Spouse/partner	Yes	4,749	63%	14	36%*	11	25%*
	No	4,002	37%	30	64%	35	75%
Lives alone	No	6,530	87%	29	78%	29	78%
	Yes	2,221	13%	15	22%*	17	22%*
Suicidality in past 12 months ¹	No	8,535	98%	30	70%	28	53%
	Yes	216	2%	14	30%*	18	47%
Gender	Male	3,998	50%	13	29%*	16	39%*
	Female	4,753	50%	31	71%	30	61%
Age group	16-34 years	2,730	33%	18	42%*	13	29%*
	35-85 years	6,021	67%	26	58%	33	71%
Post-school qualification	Yes	3,881	45%	17	33%*	19	48%*
	No	4,870	55%	27	67%	27	52%
Employed	Yes	5,455	65%	26	64%	18	28%*
	No	3,296	35%	18	36%	28	72%
Household income ²	Higher (deciles 6-10)	3,599	50%	14	41%*	9	18%*
	Lower (deciles 1-5)	4,126	50%	23	59%	29	82%
Number of days out of role in past 30 days	0 to 7 days	7,988	92%	32	75%	27	54%
	More than 7 days	755	8%	12	25%*	19	46%*
Psychological distress ³	Low to moderate	7,959	91%	16	39%*	15	29%*
	High to very high	790	9%	28	61%	31	71%
12-month ICD-10 affective disorder	No	8,239	94%	23	60%	24	47%
	Yes	512	6%	21	40%	22	53%
12-month ICD-10 anxiety disorder	No	7,509	86%	23	61%	14	27%*
	Yes	1,242	14%	21	39%	32	73%
12-month ICD-10 substance use disorder	No	8,348	95%	36	85%	34	65%
	Yes	403	5%	8	15%*	12	35%*
Types of providers consulted for mental health problems in past 12 months							
General practitioner ⁴	No	8,015	92%	20	54%	10	20%*
	Yes	733	8%	23	46%	35	80%
Psychiatrist ⁴	No	8,571	98%	34	82%	30	67%
	Yes	177	2%	10	18%*	15	33%*
Specialist allied health ^{4,5}	No	8,325	95%	19	55%	13	29%*
	Yes	426	5%	25	45%	32	71%
Other provider ^{4,6}	No	8,537	98%	34	82%	34	67%
	Yes	210	2%	10	18%*	12	33%*

*' indicates the estimate has a relative standard error between 25% and 50% and should be interpreted with caution.

(1) Includes suicidal thoughts, plans or attempts in the past 12 months; (2) Based on deciles of household income in ascending order, with the first decile containing the bottom 10% (lowest income) and the last decile containing the top 10% (highest income); (3) Psychological distress measured using the Kessler-10 (K-10) using standard cut-offs: 10-15 (Low); 16-21 (Moderate); 22-29 (High); ≥ 30 (Very high); (4) Respondents may have used more than one type of provider; (5) Includes psychologists, mental health nurses, and other mental health specialists; (6) Includes other doctors or surgeons, other professionals providing general services, and complementary/alternative therapists.

Table 2: Results of univariate logistic regression analyses examining NSMHWB respondents' characteristics and the types of providers consulted for mental health problems in the past 12 months according to frequency of use of telephone counseling services

Covariate		Single-use caller in past 12 months vs. non-caller (n = 8,795) ⁷		Repeat caller in past 12 months vs. non-caller (n = 8,797) ⁷		Repeat caller in past 12 months vs. single-use caller (n = 90) ⁷	
		OR (95% CI)	P-value	OR (95% CI)	P-value	OR (95% CI)	P-value
Spouse or partner	Yes	1.00	0.017	1.00	0.001	1.00	0.418
	No	3.01 (1.22 to 7.41)		5.20 (2.06 to 13.11)		1.73 (0.45 to 6.60)	
Lives alone	No	1.00	0.086	1.00	0.110	1.00	0.985
	Yes	1.88 (0.91 to 3.86)		1.90 (0.86 to 4.17)		1.01 (0.35 to 2.93)	
Suicidality in past 12 months ¹	No	1.00	<0.001	1.00	<0.001	1.00	0.229
	Yes	20.61 (8.27 to 51.34)		42.00 (16.15 to 109.22)		2.04 (0.63 to 6.57)	
Gender	Male	1.00	0.017	1.00	0.423	1.00	0.469
	Female	2.26 (1.19 to 5.10)		1.53 (0.53 to 4.37)		0.62 (0.17 to 2.29)	
Age group	16-34 years	1.45 (0.60 to 3.52)	0.404	0.83 (0.29 to 2.36)	0.722	0.57 (0.15 to 2.24)	0.415
	35-85 years	1.00		1.00		1.00	
Post-school qualification	Yes	1.00	0.178	1.00	0.847	1.00	0.281
	No	1.70 (0.78 to 3.71)		0.91 (0.34 to 2.44)		0.53 (0.17 to 1.70)	
Employed	Yes	1.00	0.909	1.00	0.001	1.00	0.005
	No	1.04 (0.50 to 1.20)		4.97 (2.08 to 11.90)		4.76 (1.64 to 13.86)	
Household income ²	Higher (deciles 6-10)	1.00	0.468	1.00	0.007	1.00	0.116
	Lower (deciles 1-5)	1.44 (0.53 to 3.87)		4.69 (1.54 to 14.30)		3.26 (0.74 to 14.37)	
Number of days out of role in past 30 days	0 to 7 days	1.00	0.005	1.00	<0.001	1.00	0.225
	More than 7 days	3.88 (1.53 to 9.84)		9.76 (3.35 to 28.44)		2.52 (0.56 to 11.35)	
Psychological distress ³	Low to moderate	1.00	<0.001	1.00	<0.001	1.00	0.465
	High to very high	15.92 (5.74 to 44.21)		24.93 (11.50 to 54.02)		1.57 (0.46 to 5.30)	
12-month ICD-10 affective disorder	No	1.00	<0.001	1.00	<0.001	1.00	0.378
	Yes	10.82 (4.96 to 23.61)		17.95 (6.92 to 46.53)		1.66 (0.53 to 5.19)	
12-month ICD-10 anxiety ³ disorder	No	1.00	<0.001	1.00	<0.001	1.00	0.009
	Yes	4.00 (1.90 to 8.43)		16.32 (7.40 to 35.98)		4.08 (1.44 to 11.54)	
12-month ICD-10 substance use disorder	No	1.00	0.028	1.00	0.001	1.00	0.177
	Yes	3.39 (1.14-10.01)		10.43 (2.86-38.05)		3.08 (0.59-15.96)	
Types of providers consulted for mental health problems in past 12 months							
General practitioner ⁴	No	1.00	<0.001	1.00	<0.001	1.00	0.001
	Yes	10.51 (4.88 to 22.66)		50.04 (19.89 to 125.94)		4.76 (1.95 to 11.64)	
Psychiatrist ⁴	No	1.00	<0.001	1.00	<0.001	1.00	0.226
	Yes	10.32 (3.96 to 26.92)		23.60 (10.29 to 54.13)		2.29 (0.59 to 8.83)	
Specialist allied health ^{4,5}	No	1.00	<0.001	1.00	<0.001	1.00	0.062
	Yes	17.01 (6.98 to 41.44)		50.49 (22.77 to 111.95)		2.97 (0.95 to 9.32)	
Other provider ^{4,6}	No	1.00	<0.001	1.00	<0.001	1.00	0.306
	Yes	9.73 (4.43 to 21.34)		22.12 (5.71 to 85.60)		2.27 (0.46 to 11.18)	

Frequencies are unweighted

(1) Includes suicidal thoughts, plans or attempts in the past 12 months; (2) Based on deciles of household income in ascending order, with the first decile containing the bottom 10% (lowest income) and the last decile containing the top 10% (highest income); (3) Psychological distress measured using the Kessler-10 (K-10) using standard cut-offs: 10-15 (Low); 16-21 (Moderate); 22-29 (High); ≥30 (Very high); (4) Respondents may have used more than one type of provider; (5) Includes psychologists, mental health nurses, and other mental health specialists; (6) Includes other doctors or surgeons, other professionals providing general services, and complementary/alternative therapists; (7) Due to missing data, some sample sizes are reduced: household income (n's are 7763, 75, and 7762, respectively), days out of role (n's are 8789, 90 and 8787, psychological distress (n's are 8789, 90 and 8795), general practitioner (n's are 8793, 88 and 8791), psychiatrist (n's are 8795, 89, and 8794), specialist allied health (n's are 8796, 89, and 8795), other providers (n's are 8793, 90, and 8791).

Table 3: Potential need for services in past 12 months according to types of services used in the past 12 months

		Telephone counseling +/- mental health or other providers ² (n = 90)		Mental health or other providers ² only (n = 671)		No services (n = 8,080)	
		Unweighted frequency	Weighted %	Unweighted frequency	Weighted %	Unweighted frequency	Weighted %
Potential need for services ¹	Yes	78	81%	454	70%	1,957	24%
	No	12	19%*	217	30%	6,123	76%

** indicates the estimate has a relative standard error between 25% and 50% and should be interpreted with caution.

(1) Need for services is indicated by any one of the following: a 12-month ICD-10 mental disorder; high to very high psychological distress (as measured by the K-10); more than 7 days out of role in the past 30 days; or 12-month suicidality; (2) Mental health or other providers includes: general practitioners; psychiatrists; psychologists; specialist allied health providers; mental health nurses; general allied health providers; other doctors; and complementary or alternative medicine providers.



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