The impact of the “Pause. Call. Be Heard” campaign on help-seeking and suicidal behaviours within rail environment in Victoria, Australia

LAY SAN TOO¹, PHD, ANNA ROSS¹, MPSYCH, JANE PIRKIS¹, PHD, NICOLA REAVLEY¹, PHD, LENNART REIFELS¹, PHD,

¹Centre for Mental Health, Melbourne School of Population and Global Health, The University of Melbourne, Parkville, Victoria 3052, Australia.

Correspondence to

Dr Lay San Too

Centre for Mental Health,

Melbourne School of Population and Global Health,

The University of Melbourne,

Parkville, Victoria 3052, Australia.

Email: tiffany.too@unimelb.edu.au

Tel: +61 3 834 42722

Fax: +61 3 9349 5815

ABSTRACT

Objective

To assess the impact of the “Pause. Call. Be Heard” campaign on help-seeking and suicidal behaviours within rail environment in Victoria, Australia.

Methods

An anonymous online survey was conducted to measure noticeability of and engagement with the campaign and help-seeking intentions and behaviours among rail commuters at 10 rail stations. We generated descriptive statistics to report these data and used logistic regression models to examine the association between campaign-related factors and help-seeking. Changes in Lifeline crisis calls and rail suicide behaviours from pre-campaign to campaign periods were examined using proportion tests.

Results

About 25% of rail commuters noticed the campaign and rated the materials as ‘moderately noticeable’. Over half of these individuals correctly identified the campaign intentions and 75% engaged with the materials. Approximately 80% indicated that the materials increased their help-seeking intentions and about half indicated that they had engaged with help-seeking and/or self-caring behaviours. Engaging with the campaign was positively associated with help-seeking. A significant increase in crisis calls but not in suicide-related calls, and a non-significant decrease in rail suicidal behaviours were found during the campaign period.

Conclusions

Continued implementation of the campaign is warranted as it showed some desirable effects on help-seeking among rail commuters.

Keywords

Help-seeking, rail suicidal behaviours, intervention

INTRODUCTION

In Victoria, Australia, suicide accounts for approximately three-quarters of deaths on rail networks, with an average of 28 rail suicides each year (Too, Spittal, Bugeja, Milner, Stevenson, & McClure, 2015). Among these deaths, close to 70% take place on the open track, 17% within the station itself, 11% at level crossings, and 5% at pedestrian crossings (Too, Spittal, Bugeja, Milner, Stevenson, & McClure, 2015). There have been substantial public concerns about these suicides because they have significant traumatic effects not only for family and friends of those who die, but also for those who witness these deaths including passengers, rail drivers, and other rail staff (Lukaschek, Baumert, & Ladwig, 2011; Mishara & Bardon, 2016). In addition, rail suicides also cause economic losses through disruptions of rail services, driver absenteeism, and counselling required for affected people (Lukaschek Baumert, & Ladwig, 2011; Mishara & Bardon, 2016).

Some interventions have been shown to effectively reduce rail suicides (Pirkis, Too, Spittal, Krysinaka, Robinson, & Cheung, 2015; Too, Milner, Bugeja, & McClure, 2014). These include installation of physical barriers at rail stations (Chung, Kang, Matsubayashi, Sawada, & Ueda, 2016; Law, Yip, Chan, Fu, Wong, & Law, 2009; Ueda, Sawada, & Matsubayashi, 2015; Xing, Lu, & Chen, 2019) and appropriate media reporting (Niederkrötenhaler & Sonneck, 2007). Installing blue lights to create a calming atmosphere has also shown a promising effect (Matsubayashi, Sawada, & Ueda, 2013; Matsubayashi, Sawada, & Ueda, 2014). Several gatekeeper programs have also been developed to prevent rail suicides. For example, the “Small Talk Saves Lives” campaign in the United Kingdom was designed to encourage people to talk to someone who might be at risk of taking their own life on the rail network (Samaritans, 2018). The “Train the trainers” program in Germany and the “Contact with a (possibly) suicidal person” program in the Netherlands were designed to train rail personnel in how to intervene with people who might be at risk of

suicide (Havarneanu, Bonneau, & Colliard, 2016). Although encouraging help-seeking by installing signage displaying crisis helpline numbers has been shown to reduce suicides at some hot spot locations (e.g., USA Mid-Hutson bridge, England New Forest, Sydney Gap Park, and Hong Kong's Cheung Chau) (Pirkis, Too, Spittal, Krysinska, Robinson, & Cheung, 2015, 2015), this intervention has not been implemented within rail environment.

In 2017, the TrackSAFE Foundation and the Lifeline Research Foundation developed a "Pause. Call. Be Heard" campaign to address concerns about rail suicides in Australia. The campaign aimed to encourage rail commuters to seek help by calling the Lifeline crisis helpline. In particular, it aimed to: (1) encourage help-seeking intentions and behaviours, specifically contacting the Lifeline '13 11 14' crisis helpline if/when a person is struggling to cope; (2) increase general awareness of Lifeline services, which may encourage people to suggest Lifeline services to friends/family members who are having emotional difficulties; and (3) interrupt intense negative feelings/suicide ideation by encouraging a breathing exercise and a call to the Lifeline crisis helpline. The campaign was implemented in Victoria over a 12-month period from December 2017 to November 2018. It contained materials such as posters and digital billboards showing the Lifeline crisis helpline number and the "Pause. Call. Be Heard" messages. The digital billboards also contained a guided breathing exercise (see supplementary file for images of campaign materials). The breathing exercise aimed to help rail commuters to feel more relaxed and relieve negative feelings.

This study, commissioned by the TrackSAFE Foundation, sought to evaluate the impact of the "Pause. Call. Be Heard" campaign on help-seeking intentions and behaviours among rail commuters as well as rail suicidal behaviours in Victoria, Australia. It also examined campaign-related factors that were associated with help-seeking intentions and behaviours. We hypothesised that rail commuters who engaged with the campaign materials would have greater help-seeking intentions and behaviours than those who did not; and in

turn, this would have the potential to prevent rail suicidal behaviours. We also hypothesised that rail commuters who noticed both posters and digital billboards would have greater help-seeking intentions and behaviours than those who noticed only either of the campaign materials.

METHODS

The current study measured the impact of the campaign on four outcomes, namely: (1) help-seeking intentions and (2) help-seeking behaviours among Victorian rail commuters during the campaign period, as well as (3) change in the proportion of calls to the Lifeline service for crisis support and (4) change in the proportion/incidence rate of rail suicidal behaviours in Victoria from the 12-month pre-campaign to the 12-month campaign periods.

Survey

An anonymous online survey was administered to rail commuters at 10 participating rail stations (eight metro and two regional stations) in Victoria during May 2018 to examine their help-seeking intentions and behaviours in relation to the campaign. Posters were shown within all participating stations while digital billboards were shown within three of them. These materials were shown within station waiting areas, station entrances, and/or next to customer service counters. As the campaign was initiated since December 2017 for a 12-month period, rail commuters selected to participate in the survey were likely to be exposed to the campaign for about five months. The survey was administered onsite during daytime for approximately four hours at metro stations and for six to eight hours at regional stations by trained interviewers using iPads with rail commuters, selected based on their availability in a non-random way (convenience sample).

These stations were selected purposefully to achieve a proportional mix of 80% metropolitan and 20% regional rail stations in the state. This proportion reflected the prevalence of rail suicidal behaviours across metropolitan and regional Victorian rail networks (Too, Spittal, Bugeja, Milner, Stevenson, & McClure, 2015). These stations were also selected because they were among the stations which had a relatively higher number of

suicides, based on the analysis from a previous study (Too, Pirkis, Milner, Bugeja, & Spittal, 2017).

The survey contained some initial questions that gathered information on commuters' socio-demographics (i.e., gender, age group, and how often they travelled by train), whether they would consent to take part in the survey, and whether they had noticed the campaign materials. Only those aged 18 years and above, and those who provided consent were then invited to participate. For those who indicated that they had noticed the campaign materials, they were asked additional questions about: (1) the noticeability of the materials; (2) the key messages they thought these materials conveyed; (3) whether they recognised Lifeline logo and/or number; (4) their immediate reactions to the materials; (5) whether they had previously contacted Lifeline crisis support for themselves and/or someone else; (6) whether the materials increased their likelihood of seeking support from Lifeline for themselves and/or someone else during a personal crisis (an indication of help-seeking intentions); (7) whether they had actually sought help from Lifeline for themselves, suggested Lifeline to someone else, and/or better looked after themselves in the past month (an indication of help-seeking behaviours); and (8) their current emotional wellbeing. For those who indicated that they had not noticed the campaign materials, they were only asked the question about their current emotional wellbeing. All questions required respondents to select responses from a pre-specified list (shown in Tables below), except for the question on key messages conveyed by the campaign which gave respondents the opportunity to capture free-text responses. A 10-point Likert scale was used in two questions (noticeability of the campaign materials and emotional wellbeing), with higher scores indicating greater noticeability/better wellbeing. The survey was designed to be completed within three to four minutes.

Lifeline service calls in Victoria

To examine the change in the proportion of Lifeline crisis calls in Victoria from the 12-month pre-campaign period to the 12-month campaign period, we used routinely collected crisis call data from the Lifeline '13 11 14' service. Aggregate data on the total volume of Victorian Lifeline crisis calls, including calls for which suicide was identified as a safety concern, was obtained from Lifeline for the 2-year period from December 2016 to November 2018.

Rail suicidal behaviours in Victoria

To compare rail suicidal behaviours for the 12-month pre-campaign period and the 12-month campaign period, we estimated its proportion and rate using data on suicidal behaviours (numerator) and patronage numbers (denominator) for the entire Victorian rail network. These data were obtained from Metro Trains Melbourne and V/Line, and included suicide attempts and deaths (both confirmed and suspected, as determined by Victorian rail staff).

Statistical analysis

We analysed the quantitative data from the survey using basic descriptive statistics. We coded the free-text responses on key messages conveyed by the campaign materials based on common themes and also used descriptive statistics to characterise these themes. In addition, we performed logistic regression analysis to examine the relationship between two campaign-related exposure variables and help-seeking intentions and behaviours separately, adjusting for gender, age group, frequency of train travel, and current emotional wellbeing. These exposure variables were: (1) the type of campaign materials noticed by respondents (digital billboard, posters, or both); and (2) whether respondents engaged with the campaign materials ('yes' or 'no', indicated by whether they showed immediate reactions to the materials). In terms of the outcome variables, for help-seeking intentions, we classified those who indicated that the campaign materials had prompted them to seek help for themselves

and/or for someone else during a personal crisis as ‘yes’ while those who indicated none of these as ‘no’. For help-seeking behaviours, we classified those who indicated they had sought Lifeline support for themselves, suggested Lifeline support to someone else, and/or tried to better look after themselves as ‘yes’ and those who had done none of these as ‘no’. We also performed the same logistic regression analysis restricted to those who had not previously sought Lifeline support for themselves/someone else. In addition, we used a two-sample t-test to examine whether those who noticed the campaign materials had poorer current emotional wellbeing than those who did not.

A test of proportions (a test that estimates the statistically significant difference between two proportions) was used to assess the significance of changes in the proportions of Victorian Lifeline crisis calls and rail suicidal behaviours from the pre-campaign period to the campaign period. The incidence rate ratio was also estimated for rail suicidal behaviours between these two periods. All data analyses were performed using Stata 14 (StataCorp) and a p-value of less than 0.05 was interpreted as statistically significant.

RESULTS

Survey response

A total of 1,844 rail commuters participated in the survey. Seventy-two surveys were removed from the analysis because: (1) 13 were incomplete; (2) 13 were from individuals who did not give their consent to participate; and (3) 46 were completed by individuals who were under 18 years of age. Overall, surveys from 1,772 individuals were included in our analysis. Our results showed a relatively even response across selected rail stations, ranging from 8% to 15%.

Characteristics of respondents

Table 1 shows the characteristics of respondents. The gender split was relatively well balanced (51% males and 48% females). About half of the respondents were under 35 years old (52%) and 14% were aged 65 years or over. Respondents most commonly indicated that they travelled by train Monday to Friday (39%). Smaller proportions of respondents travelled more frequently (every day; 16%) or less frequently than this (once every few months; 19%).

TABLE 1. Characteristics of respondents

Characteristics	n	%
Gender		
Female	909	51.3
Male	855	48.3
Other	4	0.2
Rather not say	4	0.2
Age group (years)		
18 - 24	596	33.6
25 - 29	199	11.2
30 - 34	127	7.2
35 - 39	140	7.9
40 - 44	102	5.8
45 - 49	90	5.1
50 - 54	102	5.8
55 - 59	78	4.4
60 - 64	99	5.6
65 - 69	87	4.9
70 - 74	81	4.6
75+	71	4.0
Travel frequency		
Every day	275	15.5
Monday to Friday	685	38.7
Once a fortnight	112	6.3
Once a month	133	7.5
Once a week	236	13.3
Once every few months	331	18.7

Campaign noticeability and identified messages

In total, 459 (26%) respondents indicated that they had noticed the campaign materials during their train travels in the previous month. Twenty-two per cent indicated that they saw the Lifeline posters and 3% indicated that they saw the digital billboard. Less than 2% of respondents indicated that they saw both the posters and digital billboard. The proportion of respondents noticing the campaign materials ranged from 13% to 48% across selected rail stations. However, it is worth noting that respondents who had responded to the survey at a particular station may have noticed the campaign materials at other stations.

Respondents who had noticed the campaign materials reported that they had found these materials to be ‘moderately noticeable’. The mean noticeability scores were highly similar between posters and digital billboard materials (posters: mean = 6.20, SD = 1.90; digital billboard: mean = 6.23, SD = 1.99). Close to 80% of respondents who noticed the campaign materials indicated that they recognised the Lifeline logo and/or helpline number in these materials. Specifically, 45% indicated that they recognised the Lifeline logo, 21% recognised the Lifeline number, and 12% recognised both the logo and the number.

When asked about the key messages that respondents thought the campaign materials were conveying, over half identified a range of messages that showed good overall alignment with campaign intentions (Table 2). For example, 15% of respondents who noticed the campaign indicated that the campaign aimed to convey that support was available, 14% indicated that it was about encouraging help-seeking, and 8% indicated that it was about emotion regulation exercises.

TABLE 2. Campaign messages identified by survey respondents

Campaign messages	n	%
Support is available	68	14.8
Encouraging help-seeking	63	13.7
Emotion regulation exercises (think, breath, and/or pause)	36	7.8
Increasing mental health awareness	26	5.7
Track safety	24	5.2
Advocating Lifeline	16	3.5
Positive message	12	2.6
Preventing suicide	9	2.0
Increasing awareness of support resources	7	1.5
Offering help to others	6	1.3
Suicide/suicide attempt/loss of people in crisis	5	1.1
Promoting self-help	1	0.2
Train interruption	1	0.2
Unsure	77	16.8
Not reported	108	23.5

Immediate reactions to campaign materials

Three-quarters of those who had noticed the campaign materials indicated that they had engaged with the materials. Of those who had engaged with materials, 47% indicated that they paused and considered the messages after seeing the materials, 21% thought about a friend/family member who could benefit from contacting Lifeline, 14% considered Lifeline support options, 12% considered other self-care options (e.g., connecting to others to keep strong, getting enough sleep and rest, being active and eating well, making time for things you enjoy, and reaching out for support when you need it), and 9% did the breathing exercise (Table 3). While 59% of respondents who had engaged with the campaign materials indicated that they only experienced one of these reactions, 8% had two, 6% had three, 1% had four and 1% had five.

A higher proportion of respondents who noticed both types of campaign materials indicated that they had paused and considered the Lifeline messages (77%), compared to those who had only noticed the posters (47%) or the digital billboard (38%) (Table 3). As might be expected, a greater proportion of respondents who noticed the digital billboard messages did the breathing exercise compared to those who noticed the poster messages (21% versus 7%). In addition, a higher proportion of respondents who noticed both types of campaign materials considered Lifeline support options (32%), thought about a friend/family member who could benefit from contacting Lifeline (36%), and considered other self-care options (23%), compared with the proportions of respondents who only noticed either the posters or the digital billboard. Furthermore, respondents noticing both types of campaign materials (95%) were more likely to experience any of the above reactions than those who noticed only the posters (74%) or the digital billboard (72%).

TABLE 3. Type and number of respondent reactions to campaign materials

	Posters n (%*)	Digital billboard n (%*)	Both posters and digital billboard n (%*)	Total n (%*)
Immediate reactions				
Pause and consider these messages	182 (46.7)	18 (38.3)	17 (77.3)	217 (47.3)
Do the breathing exercise	28 (7.2)	10 (21.3)	4 (18.2)	42 (9.2)
Consider Lifeline support options	53 (13.6)	6 (12.8)	7 (31.8)	66 (14.4)
Think about a friend/family member that could benefit from contacting Lifeline	77 (19.7)	10 (21.3)	8 (36.4)	95 (20.7)
Consider other selfcare options	44 (11.3)	7 (14.9)	5 (22.7)	56 (12.2)
Number of reaction types	n (%)	n (%)	n (%)	n (%)
0	100 (25.6)	13 (27.7)	1 (4.6)	114 (24.8)
1	235 (60.3)	26 (55.3)	9 (40.9)	270 (58.8)
2	29 (7.4)	2 (4.3)	6 (27.3)	37 (8.1)
3	17 (4.4)	4 (8.5)	5 (22.7)	26 (5.7)
4	5 (1.3)	1 (2.1)	0	6 (1.3)
5	4 (1.0)	1 (2.1)	1 (4.6)	6 (1.3)

*% totals more than 100% as multiple responses were permitted.

Lifeline-related help-seeking intentions and behaviours

Of those who noticed the campaign materials, 78% indicated that these had increased their likelihood of seeking help from Lifeline for themselves and/or for others (Table 4), with 35% indicating that the materials had made them more likely to seek help for someone else, 22% indicating that the materials had made them more likely to seek help for themselves, and 21% indicating that the materials had made them more likely to seek help for themselves and others.

When respondents who noticed the campaign materials were asked about their help-seeking behaviour in the past month, 4% indicated that they had sought Lifeline support for themselves, 10% indicated that they had suggested Lifeline support to someone else, and 46% indicated that they had tried to better look after themselves in the past month (Table 4). Overall, 13% indicated they had sought and/or suggested Lifeline support, while 55% reported at least one of the three help-seeking behaviours over the last month.

TABLE 4. Intention and behaviour to seek help from Lifeline

	n	%
Help-seeking intention		
For yourself	101	22.0
For someone else	162	35.3
Both for yourself and someone else	96	20.9
None of these	100	21.8
Help-seeking behaviour in the past month		
	n	%*
Sought Lifeline support for yourself	18	3.9
Suggested Lifeline support to someone else	45	9.8
Tried to better look after yourself	209	45.5
None of these	206	44.9
Number of types of help-seeking behaviours		
	n	%
0	206	44.9
1	238	51.9
2	11	2.4
3	4	0.9

*% total more than 100% as multiple responses were permitted.

Campaign-related predictors of Lifeline-related help-seeking intentions and behaviours

Respondents who experienced any of the immediate reactions to the campaign materials were significantly more likely to express the intention to seek or suggest help from Lifeline, compared with those who did not experience such reactions [Adjusted Odds Ratio (AOR) = 3.58, 95% Confidence Intervals (CI) = 2.19–5.86]. However, the type of campaign materials was not significantly associated with help-seeking intentions.

As with the results on help-seeking intentions, immediate reactions to the campaign materials, but not the type of campaign materials, were associated with help-seeking behaviours in the past month. That is, respondents who had engaged with the campaign materials were more likely to have sought/suggested help from Lifeline and/or tried to better look after themselves in the past month, compared with those who had not (AOR = 3.56, 95% CI = 2.21–5.74).

Younger respondents (18-24 years of age) were more likely than older respondents, and those who reported poorer emotional wellbeing were more likely than those reported better wellbeing, to report help-seeking behaviours in the past month. These variables were not significant in the models for help-seeking intentions.

We obtained similar results when restricting our sample to those who indicated that they had never sought help for themselves and/or someone else from Lifeline. In that, whether respondents had engaged with the campaign materials, but not the material type, was associated with an increased intention to seek help from Lifeline.

TABLE 5. Adjusted odds ratios and 95% confidence interval of help-seeking intention and behaviour associated with material type and immediate reaction.

	Adjusted OR	Adjusted CI	95%	p-value
Help-seeking intention				
Material type ^a				0.480
Billboard	1.00			
Poster	1.51	0.75–3.02		
Both billboard and poster	1.18	0.36–3.95		
Immediate reaction ^a				<0.001
No	1.00			
Yes	3.58	2.19–5.86		
Help-seeking behaviour in the past month				
Material type ^a				0.014
Billboard	1.00			
Poster	0.58	0.30–1.13		
Both billboard and poster	2.67	0.71–10.01		
Immediate reaction ^a				<0.001
No	1.00			
Yes	3.56	2.21–5.74		

^aThese models were controlled for gender, age group, train travel frequency, and current emotional wellbeing.

Emotional wellbeing

Respondents had moderately good emotional wellbeing at the end of the survey. Wellbeing differed significantly between those who noticed and those who did not notice the campaign materials [$t(1770) = 5.65$, $p < 0.001$]. Those who noticed the campaign had significantly (mean = 7.17, SD = 1.94) poorer wellbeing than those who did not (mean = 7.73; SD = 1.80).

Change in Lifeline crisis calls in Victoria

Comparison of Victorian Lifeline crisis calls from the 12-month pre-campaign period to the 12-month campaign period indicated a small increase in the number of Lifeline crisis calls (from 154,5221 to 163,916, +6%). By contrast, the number of Lifeline calls with suicide as an identified safety issue decreased slightly (from 27,070 to 26,526, -2%). When overall Lifeline call volume was considered as the denominator, the proportion of crisis calls increased significantly (from 75% to 79%, $p < 0.001$) and the proportion of calls with suicide as an identified safety issue decreased at the non-significant level during the campaign period (from 13.2% to 12.8%, $p = 0.169$).

Change in rail suicidal behaviours in Victoria

There were 58 rail suicidal incidents observed during the 12-month pre-campaign period and 51 incidents during the 12-month campaign period (-12%). After considering the number of station patronages, the proportion and rate of suicidal behaviours were not significantly decreased from pre-campaign to campaign periods [from 0.023% to 0.020%, $p = 0.992$; Incidence Rate Ratio (IRR) = 0.88; 95% CI = 0.59–1.30, $p = 0.246$].

DISCUSSION

This study examined the effect of the “Pause. Call. Be Heard” campaign on help-seeking intentions and behaviours and suicidal behaviours within rail environment in Victoria. It showed that 26% of selected rail commuters at selected rail stations noticed the campaign. These individuals indicated that the campaign materials were ‘moderately noticeable’ and approximately 80% of them indicated that they recognised the Lifeline logo and/or helpline number. Of those who noticed the campaign, about half identified campaign messages that were consistent with its intentions and 75% indicated that they had engaged with the campaign materials. Close to 80% of these individuals indicated that the materials had increased their intention to seek help from Lifeline for themselves/someone else and 55% indicated that they had sought/suggested help from Lifeline and/or better looked after themselves in the past month. Our findings also showed that engagement with the campaign (in terms of immediate reactions) was positively associated with these help-seeking intention and behaviours. There was an increase in Lifeline crisis calls but not calls related to suicide during the campaign period. Rail suicidal behaviours in Victoria decreased at a non-significant level during the campaign period.

Overall, the campaign reached about a quarter of all selected rail commuters. This proportion may be affected by the noticeability of the campaign materials because it was rated as ‘moderately noticeable’ by those who noticed them. To improve the campaign’s reach in the future, the materials could be designed in a more striking format (e.g., increasing the size of the poster, and increasing the frequency of billboard ads) or placed at more noticeable locations (e.g., within station waiting areas rather than station entrances or next to customer service counters) wherever possible. Many of those who noticed the campaign recognised the Lifeline logo/helpline number and correctly identified the messages delivered by the campaign. This would suggest that Lifeline crisis support services are widely known.

Our finding that those who noticed the campaign had poorer emotional wellbeing than those who did not may imply that those who have poorer wellbeing are more attuned to help-seeking messages or tend to have prior awareness of the Lifeline service and this may have increased their likelihood of noticing and remembering the campaign.

Our findings are encouraging and show that the campaign had some desirable effects. Around 80% (359/459) of respondents who had noticed the campaign indicated that it had increased their intention to seek help from Lifeline for themselves/someone else and more than half indicated that they had sought/suggested help from Lifeline and/or tried to better look after themselves in the past month. Our findings also show that those who engaged with the campaign were more likely to have a greater help-seeking intention and behaviour (including self-care behaviour), which is consistent with our hypothesis. This suggests that future campaigns that aim to increase help-seeking intention and behaviour could be designed to increase individual engagement to the campaigns. One way to increase engagement is using a multimodal campaign, as shown in this study that those noticing both posters and digital billboards expressed greater engagement with the campaign than those noticing only either of the materials. However, there was no significant relationship between campaign material type and help-seeking intentions/behaviours. This may have been partly resulted from the small proportion of people who had noticed the digital billboards, which were only installed at three of the selected rail stations.

We found a significant increase in Lifeline calls related to general crises but not calls related to suicide, and a non-significant decrease in rail suicidal behaviours during the campaign period. The observed pattern of Lifeline calls is interesting to note in view of the upstream nature of the campaign and the fact that it had a broad emphasis on crisis support rather than a narrower or more explicit focus on suicide. Nevertheless, since we have no information about whether the Lifeline crisis calls were related to suicidality within the rail

environment, we are unable to conclusively attribute these calls to the non-significant decrease in rail suicidal behaviours. Furthermore, although it is positive that rail suicidal behaviours decreased during the campaign period and the observed pattern went in the desired direction, this decrease was not significant. This finding does not support our hypothesis that greater help-seeking would in turn reduce rail suicidal behaviours. The non-significant decrease may have been due to small numbers of rail suicidal behaviours and/or the use of patronage numbers (a proxy measure of the number of general population) as the denominator in estimating the proportion and the rate of rail suicidal behaviours. Assessing the impact of the campaign on Lifeline crisis calls and rail suicidal behaviours is difficult as the campaign did not operate in isolation from other suicide prevention activities in Australia; therefore, the frequency of Lifeline crisis calls and rail suicidal behaviours during the campaign period might be affected by the combination of these activities.

Strengths and limitations

To the best of our knowledge, the “Pause. Call. Be Heard” campaign was the first campaign designed to encourage help-seeking in rail commuters. Our findings suggest that this campaign had some desired effects. Nevertheless, some issues should be considered when interpreting these findings. In terms of survey data, first, it was self-reported. This means respondents may have offered biased estimates of self-assessed intentions and behaviour, which could include a misunderstanding of the questions being asked and the tendency to respond to questions in a manner that would be viewed favourably by other people (social-desirability bias). However, social desirability may be minimised by the anonymous nature of the survey. Second, some survey questions required the respondents to recall their behaviours in the past month, raising the possibility of recall bias. Third, most of the questions in the survey required recall but not recognition. This means respondents were presented with a list

of options and asked to endorse the ones they thought related to the campaign but were not asked to generate an unprompted list. The results might be different if the unprompted approach was used. Fourth, as the survey was conducted at only one time (cross-sectional, during campaign period) but not both pre-campaign and campaign periods, we could not determine whether increased likelihoods of help-seeking intentions and behaviours were affected by the campaign. Fifth, we used a convenience sample, where respondents were selected based on their availability in a non-random way. This sampling method may generate a biased sample due to the selected location and time of day as well as other factors. Sixth, as it is not feasible to run the campaign on the rail tracks (where most Victorian rail suicide occurred), the campaign was therefore implemented at rail stations with the hope that it could promote help-seeking, and in turn, prevent rail suicidal behaviours. Finally, because only those who indicated that they had noticed the campaign materials were asked additional questions including the questions on their help-seeking, we were not able to examine whether prior awareness of the Lifeline service had increased the likelihood of noticing and remembering the campaign.

In terms of rail suicidal data, first, we included both confirmed and suspected suicidal behaviours as assessed and determined by rail staff. The way rail staff determine whether an incident is a suicide might be different from those determined by coroners. We were not able to use coronial data on rail suicide as these data were not readily available. Second, we used patronage numbers as our denominator when we estimated the proportion and the rate of rail suicidal behaviours. Those who took their own lives on the rail network might not have been rail patrons but instead may have lived near to the rail track. Third, the ecological nature of rail suicidal data utilised in this study did not permit us to directly attribute observed changes in rail suicidal behaviours to campaign impacts. This was the same for Lifeline crisis call

data. Finally, we do not have the details of crisis call data and thus we could not ascertain whether calls were made by people who did or did not see the campaign materials.

Conclusions

In summary, the “Pause. Call. Be Heard” campaign appears to be effective in engaging rail commuters in its key messages and encouraging them to seek help as required. Although evaluating its impact on rail suicidal behaviour is difficult, our findings show that the effect went in the desired direction. Our findings bode well for the continued implementation of the campaign in the rail environment and suggest that it would have significant benefits for rail commuters in times of crisis. This study may offer lessons for those wishing to run similar campaigns to prevent rail suicides elsewhere. We suggest that campaign materials could be designed in a more striking format and placed within station waiting areas to increase their noticeability. The materials could also be delivered to rail commuters through a social media platform on their smartphones. Future research could evaluate the effect of the campaign on help-seeking by comparing this outcome before and after the implementation of the campaign if possible.

ACKNOWLEDGEMENTS

We would like to thank Lifeline Australia, Metro Trains Melbourne and V/Line for providing us with the required data. We would also like to thank our interviewers for collecting the survey data and Victorian train commuters who generously gave their time in providing feedback and responding to the survey

AUTHORS' CONTRIBUTIONS

All authors contributed to the design of the survey. LR and JP oversaw the study. AR coordinated data collection with the interviewers. LST analysed data and interpreted the findings. LST wrote the first draft of the manuscript. All authors contributed to and approved the final draft.

CONFLICT OF INTERESTS

None declared.

FINANCIAL SUPPORT

This study was funded by TrackSAFE Foundation.

ETHICAL APPROVAL

This study received ethical approval from the Human Research Ethics Committee at the University of Melbourne.

REFERENCES

- CHUNG, Y. W., KANG, S. J., MATSUBAYASHI, T., SAWADA, Y., & UEDA, M. (2016). The effectiveness of platform screen doors for the prevention of subway suicides in South Korea. *Journal of Affective Disorders*, 194, 80–83. <https://doi:10.1016/j.jad.2016.01.026>
- HAVARNEANU, G. M., BONNEAU, M. H., & COLLIARD, J. (2016). Lessons learned from the collaborative European project RESTRAIL: REDuction of suicides and trespasses on RAILway property. *European Transport Research Review*, 8, 16. <https://doi:ARTN 1610.1007/s12544-016-0203-y>
- LAW, C. K., YIP, P. S., CHAN, W. S., FU, K. W., WONG, P. W., & LAW, Y. W. (2009). Evaluating the effectiveness of barrier installation for preventing railway suicides in Hong Kong. *Journal of Affective Disorders*, 114, 254–262. <https://doi:10.1016/j.jad.2008.07.021>
- LUKASCHEK, K., BAUMERT, J., & LADWIG, K. H. (2011). Behaviour patterns preceding a railway suicide: Explorative study of German Federal Police officers' experiences. *BMC Public Health*, 11, 620. <https://doi:Artn 62010.1186/1471-2458-11-620>
- MATSUBAYASHI, T., SAWADA, Y., & UEDA, M. (2013). Does the installation of blue lights on train platforms prevent suicide? A before-and-after observational study from Japan. *Journal of Affective Disorders*, 147, 385–388. <https://doi:10.1016/j.jad.2012.08.018>
- MATSUBAYASHI, T., SAWADA, Y., & UEDA, M. (2014). Does the installation of blue Lights on train platforms shift suicide to another station?: Evidence from Japan. *Journal of Affective Disorders*, 169, 57–60. <https://doi:10.1016/j.jad.2014.07.036>

MISHARA, B. L., & BARDON, C. (2016). Systematic review of research on railway and urban transit system suicides. *Journal of Affective Disorders*, 193, 215–226. <https://doi:10.1016/j.jad.2015.12.042>

NIEDERKROTENTHALER, T., & SONNECK, G. (2007). Assessing the impact of media guidelines for reporting on suicides in Austria: interrupted time series analysis. *Australian and New Zealand Journal of Psychiatry*, 41, 419–428. <https://doi:10.1080/00048670701266680>

PIRKIS, J., TOO, L. S., SPITTAL, M. J., KRYNSKA, K., ROBINSON, J., & CHEUNG, Y. T. D. (2015). Interventions to reduce suicides at suicide hotspots: a systematic review and meta-analysis. *Lancet Psychiatry*, 2, 994–1001. [https://doi:10.1016/S2215-0366\(15\)00266-7](https://doi:10.1016/S2215-0366(15)00266-7)

SAMARITANS. (2018). Small Talk Saves Lives. Retrieved from <https://www.samaritans.org/support-us/campaign/small-talk-saves-lives/>.

TOO, L. S., MILNER, A., BUGEJA, L., & MCCLURE, R. (2014). The socio-environmental determinants of railway suicide: a systematic review. *BMC Public Health*, 14, 20. <https://doi:Artn 2010.1186/1471-2458-14-20>

TOO, L. S., PIRKIS, J., MILNER, A., BUGEJA, L., & SPITTAL, M. J. (2017). Railway suicide clusters: how common are they and what predicts them? *Injury Prevention*, 23, 328–333. <https://doi:10.1136/injuryprev-2016-042029>

TOO, L. S., SPITTAL, M. J., BUGEJA, L., MILNER, A., STEVENSON, M., & MCCLURE, R. (2015). An investigation of neighborhood-level social, economic and physical factors for railway suicide in Victoria, Australia. *Journal of Affective Disorders*, 183, 142–148. <https://doi:10.1016/j.jad.2015.05.006>

UEDA, M., SAWADA, Y., & MATSUBAYASHI, T. (2015). The effectiveness of installing physical barriers for preventing railway suicides and accidents: evidence from Japan. *Journal of Affective Disorders*, 178, 1–4. <https://doi:10.1016/j.jad.2015.02.017>

XING, Y., LU, J., & CHEN, S. (2019). Evaluating the effectiveness of platform screen doors for preventing metro suicides in China. *Journal of Affective Disorders*, 253, 63–68. <https://doi:10.1016/j.jad.2019.04.014>