

Original Research Article

A hospital-based self-harm register in Mysore, South India: Is follow-up of survivors feasible in low and middle income countries?

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ABSTRACT

Background: In high-income countries, dedicated self-harm surveillance systems are regarded as a key component in suicide prevention strategies, which suggests they may be important in low- and middle-income countries where rates of suicide are higher and risk factors for self-harm are different, provided they can be shown to be feasible in those settings.

Methods: We established a hospital based self-harm register in Mysore, South India. A subset of participants was followed-up after two years.

Results: Of the 453 who were examined at baseline, the vast majority (80%) were from rural areas, nearly a quarter were illiterate and 65 (14%) were diagnosed with depression. Compared to men, women tended to be younger, single, from rural areas, unemployed, with lower levels of educational attainment and higher levels of disability. Of the 453, 371 (80%) were successfully contacted by cellphone at 2 years. There were no significant differences in baseline variables between those followed-up and those who were not, including sociodemographic features, rates of depression, severity of disability and severity of suicidal intent. All participants reported that psychosocial assessment offered at baseline was helpful and that they would recommend assessment to others

Conclusions: Findings from this study indicate that our self-harm register was a feasible and useful resource, and that contact and follow up are acceptable and feasible.

Keywords: Self-harm register, Surveillance, Low and middle income countries

INTRODUCTION

In high income countries, dedicated hospital-based surveillance systems for self-harm range from local registers held in Oxford, Manchester and Derby in the United Kingdom to national registers that collate all hospital presentations such as is held in Ireland.¹⁻³ In most

low- and middle-income countries (LMICs) there are no hospital- or community- based surveillance systems for those who self-harm. However, in recent years, a growing number of LMICs have taken first steps towards setting up local registers of suicide attempts presenting to hospitals, such as the registers in Mysore, South India, Sri Lanka and Jamaica.⁴⁻⁶ Data from local registers can

provide invaluable information in resource poor LMICs where rates of self-harm and suicide are high.⁷ Patient profiles are known to be different to those from high-income countries. Suicide prevention strategies developed in high income countries may not be relevant elsewhere. For example, our previously published studies from Mysore have shown differences in method of self-harm and in suicidal intent between men and women, with a high prevalence of pesticide poisoning, and an absence of diagnosable psychiatric disorder among the majority who had self-harmed.^{4,8} In addition, rates of repetition following an index event appear to be low in LMIC compared to HIC settings, including India.^{7,9}

Despite the high burden of self-harm and suicide in LMICs, there are limited data from longitudinal follow-up studies of self-harm survivors reporting the rate of recurrence, losses to follow-up and subsequent mortality, including from suicide.^{7,10,11} The primary objective of the present study is test the feasibility of follow-up and to

report outcomes at 2-year follow-up for survivors of self-harm registered at a tertiary state-run hospital in Mysore, South India. We were particularly interested to examine socio-demographic factors and clinical characteristics that influence successful follow-up in this study sample.

METHODS

We established a self-harm register at Krishna Rajendra Hospital, Mysore and the Department of Psychiatry Mysore Medical College and Research Institute (MMCRI). This is a large state-run university hospital with 1800 beds across all specialities that provides low-cost services. It is mostly accessed by low- and middle-income families in the district of Mysore. The study was approved by the MMCRI research and ethics committee.

The methods employed to establish the register have been described previously.^{4,12} The data fields of the self-harm register are set out in Figure 1.

1. Psychiatry No (IP/OP):
2. First name Surname
3. Father's/ husband's name
4. Age in years
5. Sex
1. Male 2. Female
6. Marital Status
0. Single 1. Married 2. Remarried 3. Widowed 4. Divorced 5. Separated 6. Others
7. Occupation/Profession
a. Profession b. Semi-profession c. Clerical, shop-owner, farmer d. Skilled worker e. Semi-skilled worker
f. unskilled worker g. unemployed h. Student
8. Education
a. Profession or honours b. Grauate or Post-graduate c. Intermediate or Post-high school diploma
d. Highschool certificate e. Middle school certificate f. Primary school certificate g. Illiterate
9. Income per annum
10. Religion
0. Hindu 1. Muslim 2. Christian 3. Others
11. Family Type
0. Nuclear 1. Extended/Joint 2. Living alone
12. Date of entering into register:
13. Method of Self-Harm:
14. Agree for future contact: a. No
b. Yes- Only phone contact/ only face contact/ both
15. Contact address with 2 contact numbers

Figure 1. Contents of the self harm register.

The register was maintained between January 2012-2014 January and during this period 1870 men and women presented to the hospital following an act of self-harm.

This is a cohort study with Inclusion criteria were those who consented for future follow up and had detailed psychiatric assessments from the above-mentioned register. The study sample included all 453 participants who had consented for future contact (two cell phone contact numbers were obtained per participant) from the basic registry and provided detailed psychiatric

assessments. The assessments included an adaptation of 10/66 Socio-demographic Risk Questionnaire; Kannada language version of Mini Neuropsychiatric Inventory (MINI); a purpose-designed and validated structured interview about self-harm and substance use; the Pierce Suicide Intent Scale; the Disability Assessment Schedule II (WHODAS II); Standard of Living Index (SLI) questionnaire validated by National Family and Health Survey (NFHS).¹²⁻¹⁷ Hence, we did not have sampling methods, it was census method of all those fit into the inclusion criteria.

We attempted to contact them two years after index admission. If contact was established, we administered a brief structured interview to enquire whether there had been any repetition in self-harm, whether they were receiving any psychotropic medication and/or psychological therapies, and whether they had found the baseline psychosocial assessments helpful. Loss to follow-up was defined as three unsuccessful attempts to contact the person over a three-week period. Later calls were made at different times of the day.

Statistical analyses

Differences in the means for normally distributed variables were analysed using t-tests and Medians for

variables that were not normally distributed were analysed using non-parametric tests. Differences in proportions between groups (e.g., men vs women) were analysed using Chi square tests. All analyses were conducted using IBM SPSS version 24.0.

RESULTS

Important gender differences were observed at baseline (Table 2). Compared to men, women were younger, single, with lower levels of educational attainment, from rural areas and unemployed. Women had higher levels of disability compared to men, but there were no differences in severity of suicidal intent and in rates of depression between the genders.

Table 2. Sociodemographic characteristics of the study sample at baseline.

Sociodemographics	Men (n=273)	Women (n=180)	P value
Age in yrs (mean in SD)	30.3 (10.5)	26.4 (8.6)	<0.001*
Marital status, N (%)			
Married	155 (57)	48 (27)	<0.001*
Single	117 (43)	124 (69)	
Education, N (%)			
Illiterate	67 (25)	34 (19)	0.02**
Primary	150 (55)	95 (53)	
Secondary	43 (16)	29 (16)	
Graduate	13 (5)	22 (12)	
Standard of living index (score)	23.3 (6.8)	24.1 (5.9)	0.17*
Locality, N (%)			
Rural	225 (82)	135 (75)	0.06**
Urban	48 (18)	45 (25)	
Job Category, N (%)			
Paid Full-Time Work	217 (79)	34 (19)	<0.001*
Paid Part-Time Work	16 (6)	6 (3)	
Unemployed	18 (7)	13 (7)	
Student	22 (8)	27 (15)	
Housewife/husband	-	100 (56)	
Depression, N (%)			
Yes	42 (15)	23 (13)	0.3**
No	231 (85)	157 (87)	
Smoking (cigarettes/day)			
Med IQR	6 (3-15)	0 (0-0)	-
Alcohol (units/day)			
Med IQR	0 (0-1)	0 (0-0)	-
Pierce suicide intent scale score			
Mean (SD)	10.1 (3.1)	9.6 (3.7)	0.12*
WHO DAS II, N (%)			
Yes	20 (7)	27 (15)	0.01*
No	253 (93)	153 (85)	

*t-test; **Chi-Square; DAS: disability assessment schedule (version II).

Of the 453 participants examined at baseline, 80% (233 men and 138 women, total 371) were successfully followed-up at 2 years. There was no difference in rates of follow-up between the sexes. In addition, there were no

significant differences in sociodemographics features and other baseline variables (rates of depression, severity of disability and severity of suicidal intent) between those interviewed at follow-up and those who were not.

All 371 of those contacted at follow-up completed the second assessment. Of these 317, only one participant (male) reported repetition of self-harm. Six participants were still under the care of psychiatrists at MMCRI, 14 participants were taking regular psychotropic medication, and eight participants were receiving supportive counselling. All reported that psychosocial assessments offered at baseline were helpful and that they would recommend the assessments to others.

DISCUSSION

To our knowledge this is the first study in India to report long-term outcomes of a cohort from a hospital-based self-harm register. Findings from this study indicate that our self-harm register set up at a tertiary, state-run inner-city hospital with limited resources is a useful tool for self-harm surveillance. Using our register, we were able to re-establish contact with nearly 80% of those who had self-harmed after a 2-year period, despite no interim contact in most cases. This finding suggests that follow-up by cell phone contact after self-harm in India is feasible and useful. It was encouraging to learn that almost all of those who were re-examined felt that the initial psychosocial assessment was helpful. Our study also highlights the need for a structured mental health assessment for diagnosis of mental disorders among those who self-harmed.

The rates of repetition of self-harm were negligible. This finding is congruent with a growing body of evidence reporting lower rates of repetition of self-harm in LMIC settings compared to higher income settings.^{1,7} Although we did not have a single case of complete suicide at follow-up in our study, the method (contact via personal cell phone) would be unlikely to detect cases. It is likely that any deaths would be amongst the 20% of participants we could not contact.

Findings from this study must be observed with caution. We only attempted to contact the participants over the cell phone and did not attempt to visit them at the address they provided, due to limited funding. Other potential reasons for losses to follow-up can be inferred from observed baseline differences between the genders. In our study, losses to follow-up were much higher among women particularly from rural areas with lower education and from poorer families. A vast majority of women in our study (95% from urban and 100% from rural areas) were homemakers and less likely to own or have access to personal cell phones. The difficulty in following up a population at particular risk of self-harm in India (married women from poorer and rural backgrounds) must be addressed in future follow up studies of this type.

Strengths

The main strength of our study is the use of a rigorous self-harm register and the systematic follow-up of the participants. All assessments were in local languages,

cultural adapted and implemented after pilot studies. We have carried out representativeness analyses to examine how those followed-up compare to those examined at baseline, and those who were not followed-up.

Limitations

A major limitation of the study is that the method does not allow ascertainment of reasons for loss to follow-up. These probably included changes in mobile numbers, participants providing incorrect names and contact details due to anxieties about medico-legal complications and stigma. Our sample of survivors of self-harm from a single center in Mysore that contains some tertiary referral facilities may not be representative, and the findings may not be generalizable beyond the study setting. Despite these limitations, this longitudinal follow-up study has provided an indication of factors that are important in continued engagement of survivors of self-harm in an Indian setting, which need further confirmation in much larger clinical and community-based samples. The findings from this study informed work by our research group, including the mixed method GCRF-SASHI (South Asia Self Harm Initiative) study to improve the evidence base and capacity for self-harm research in India [<https://gtr.ukri.org/projects?ref=MR%2FP028144%2F1>].

CONCLUSIONS

Findings from this study indicate that our self-harm register was a feasible and useful resource, and that contact and follow up are acceptable and feasible. The rate of repetition of self-harm was negligible. The loss to follow up was more among rural and poorer subjects. Hence it is recommended that, better alternative forms of community engagements may be done in addition to telephonic follow up for better understanding of self-harm

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