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Reducing pesticide-related suicides through using a centralized pesticide storage facility

Submission date
10/04/2012

Recruitment status
No longer recruiting

Registration date
18/04/2012

Overall study status
Completed

Last Edited
19/09/2014

Condition category
Injury, Occupational Diseases, Poisoning

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol
Background and study aims
Studies have shown that delaying access to pesticides by storing them in a safe facility which is not in the home can help reduce pesticide-related suicides. This study was therefore undertaken to assess the effectiveness of a central pesticide storage facility as a preventive intervention strategy in reducing pesticide-related attempted and completed suicides.

Who can participate?
The study was conducted in four villages in Kattamannarkoil Taluk in Tamilnadu State in Southern India.

What does the study involve?
The four participating villages were randomly allocated to either the control or the intervention group. In the two control group villages people continued with the routine practice of storing their pesticides in the fields and in their homes. In the two intervention group villages a centralized pesticide storage facility (one for each village) was set up, in which farmers could store their pesticides safely. A household survey was carried out before setting up the storage facility and again a year and half after the intervention to examine the effectiveness of the storage facility in reducing pesticide-related suicides. At the start of the study a door-to-door survey of all the households in the selected intervention and control villages was carried out. An adult (over 18 years of age) who was either the head or the main earning member of the household or an adult son or wife of the head of the household constituted the key respondent to the survey. Only one such member from each household was interviewed. In addition to documenting the characteristics of the household, information on types and quantities of pesticides bought and used, knowledge of methods of pesticide storage, disposal, knowledge about the health risks of pesticides, medical management of acute toxic effects of pesticide poisoning, information on any attempted or completed suicides, and/or accidental deaths occurring in the family over the last one and a half years were ascertained. All assessments carried out in the intervention sites were also carried out in the control sites. A surveillance involving monthly visits to GPs, health workers, hospitals and police stations located in the study area was carried out by a field project supervisor throughout the one and a half year of the intervention to document any reports of attempted suicides or completed suicides occurring during that time. The supervisor also monitored the functioning of the storage facility.

What are the possible benefits and risks of participating?
There were no risks involved in participation in the study. All respondents were assured of confidentiality. The benefits of the study entailed the setting up of a centralized facility easily accessible to farmers in the village where their pesticides could be safely stored. Apart from preventing access to a particularly lethal means of suicide, it also helped prevent accidental poisonings. In addition, loss of pesticides that frequently occurred when stored in the fields, which incurred considerable financial loss to farmers, was avoided. Setting up of the facility also resulted in increased awareness about suicides and the harms of pesticide exposure.

Where is the study run from?
The study was a collaborative project between Samarth, Sneha, the Voluntary Health Services in Chennai, and the Biostatistics Resource and Training Centre at Christian Medical College, Vellore (India).

When is the study starting and how long is it expected to run for?
The study commenced in September 2009 and was completed in June 2011.

Who is funding the study?
World Health Organization (Switzerland).

Who is the main contact?
Dr Lakshmi Vijayakumar

Contact information

Type(s)
Scientific

Contact name
Prof Lakshmi Vijayakumar

Contact details
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Additional identifiers

EudraCT/CTIS number

IRAS number

ClinicalTrials.gov number

Secondary identifying numbers
WHO Registration 2009/27949-0

Study information

Scientific Title
Pilot study to assess the acceptability and effectiveness of central storage of pesticides in preventing suicides

Study objectives
Storage of pesticides in a centralized facility in a community will reduce suicides and attempted suicides by pesticides.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Research Ethics Committee of the Voluntary Health Services, 16/09/2009

Study design
Randomized community controlled trial

Primary study design
Interventional

Secondary study design
Randomised controlled trial

Study setting(s)
Other

Study type(s)
Prevention

Participant information sheet
Not available in web format, please use the contact details below to request a patient information sheet

Health condition(s) or problem(s) studied
Attempted and completed suicides by pesticide poisoning

Interventions
In the two intervention villages a centralized pesticide storage facility (one for each village) was set up. Firstly, with the help of the Panchayat (local self-government), existing buildings were identified within which - similar to a bank locker - 100-200 pesticide storage boxes were constructed. These boxes were two feet by two feet in size, made of wood and were fixed to the wall and thereby could not be removed from the facility. Each box could be locked. Secondly, four managers (two for each facility), were identified by the local community and were put in charge of managing the facility. The managers were paid a basic salary, worked in shifts and were provided training which included information on the need for safe storage and methods of safe storage and disposal. Thirdly, with the help of the Panchayat and other key persons in the villages, public meetings were organized to bring about awareness among people in the villages about the storage facilities, their purpose and benefits.

In the two control villages people continued with the routine practice of storing their pesticides in the fields and in their homes.

Six research assistants were trained for the purpose of carrying out the data collection. They carried out a baseline door-to-door survey of all the households in the selected intervention and control villages using a structured interview schedule. This baseline survey was done before the setting up of the storage facilities. An adult (over 18 years of age) who was either the head or the main earning member of the household or an adult son or wife of the head of the household constituted the key respondent to the survey. Only one such member from each household was interviewed. In addition to documenting the sociodemographic characteristics of the household, information on types and quantities of pesticides bought and used, knowledge of methods of pesticide storage and disposal, knowledge about the health risks of pesticides and medical management of acute toxic effects of pesticide poisoning were obtained. Lastly the survey also documented information on any attempted or completed suicides, and/or accidental deaths occurring in the family over the last one and a half years. All assessments carried out in the intervention sites were also carried out in the control sites. The survey was repeated at the end of one and a half years of the intervention in both the intervention and control sites. A surveillance system involving monthly visits to GPs, health workers, hospitals and police stations located in the study area was carried out by a field project supervisor, throughout the one and a half year of the intervention to document any reports of attempted suicides or completed suicides occurring during that time.

Intervention Type
Other

Phase
Not Applicable

Primary outcome measure
1. Attempted and completed suicides by pesticide poisoning elicited through survey
2. Assessments were made at baseline and following completion of one and a half years of intervention. This was measured using a structured interview schedule. In addition, surveillance was carried out throughout the intervention period to obtain information from varied sources regarding attempted and completed suicides

Secondary outcome measures
Acceptability of the centralized pesticide storage facility measured using a structured interview schedule

Overall study start date
30/09/2009

Completion date
30/06/2011

Eligibility

Key inclusion criteria
An adult (over 18 years of age) who was either the head of the household and main earning member of the household or an adult son or wife of the head of the household

Participant type(s)
Patient

Age group
Adult

Lower age limit
18 Years

Sex
Both

Target number of participants
3004 households

Key exclusion criteria
Non residents (i.e., not living in the villages for the last 2 years)

Date of first enrolment
30/09/2009

Date of final enrolment
30/06/2011

Locations

Countries of recruitment
India

Study participating centre
No. 25 Ranjith Road
Chennai
India
600 085

Sponsor information

Organisation
Samarth NGO (India)

Sponsor details
No. 100 Warren Road
Mylapore

Chennai
India
600004

Sponsor type
Charity

Website
http://www.samarthngo.org/

Funder(s)

Funder type
Government

Funder Name
World Health Organization (Switzerland), ref: 2009/27949-0

Alternative Name(s)
, , Всемирная организация здравоохранения, Organisation mondiale de la Santé, Organización Mundial de la Salud, WHO, , ВОЗ, OMS

Funding Body Type
Private sector organisation

Funding Body Subtype
International organizations

Location
Switzerland

Results and Publications

Publication and dissemination plan
Not provided at time of registration

Intention to publish date

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not provided at time of registration

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article	results	16/09/2013		Yes	No