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Original Article

Can receipt of a regular postcard reduce suicide-related behaviour in young help seekers? A randomized controlled trial

Jo Robinson, Hok Pan Yuen, Sara Gook, Alison Hughes, Elizabeth Cosgrave, Eoin Killackey, Kathryn Baker, Anthony Jorm, Patrick McGorry and Alison Yung

Orygen Youth Health Research Centre, Centre for Youth Mental Health, The University of Melbourne, Melbourne, Victoria, Australia

Corresponding author: Ms Jo Robinson, Orygen Youth Health Research Centre, Centre for Youth Mental Health, The University of Melbourne, Locked Bag 10, 35 Poplar Road, Parkville, Melbourne, Vic. 3052, Australia. Email: jr@unimelb.edu.au

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ABSTRACT

Aim: Suicide attempt, ideation and deliberate self-harm are common among adolescents. Limited evidence exists regarding interventions that can reduce risk; however, research indicates that maintaining contact with at-risk adults following discharge from services via letter or postcard can reduce risk. The aim of the study was to test a postcard intervention among people aged 15–24 who presented to mental health services but were not accepted, yet were at risk of suicide.

Methods: A randomized controlled trial of 3 years in duration was used. The intervention consisted of 12 postcards sent once a month for 12 months following presentation to the service. Key outcomes of interest were reduced rates of suicide attempt, suicidal ideation and deliberate self-harm, assessed at 12 and 18 months.

Results: Participants reported that they liked receiving the postcard and that they used the strategies recommended. However, no significant effect of the postcard intervention was found on suicide risk, although participants in both groups improved on measures of mental health over the course of the study.

Conclusions: There remains a need for further research into youth-friendly interventions for young people at risk of suicide.

Key words: adolescent, deliberate self-harm, randomized controlled trial, suicide.

INTRODUCTION

Suicide-related behaviours, including suicide attempt (SA), suicidal ideation (SI) and deliberate self-harm (DSH) where suicidal intent is not specified, are common in young people.[1–4] However, there is little evidence regarding interventions to reduce these behaviours.[5] In particular, there are few randomized controlled trials[6] and studies in youth.[7] Yet it is important to explore the extent to which brief, low-cost interventions can reduce these behaviours.[8]

Previous studies have shown that simple contact via letter, enquiring about well-being, has reduced rates of suicide among adults discharged from an inpatient psychiatric unit.[9] Similar studies have shown reduced rates of repeated self-poisoning and reduced SI among adults discharged from an emergency department (ED) following receipt of regular postcards.[10,11] However, this type of intervention has not proved to be effective in reducing all forms of self-harming behaviour,[11] nor with all populations.[12] Further, interventions successful with adults may not be successful among young people.[13]

A study at a specialist youth mental health service (Orygen Youth Health (OYH)) showed that many young people who were not unwell enough to meet entry criteria had made a recent SA ($n = 14$; 25%) or expressed SI ($n = 22$; 38.6%), and when assessed 2 years later, the rates of both SI and SA remained elevated when compared with those who received

treatment.[14] Given that past suicide-related behaviour is the strongest indicator of future suicide,[15] these data highlight a service provision gap that could potentially be filled by a brief, low-cost intervention such as a postcard.

In order to build on previous studies and further enhance the intervention, two additional components were included in each postcard. The first was a reminder of a useful source of help identified by the participant following the baseline assessment, and the second was one of a series of six evidence-based self-help strategies that the participant could easily employ themselves.

The primary aim of this study was to test the efficacy of the postcard intervention in young people with a history of SA, SI and/or DSH who were not accepted for treatment into a specialist mental health service. A secondary aim was to determine whether or not any potential effect of the postcard was associated with reduced symptoms of depression and hopelessness, or increased self-esteem, perceptions of social support and help seeking; therefore, these variables were included as secondary outcome variables.

METHOD

Design

The study was a randomized controlled trial. It was 3 years in duration with a 12-month recruitment and intervention phase. Participants were assessed face to face at baseline, 12 and 18 months.

Hypotheses were that receipt of a regular postcard would result in: (i) decreased SA, SI and DSH; (ii) reduced depression; (iii) reduced hopelessness; (iv) improved self-esteem; (v) increased perceived social support; and (vi) increased help seeking.

Setting/sample

OYH is a publicly funded specialist mental health service for people aged 15–24 living in Western and Northwestern Melbourne. It comprises an inpatient and outpatient unit and a triage service, where eligibility for treatment is determined. People are deemed ineligible for treatment if they live outside of the catchment area, do not fall within the age range or are receiving appropriate treatment elsewhere.

Participants were recruited between May 2006 and April 2007. Inclusion criteria were aged 15–24; reside in Western or Northwestern metropolitan Melbourne; did not meet entry criteria for the service (either because they were not unwell enough or were receiving treatment elsewhere); a history of suicidal threats, ideation, attempts and/or DSH. Exclusion criteria included known organic cause for presentation, intellectual disability and inability to speak English. These criteria were assessed by a research assistant via the written triage records. Those who were eligible were contacted by telephone and invited to participate.

The study was registered with the Australian Clinical Trials Registry (CTRN012606000274572) and approved by the North Western Mental Health Research and Ethics Committee. Study methods have been previously reported.[16]

Outcomes

Outcome measures have been reported in detail elsewhere[16]; however, in brief the primary outcomes were SA and DSH, measured by the Suicidal Behaviours Questionnaire (SBQ-14)[17] and the Brief Reason for Living Inventory – Adolescent Version[18] and SI measured by the Beck Scale for Suicidal Ideation.[19] Additional outcomes were hopelessness measured by the Beck Hopelessness Scale (BHS),[20] depression measured by the Structured Clinical Interview for the DSM-IV[21] and the Center for Epidemiologic Studies – Depression Scale (CES-D),[22] self-esteem measured by the Rosenberg Self-Esteem scale,[23] help seeking measured by the General and Actual Help Seeking Scale[24] and perceived social support measured by Multidimensional Scale of Perceived Social Support.[25]

Acceptability was measured by calculating the proportion of participants who discontinued receiving the postcards and via an evaluation questionnaire administered at 12-month follow-up. During the 18-month follow-up interview, participants completed a general evaluation questionnaire asking about their experience of participating in the study. Questions included 'Did you like receiving the postcards?' and 'Did you use any of the health promotion messages?'

Following the baseline assessment and prior to randomization, all participants received a brief 'sources of help' interview which was conducted by the research fellow via telephone, during which participants were asked to identify three sources of help that they found useful in times of crisis. Examples included listening to music, playing sport, or talking to a friend or family member. This information was included in the postcards for the intervention group.

Intervention

The intervention was a postcard sent in a sealed envelope; one per month over 12 months, following the baseline assessment. Each postcard expressed an interest in the person's well-being, reminded them about one of the sources of help identified at interview and promoted one of six evidence-based self-help strategies which were rotated each month. These included: (i) physical activity; (ii) early morning light exposure; (iii) self-help books based on cognitive behavioural therapy; (iv) websites such as, for example, BluePages[26] and Mood GYM[27]; (v) relaxation techniques; and (vi) reducing alcohol and other substance use.[26–29]

The participant's name and the individual sources of help were handwritten and each postcard was individually signed. Included with each postcard was a 'change of address' slip, plus the option to request that the postcards be discontinued. In addition to the postcard, all participants received treatment as usual.

Those in the control group received the initial 'sources of help' interview plus treatment as usual, but no postcards.

Treatment as usual was defined as whatever forms of treatment or support the young person was receiving at the time; for example, support from their school counsellor, a general practitioner (GP), or a private psychiatrist or psychologist.

Safety and supervision

The research assistant received training in the administration of the measures and suicide risk assessment. Following each assessment, the research assistant made contact with the research fellow overseeing the study. If there was no cause for concern, contact was made via SMS. If there were concerns about the participant, contact was made by telephone or face to face; where necessary, a referral was made to an appropriate service. Weekly supervision meetings with a clinical psychologist were held, during which all cases were presented and any diagnostic and/or risk issues were discussed and dealt with as necessary.

Randomization

Random allocation to the postcard and control groups was carried out by the independent statistician, using block randomization and computer-generated random numbers following completion of the 'sources of help' interview. A small number of participants that completed a baseline interview but could not be contacted to complete a 'sources of help' interview were not randomized and excluded from the study at this point.

The statistician notified the study coordinator regarding group allocation; however, the research assistant remained blind.

Sample size

Suicide and SA rates from other studies vary between 3.9% and 15.1% for a contact group, and 4.6% and 17.3% for a non-contact group,[9,10] with small effect sizes. The design of our study differs from previous studies, although it is reasonable to expect a similar effect size. The power analysis was based on using the general linear model to compare the intervention and control groups with the baseline values of an outcome measure as the covariate. It was assumed (conservatively) that the covariate would explain 5% of the variance in the dependent variable. Based on previous research, we expect to recruit 180 subjects who would be equally allocated to the two groups and conservatively estimated a dropout rate of 20%. A power calculation indicated that we would be able to detect a small effect size of 0.21 with a significance level of 0.05 and power of 0.8. The actual sample size ($n = 165$) has made only a small change to the power calculation – the detectable effect size has increased from 0.21 to 0.22.

Statistical methods

At each time point, the general linear model (analysis of covariance) tested for the treatment factor for each continuous outcome measure. The corresponding baseline values of each outcome measure were used as the covariate. The number of self-harm incidents was a skewed measure (due to many zeros); therefore, analysis was also carried out using negative binomial regression. The results were similar and so the details are not reported here. For dichotomized measures, logistic regression was used. The analysis was done in two ways. Firstly, only those with valid scores at both time points were included in the analysis. Secondly, multiple imputation was used to impute the missing values. The statistical software, S-Plus,[30] was used to carry out multiple imputation[31,32] which utilizes the expectation–maximization algorithm[33] and data augmentation algorithm.[32] Because the results were similar, only the results of the first way are reported here.

RESULTS

Participant flow

At baseline, 165 participants were randomly allocated to the intervention ($n = 82$) and treatment as usual (TAU) ($n = 83$) groups. Following randomization, one participant withdrew consent, leaving 81 participants in the intervention group. At 12-month follow-up, data were available from 60 participants in the intervention and 52 in the TAU group. At 18-month follow-up, 50 participants from the intervention and 37 from the TAU group participated in assessments. Reasons for dropout were as follows: unable to make contact ($n = 44$), did not attend appointments and could not be re-contacted ($n = 8$), time-constraints ($n = 6$), living overseas or interstate ($n = 3$), reluctance to discuss their mental health ($n = 4$), administrative error ($n = 2$), too unwell ($n = 1$), and eight gave no reason. Please see Figure 1.

Demographics

The sample consisted of more females (postcard = 60.5% ($n = 49$), TAU = 64.6% ($n = 57$)) than males (postcard = 39.5% ($n = 32$), TAU = 31.3% ($n = 26$)). Mean age was 18.6 years[15–20,26–29] for both groups. Sixteen participants (19.8%) in the postcard group and 20 (24.1%) in the TAU group were unemployed. The majority of participants were born in Australia (postcard = 87.7% ($n = 71$), TAU = 91.6% ($n = 76$)). Fifty-two participants (64.2%) in the postcard group and 56 (67.5%) in the TAU group lived with their parents.

Baseline clinical characteristics

Baseline clinical characteristics are presented in Table 1. Despite randomization, there appeared to be a higher incidence of anxiety disorders and co-morbidity in the TAU group, and a higher incidence of substance use and dependence disorders in the postcard group. There were fewer people with no diagnosis in the TAU group versus the postcard group.

Suicide-related behaviour at baseline

Suicide-related behaviour at baseline is also reported in Table 1. There were no large differences in suicide-related behaviour between groups. The most common methods of DSH reported were cutting, intentionally overdosing on drugs and burning.

Deliberate self-harm

The results for baseline, 12- and 18-month assessments are shown in Table 2. Suicide-related

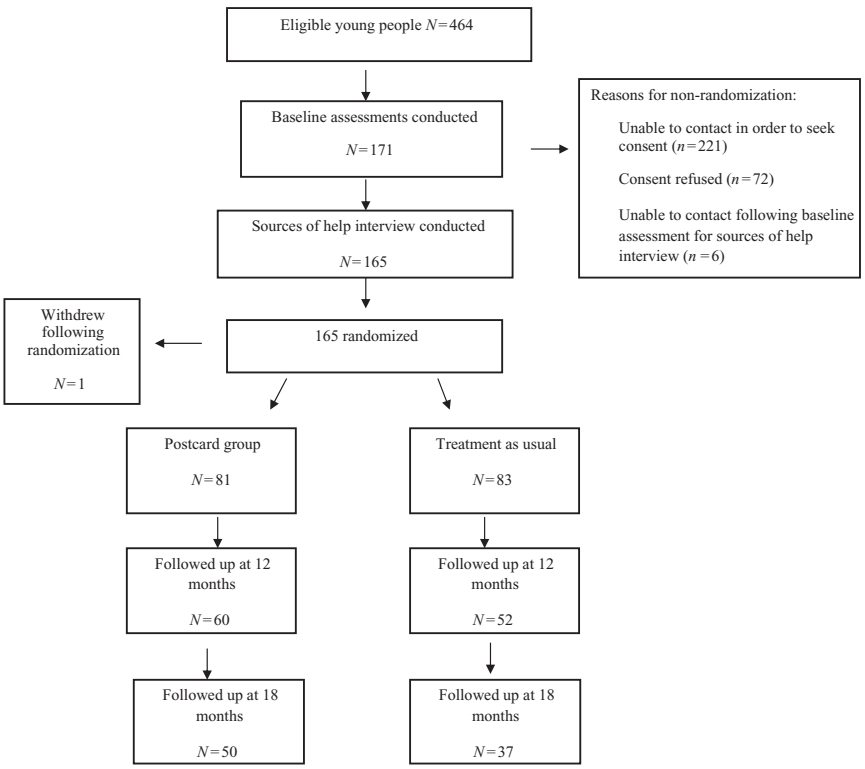

FIGURE 1. Participant flow chart.

TABLE 1. Baseline characteristics of sample

Baseline clinical characteristics	Postcard $n = 81$	TAU $n = 83$
CES-D: mean (range)	28.7 (0–55)	30.9 (0–56)
MH treatment in past month: *n* (%)	28 (34.6)	29 (34.9)
Mood disorder: *n* (%)	51 (63.0)	59 (71.1)
Anxiety disorder: *n* (%)	41 (50.6)	62 (74.7)
Substance use/dependence disorder: *n* (%)	25 (30.9)	16 (19.3)
Co-morbidity: *n* (%)	33 (40.7)	48 (57.8)
No diagnosis: *n* (%)	21 (25.9)	13 (15.7)
Functioning: GAF/CGAS: mean (range)	54.6 (30–82)	54.2 (35–81)
Prescribed antidepressant: *n* (%)	29 (35.8)	32 (38.6)
No psychotropic prescription: *n* (%)	48 (59.3)	50 (60.2)
Suicide-related behaviour at baseline		
Previous DSH: *n* (%)		
Lifetime	58 (71.6)	55 (66.3)
Past 12 months	52 (64.2)	44 (53)
Past month	25 (30)	22 (26.5)
Mean number of instances of DSH (SD)	10.2 (28.7)	11.3 (31.5)
Suicidal thoughts: *n* (%)		
No thoughts of suicide	2 (2.5)	9 (10.8)
Brief thoughts of suicide	19 (24)	24 (26.5)
Somewhat serious thoughts of suicide in lifetime	17 (21)	17 (20.5)
Serious thoughts plus suicide plan	7 (8.6)	6 (7.2)
SA with ambivalence	21 (25.9)	17 (20.5)
SA and definitely wanted to die	15 (18.5)	12 (14.5)

CES-D, Center for Epidemiologic Studies – Depression Scale; CGAS/GAF, Children's Global Assessment Scale/Global Assessment of Functioning; DSH, deliberate self-harm; SA, suicide attempt; TAU, treatment as usual.

behaviour reduced over time in both groups; however, no significant differences were found between the two groups after 12 or 18 months.

The mean number of instances of DSH, at 12 months for postcard and TAU groups, respectively, were 8.4 (SD 34.0) and 7.9 (SD 24.7), and at 18 months were 0.1 (SD 0.6) and 7.6 (SD 31.4). Thus, the mean number of attempts decreased between baseline and follow-up, but there were no significant differences between the two groups at 12 or 18 months ($P = 0.94$ and 0.11, respectively). Note that although the SD at 18 months for the postcard group (0.6) was much smaller than that for TAU (31.4), it was not an issue for the analysis because the analysis (general linear model) was done on the change between baseline and follow-up for which the SDs of the two groups were similar. It was also noted that the number of DSHs was a skewed measure (due to many zeros) and so analysis was also carried out using negative binomial regression. Similar results were obtained.

Additional outcomes

Results for the baseline, 12-month and 18-month assessments are shown in Table 3. Some symptoms reduced over time (i.e. CES-D scores, BHS scores) in both groups; however, no significant differences were found between the two groups after 12 months or 18 months.

Over the course of the study, 59 participants (36%) were assisted with referrals for ongoing treatment by the study team due to concerns about their well-being and/or level of risk; approximately 15% ($n = 24$) of whom were re-referred to clinical services, and 21% ($n = 35$) were helped to complete a risk management plan and assisted with referrals to their GP, or other services.

Postcard and study evaluation

The acceptability of the intervention was evaluated at the 12-month follow-up via questionnaire. Among the postcard group ($n = 81$), 57 (70.4%) completed this questionnaire, 75% of whom reported that they liked receiving the postcard; 63% said they used the sources of help messages; 46% used some of the health promotion messages and 42% reported referring to the postcards often.

DISCUSSION

Research with at-risk adults found that receipt of a regular postcard reduced subsequent suicide-related behaviour and the current study aimed to test this with a younger sample aged 15 to 25. Overall, there were no significant differences on measures of SI, DSH, hopelessness, depression, self-esteem, perceived social support or help seeking between those who received the postcard intervention and those who did not.

That said, the majority of participants found receiving the postcard to be acceptable and more than half reported using the individual sources of help messages.

In general, reporting negative findings is just as important as reporting positive findings in order to reduce the risk of publication bias in the field. However, before we consider the implications of the study findings, several limitations need to be borne in mind.

TABLE 2. 12- and 18-month outcomes for suicide-related and self injurious behaviour

		% Yes				
	Group	Baseline	12 months	18 months	12 months *P*-value‡	18 months *P*-value‡
Serious suicidal ideation in the past†	Postcard	74.1	23.3	10.6	0.591	0.789
	TAU	62.7	23.5	11.1		
Frequent suicidal ideation in the past†	Postcard	65.8	32.8	20.0	0.428	0.362
	TAU	56.1	38.0	25.0		
DSH past month	Postcard	30.9	5.0	2.0	0.179	0.117
	TAU	26.5	9.6	8.1		
Past DSH†	Postcard	64.2	25.0	6.1	0.452	0.210
	TAU	53.0	26.9	13.5		
Past SH with intent to die†	Postcard	28.7	8.5	2.2	0.906	0.535
	TAU	15.7	5.9	2.8		
Some chance of considering suicide in lifetime	Postcard	54.3	31.7	26.1	0.888	0.913
	TAU	50.6	30.0	22.2		
Some chance of committing suicide in lifetime	Postcard	43.0	17.2	18.6	0.709	0.379
	TAU	36.6	18.0	8.3		

†The time frame at baseline is lifetime, at 12 months is past 12 months and at 18 months time point is past 6 months.
‡Comparing the two groups using logistic regression in terms of the odds of 'Yes' after adjusting for the response at baseline.
DSH, deliberate self-harm; SH, self-harm; TAU, treatment as usual.

TABLE 3. 12 and 18 month outcomes for continuous measures

Measure	Group	Mean (SD)				
		Baseline	12 months	18 months	12 months *P*-value†	18 months *P*-value†
CGAS/GAF	Postcard	54.6 (10.6)	62.9 (13.9)	66.4 (14.4)	0.724	0.890
	TAU	54.2 (10.8)	62.5 (11.6)	67.0 (13.0)		
CES-D	Postcard	28.7 (14.0)	18.7 (12.9)	16.9 (12.4)	0.917	0.714
	TAU	30.9 (13.5)	18.9 (12.2)	16.6 (9.5)		
BHS	Postcard	8.6 (5.8)	6.4 (5.8)	5.1 (5.2)	0.539	0.480
	TAU	8.4 (5.6)	5.5 (4.4)	5.5 (3.6)		
BSS	Postcard	8.0 (8.8)	2.8 (4.9)	2.1 (4.7)	0.828	0.858
	TAU	7.3 (9.1)	2.7 (6.2)	1.3 (4.1)		
BRFL-A	Postcard	3.1 (1.0)	3.4 (0.9)	3.6 (1.1)	0.874	0.475
	TAU	3.4 (1.1)	3.5 (0.9)	3.5 (0.8)		
RSE	Postcard	22.1 (5.8)	17.2 (6.6)	18.5 (6.8)	0.367	0.444
	TAU	22.6 (6.2)	19.2 (6.0)	18.2 (5.4)		
MSPSS	Postcard	54.8 (14.3)	61.3 (13.9)	60.9 (15.0)	0.357	0.895
	TAU	57.1 (16.7)	64.8 (15.3)	62.2 (14.3)		
GHSQ	Postcard	27.5 (8.4)	28.5 (8.1)	28.9 (8.5)	0.845	0.111
	TAU	28.1 (9.3)	27.7 (10.2)	25.8 (7.4)		

†Testing for group difference using general linear model in terms of change between baseline and follow-up with baseline score as a covariate.
BHS, Beck Hopelessness Scale; BRFL-A, Brief Reasons for Living Scale-Adolescent Version; BSS, Beck Suicide Scale; CES-D, Center for Epidemiologic Studies – Depression Scale; CGAS/GAF, Children's Global Assessment Scale/Global Assessment of Functioning; GHSQ, General Help-Seeking Questionnaire; MSPSS, Multidimensional Scale of Perceived Social Support; RSE, Rosenberg Self-Esteem Scale.

Limitations

There are several limitations to the current study which must be considered. The first relates to the generalizability of the findings to other populations and settings. The current study sample was drawn from a group of young help seekers with a history of suicide-related behaviour who did not meet criteria for a specialist mental health service, and as such are a specific population. Thus, while we did not

obtain a positive result, that is not to say that a postcard-type intervention would not be effective among other groups of young people.

Secondly, there were a large number of young people who could not be contacted in order to seek consent, and because we have limited information about these young people we cannot be certain that the study is free from any selection bias.

A further limitation was the high attrition rates, which reduced the power of our results. Although 164 young people were randomized at baseline, only 112 participated in the 12-month follow-up assessment and 87 at 18 months. The study was only powered to detect a small effect size; therefore, a bigger sample size might have elicited more positive results, in particular on those variables where some degree of change was seen, such as rates of help seeking and number of instances of DSH at 18 months.

The high attrition rate may be linked to the fact that, consistent with the aims of the study, our sample consisted of young people who had presented for treatment at OYH but were not accepted. They therefore may have felt that they had less reason to remain engaged with the project. It is well known that engaging young people, in particular those at risk of suicide, in treatment,[34,35] and indeed research,[36,37] can be challenging.

Implications

The non-significant findings may be due to a number of factors. Despite not being accepted into the service, this was a morbid sample with high rates of mental disorder, suicide-related and self-harming behaviour. Although one positive finding was that overall all participants improved over the course of the study, it might be that the intervention would have been more effective among a less unwell cohort. Additionally, previous studies have tested similar interventions among people who have received treatment.[9,10] In contrast, our sample had sought help but had not been accepted into the service. Hence, it might be that the postcards did not elicit the same positive response for this reason.

It is also noted that many of the participants were already receiving additional services, hence their not being accepted into our own service. Further, help accessing alternative services was given to a significant proportion of participants (36%) throughout the study. Not only does this further highlight the gap in services for this population, but it may also be that any potential effect of the postcard intervention, which was expected to be small, was outweighed by the overall effect of receiving treatment.

Ours is not the only contact-type study to report a negative finding. Beautrais *et al.*[12] reported that receipt of a regular postcard had no effect on the proportion of participants re-presenting to an ED with self-harm or in the total number of re-presentations for self-harm. Indeed, it has been suggested that while postcard-type interventions have received recent attention, more research is needed in order to determine their effectiveness.[38]

Suicide-related behaviour can be transient in young people, and many who present to services in crisis find that these behaviours subside fairly quickly, in particular among those who receive some form of treatment.[14] This begs the question: Could a briefer intervention have had a greater effect? There is also an emerging body of research examining the effects of e-based interventions such as online and SMS-based interventions.[26,36] However, to our knowledge, there are no such interventions targeting at-risk adolescents. Thus, perhaps future research could trial a similar, but shorter, e-based intervention among a less unwell cohort.

Intervention research is lacking in the field of suicidology[5] and little is known about effective interventions, in particular among young people.[7,37] However, future research needs to be sufficiently powered to detect even small differences. Further, researchers need to work hard to ensure adequate rates of follow-up. There are examples of this[39,40] and although this can be resource intensive, it is essential if we are to develop effective means of reducing suicide-related behaviour among young people.

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REFERENCES

1. Ystgaard M, Arensman E, Hawton K *et al*. Deliberate self-harm in adolescents: comparison between those who receive help following self-harm and those who do not. *J Adolesc* 2009; **32:** 875–91.
2. De Leo D, Heller TS. Who are the kids who self-harm? An Australian self-report school survey. *Med J Aust* 2004; **181:** 140–4.
3. Patton GC, Harris R, Carlin JB *et al*. Adolescent suicidal behaviours: a population-based study of risk. *Psychol Med* 1997; **27** (3): 715–24.

4. Harkavy Friedman JM, Asnis GM, Boeck M, DiFiore J. Prevalence of specific suicidal behaviors in a high school sample. *Am J Psychiatry* 1987; **144:** 1203–6.
5. Robinson J, Pirkis J, Krysinska K, Niner S, Jorm AF, Dudley M. Research priorities in suicide prevention in Australia. *Crisis* 2008; **29:** 180–90.
6. Goldney RD. Suicide prevention: a pragmatic review of recent studies. *Crisis* 2005; **26:** 128–40.
7. Robinson J, Hetrick SE, Martin C. Preventing suicide in young people: systematic review. *Aust N Z J Psychiatry* 2011; **45** (1)**:** 3–26.
8. Beautrais AL. PL 09/01 Brief Interventions. International Association for Suicide Prevention, XXIV World Congress – IASP; Ireland, 2007.
9. Motto JA, Bostrom AG. A randomized controlled trial of postcrisis suicide prevention.[see comment]. *Psychiatr Serv* 2001; **52:** 828–33.
10. Carter GL, Clover K, Whyte IM, Dawson AH. Postcards from the EDge project: randomised controlled trial of an intervention using postcards to reduce repetition of hospital treated deliberate self poisoning. *Br Med J* 2005; **331:** 805–7.
11. Hassanian-Moghaddam H, Sarjami S, Kolahi A-A, Carter GL. Postcards in Persia: randomised controlled trial to reduce suicidal behaviours 12 months after hospital-treated self-poisoning. *Br J Psychiatry* 2011; **198:** 309–16.
12. Beautrais AL, Gibb SJ, Faulkner A, Fergusson DM, Mulder RT. Postcard intervention for repeat self-harm: randomised controlled trial. *Br J Psychiatry* 2010; **197:** 55–60.
13. Hazell P. Treatment strategies for adolescent suicide attempters. In: Hawton K, Heeringen KV, eds. *International Handbook of Suicide and Attempted Suicide*. Chichester: Wiley, 2000; 539–54.
14. Cosgrave EM, Robinson J, Godfrey KA, Yuen H, Killackey EJ, Baker KD. Outcome of suicidal ideation and behaviour in a young help-seeking population over a 2-year period. *Crisis* 2007; **28:** 4–10.
15. Suominen K, Isometsa E, Suokas J, Haukka J, Achte K, Lonnqvist J. Completed suicide after a suicide attempt: a 37-year follow-up study. *Am J Psychiatry* 2004; **161:** 562–3.
16. Robinson J, Hetrick S, Gook S *et al*. Study protocol: the development of a randomised controlled trial testing a postcard intervention designed to reduce suicide risk among young help-seekers. *BMC Psychiatry* 2009; **9:** 59.
17. Linehan MM. Suicide Behaviours Questionnaire. Unpublished instrument. Seattle, WA: University of Washington, 1996.
18. Osman A, Kopper BA, Barrios FX, Osman JR, Besett T, Linehan MM. The Brief Reasons for Living Inventory for Adolescents (BRFL-A). *J Abnorm Child Psychol* 1996; **24:** 433–43.
19. Beck AT, Steer RA. *Beck Scale for Suicidal Ideation: Manual*. San Antonio, TX: The Psychological Corporation, 1993.
20. Beck AT, Weissman A, Lester D, Trexler L. The measurement of pessimism: the hopelessness scale. *J Consult Clin Psychol* 1974; **42:** 861–5.
21. First M, Spitzer R, Gibbon M, Williams J. Structured Clinical Interview for DSM-IV-TR Axix I Disorders, Research Version, Patient Edition (SCID-I/P). New York: Biometrics Research Department, NY State Psychiatric Institute, 2002.
22. Radloff LS. The CES-D scale: a self-report depression for research in the general population. *Appl Psychol Meas* 1977; **1:** 385–401.
23. Rosenberg M. *Society and the Adolescent Self-Image*. Princeton, NJ: Princeton University Press, 1965.
24. Wilson CJ, Deane FP, Ciarrochi J, Rickwood D. Measuring help-seeking intentions: properties of the general help-seeking questionnaire. *Can J Couns* 2005; **39:** 15–28.
25. Zimet GD, Dahlem NW, Zimet SG, Farley GK. The multidimensional scale of perceived social support. *J Pers Assess* 1988; **52:** 30–41.
26. Christensen H, Griffiths KM, Jorm AF. Delivering interventions for depression by using the internet: randomised controlled trial. *Br Med J* 2004; **328:** 265.
27. Jorm AF, Griffiths KM. Population promotion of informal self-help strategies for early intervention against depression and anxiety. *Psychol Med* 2006; **36:** 3–6.
28. Jorm AF, Christensen H, Griffiths KM. Effectiveness of complementary and self-help treatments for anxiety disorders. *Med J Aust* 2004; **181:** S29–46.
29. Jorm AF, Christensen H, Griffiths KM, Rodgers B. Effectiveness of complementary and self-help treaments for depression. *Med J Aust* 2002; **176:** S84–96.
30. Suominen KH, Isometsa ET, Ostamo AI, Lonnqvist JK. Health care contacts before and after attempted suicide. *Soc Psychiatry Psychiatr Epidemiol* 2002; **37:** 89–94.
31. Little RJA, Rubin DB. *Statistical Analysis with Missing Data*. New York: John Wiley, 1987.
32. Schafer JL. *Analysis of Incomplete Multivariate Data*. London: Chapman & Hall, 1997.
33. Dempster AP, Laird NM, Rubin DB. Maximum likelihood estimation from incomplete data via the EM algorithm. *J R Stat Soc* 1977; Ser. B **39** (1)**:** 1–38.
34. French R, Reardon M, Smith P. Engaging with a mental health service: perspectives of at-risk youth. *Child Adolesc Social Work J* 2003; **20:** 529–48.
35. Rickwood D, Deane FP, Wilson CJ. When and how do young people seek professional help for mental health problems? *Med J Aust* 2007; **187** (7 Suppl.)**:** S35–9.
36. Haller D, Sanci L, Sawyer S, Coffey C, Patton GC. R U OK 2 TXT 4 RESEARCH? Feasability of text message communication in primary care research. *Aust Fam Physician* 2006; **35:** 175–6.
37. Burns JM, Patton GC. Preventive interventions for youth suicide: a risk factor-based approach. [Review] [164 refs]. *Aust N Z J Psychiatry* 2000; **34:** 388–407.
38. Kapur N, Cooper J, Bennewith O, Gunnell D, Hawton K. Postcards, green cards and telephone calls: therapeutic contact with individuals following self-harm. *Br J Psychiatry* 2010; **197** (1)**:** 5–7.
39. Berk MS, Brown GK, Wenzel A, Henriques GR. A cognitive therapy intervention for adolescent suicide attempters: an empirically-informed treatment. In: LeCroy CW, ed. *Handbook of Evidence-Based Treatment Manuals for Children and Adolescents*, 2nd edn. New York: Oxford University Press, 2008; 431–55.
40. Brown GK, Tenhave T, Henriques GR, Xie SX, Hollander JE, Beck AT. Cognitive therapy for the prevention of suicide attempts: a randomized controlled trial. *JAMA* 2005; **294:** 563–70.