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Green Social Work And Suicide Prevention Among Agricultural Households: A Study On Community Storage Facilities For Pesticide Safety In Rural Gujarat, India

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Abstract: *This paper explores the role of Green Social Work (GSW) in suicide prevention through environmental and community-based interventions. A mixed-method study, conducted in Mahesana District, Gujarat, India; as part of the SPIRIT initiative, focuses on the installation of Centralized Storage Facilities (CSFs) to restrict access to pesticides. The participants- CSF-trained managers-were interviewed and observed to identify ecological, social, and institutional facilitators and barriers to implementing CSF for the safe storage of pesticides in agricultural households. Findings reveal a nuanced relationship between environmental health, social work, and community mental health. Framed through a Green Social Work approach, the paper argues that integrating local ecological knowledge and social capital into suicide prevention strategies can offer sustainable, community-driven alternatives in rural India.*
Keywords: *Green Social Work, Suicide Prevention, Community Storage Facility (CFC), Environmental Justice, Mental Health, Rural India*

INTRODUCTION

According to World Health Organisation's Global Health Observatory data reports the global average suicide rate in 2016 was 10.5 per 100,000 population. In Asia, rural America, Portugal, and other places, information on mortality identified pesticide suicide as a major problem, notably among women. In Southeast Asia, the WHO reported a suicide rate of 13.4 per 100,000 population.

Suicide is the result of a complex interplay of socio-environmental, behavioural and psychological factors. In many parts of Asia, a significant number of suicides occur due to the impulsive consumption of pesticides, rather than being linked to pre-existing mental disorders. In India, 49% of suicides among women have been attributed to pesticide consumption.

Efforts to mitigate pesticide poisoning have included in the promotion of Integrated Pest Management (IPM), good agricultural practices and the use of ecologic alternatives. While effective in reducing poisoning rates, these methods have not been adopted in low-income countries due to limited awareness, the availability of low-quality pesticides, and the ease of pesticide use. Literature suggests that pesticides bans such as those in Sri Lanka are amongst the most effective strategies for reducing toxic pesticide use. However interventions to prevent or reduce self-harm via pesticides have had mixed success, hindered by adequate training and the lack of adequate pesticides storage facilities.

Indian farmers face numerous socio-economic challenges, including uncooperative money lenders, difficulty repaying debts repaying difficulty, limited access to banking services and vulnerability to market fluctuations and unpredictable weather, all of which threaten their livelihood. These pressures have contributed to public health crisis of farmer suicides.

Restricting access to pesticides through ecological community-level interventions is necessary. Evidence indicates that limiting access to lethal means can prompt individuals to consider less lethal alternatives. If access to means of suicide is restricted, it may result in the individual using a less lethal or potent method to do so.

SPIRIT (Suicide Prevention and Implementation Research Initiative) is a research partnership to implement an integrated intervention on suicide prevention in Mehsana District, Gujarat. The project aims to address the issue of suicide as a public health concern. The SPIRIT project comprises interventions at three levels. This paper focuses on the first level: *the establishment of community storage facilities in villages to restrict pesticide access.* These facilities work in collaboration with the village Gram

Panchayat, allow households to store pesticides safely and free of cost. The trained managers oversee the operations, respond to community distress and follow standard protocols for storage management.
This study examines the facilitators and barriers faced by the facility managers, positioning them as eco-social agents of change in implementing Centralised Storage Facilities (CSF) in rural Mehasana, Gujarat, to reduce the rate of suicides. The Green Social Work framework underpins the analysis, highlighting the intersection of environmental degradation, social injustice, and community well-being. Within this framework, pesticide accessibility is not merely an agricultural or public health issue but also a matter of social justice and risk mitigation.

RESEARCH METHODOLOGY

Objectives:

- To assess the role of Community Storage Facility Managers as eco-social agents of change
- To analyse the facilitators and barriers in the adoption and implementation of the Community Storage Facility
- To assess community perceptions and motivations in accessing the Community Storage Facility
- To evaluate Community Storage Facility adoption within Green Social Work principles of environmental justice, sustainability, and local agency

Hypothesis:

H_0: The active engagement of Community Storage Facility (CSF) managers has no significant effect on mental health and suicide risk in agricultural households.
H1: The active engagement of Community Storage Facility (CSF) Managers is associated with improved health knowledge and reduced suicide risk among agricultural households.
H2: Psychosocial support provided by Community Storage Facility (CSF) managers, particularly in the context of improved pesticide safety practices, is significantly associated with a reduction in suicide risk in agricultural households.

Variables:

- **Independent Variable:** CSF service
- **Dependent Variable:** Mental health and suicide risk in agricultural households

Research design: A mixed methods design was employed, combining qualitative and quantitative research methods

Universe and sample: The study included all **40 managers of CSF** selected through purposive sampling. These facilities were located in 20 intervention villages in the Mahesana District of Gujarat, India.

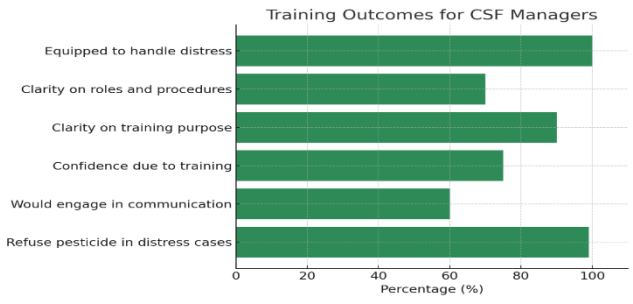
Source of data collection: Primary Data was collected through Interviews and direct observations, whereas secondary data was sourced from relevant reports, policy documents and literature on pesticide use, suicide prevention and environmental social work

Tools of data collection: An interview schedule was used to gather information from CSF managers regarding their experience, perceptions, and practices, whereas an observation guide was used to record operational aspects and community interactions related to CSF usage.

Classification and Analysis: Data were processed through editing, coding, tabulation, and thematic analysis.

RESULTS AND DISCUSSION:

Capacity Building and Training



Graph 1: Illustrating training outcome, highlighting managers' level of clarity, preparedness, and confidence in operational execution of CSF

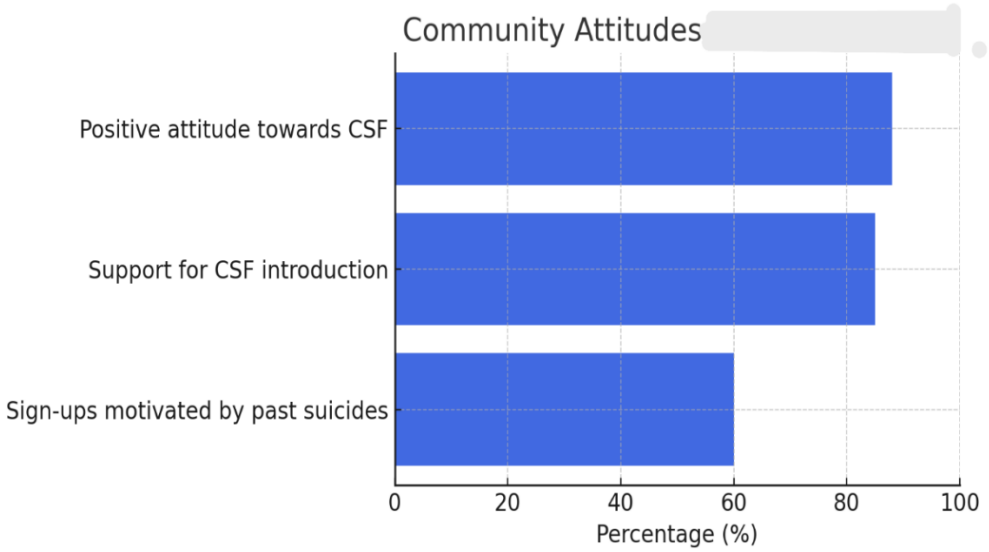
After receiving the training, 100% of CSF managers felt well-equipped to handle distress cases and identify individuals at psychological and/or suicide risk.

Additionally, 90% of managers reported a 'strong' understanding of the purpose and structure of the training, while 70% affirmed they had received clear guidelines for both routine and emergency operations. Confidence levels post-training were notably high, with 75% of respondents indicating they would act assertively in distress situations.

The training's practical impact was evident as 99% of the managers confirmed they would withhold pesticide access from individuals perceived to be at risk of self-harm. Moreover, 60% emphasised their proactive engagement in communicating with community members experiencing psychological distress.

These findings demonstrate that the SPIRIT training enhance both technical competencies and psychosocial capacities, effectively transforming managers from custodians of agro-chemicals into frontline eco-social workers.

Community Attitudes and Knowledge: Emergence of Environmental Citizenship and Collective Agency



Graph 2: Illustrating Community Attitude as reported by CSF facility managers

After training and community-level engagements activities:

92% of managers reported being able to articulate and explain the need for this prevention initiative, showing the development of an informed community leadership with a positive attitude towards CSF of the community.

88% of managers reported positive community attitudes towards CSF use after its introduction. 60% of the managers felt that the community's prior experiences of suicides in the village also motivated the villagers to value agro-based suicide prevention project.

These responses indicate that the intervention fostered environmental citizenship, wherein a sense of shared responsibility for agro-chemical management became linked to community health and ecological safety.

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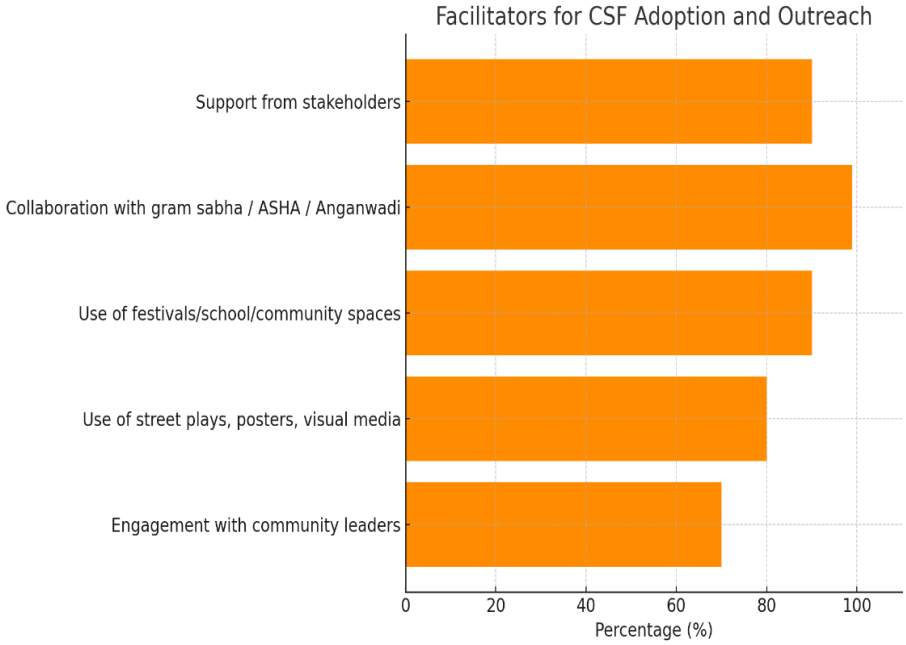
Facilitators and Barriers: Structural Inequality, Local Innovation, and Environmental Injustice



Graph 3: Illustrating the main facilitators for CSF adoption and outreach

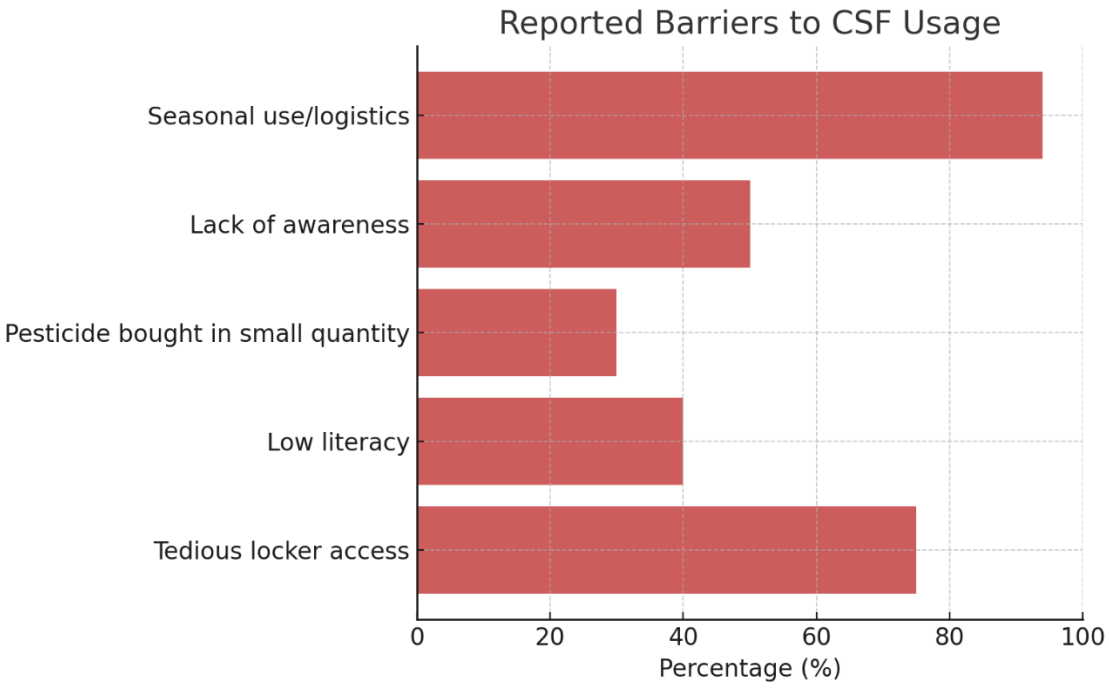
The two key facilitators were:

- Leveraging existing social capital and ecological knowledge
- Implementing context-sensitive outreach strategies

99% of CSF managers highlighted the positive role of community stakeholders, such as elders and influential locals. Active collaboration from gram sabha members, ASHA workers, and Anganwadi workers was also reported by 99% of managers.

90% used local festivals, school spaces and community events for awareness raising.

80% employed street theatre, posters, and visual media, while others enlisted respected community leaders to increase participation.



Graph 4: Summarises barriers experienced of managers during CSF implementation

Key barriers included:
Seasonal usage patterns: 94% of managers mentioned low locker use outside non-peak agricultural seasons.
Perceived inconvenience: 75% managers noted complaints about the repeated process required to accessing lockers.
Communication gap: 50% of managers reported limited community awareness while 40% mentioned that low literacy made it harder to explain the facility's importance.
Low perceived need: 30% shared that some households dismissed the need for lockers as unnecessary because they purchased only small qualities of pesticides.

CONCLUSION:

The results suggest that community-based interventions that incorporate Green Social Work (GSW) concepts can successfully address the interconnected issues of social justice, environmental health, and suicide prevention in rural India. The Community Storage Facilities (CSFs) of the SPIRIT project promoted environmental citizenship, collective action, and increased community resilience in addition to limiting access to dangerous pesticides to lower the risk of impulsive self-harm.
As eco-social change agents, CSF managers were able to recognise and assist people experiencing psychological distress in addition to managing pesticide safety. This dual function, which placed local actors at the intersection of ecological well-being and social fairness, demonstrated the green social work approach by bridging environmental safety with mental health protection.
The findings also reveal that while CSF was widely accepted where strong community networks, effective out-reach and local leadership was present. The findings also reveal that while community acceptance and collaboration with local governance structures facilitated implementation, barriers such as seasonal variations in pesticide use, procedural inconvenience, low literacy, and cultural norms limited universal adoption. These challenges emphasise the necessity of multi-level strategies that integrate policy, education, and infrastructure to ensure sustainability. In essence, the CSF model demonstrates that eco-social interventions are really embedded and participatory. This can serve as a powerful tool in addressing both environmental risks and public health crises. Strengthening such initiatives through continuous training, community empowerment, and supportive policy frameworks can advance the vision of green social work by fostering safe, sustainable and socially just rural environment.

Recommendations of the study are:

- **Strengthen Policy Support:** Enforce stricter regulations on the sale and distribution of highly hazardous pesticides, coupled with mandatory safe storage provisions at the community level.
- **Sustain Capacity Building:** Provide regular refresher training for CSF managers to enhance both technical storage management and psychosocial support skills.
- **Expand Community Awareness:** Implement culturally tailored awareness campaigns using local languages, theatre, and visual media to reach low-literacy populations.
- **Leverage Local Governance:** Formalise partnerships with gram sabhas, ASHA, and Anganwadi workers for continuous community mobilisation.
- **Address Seasonal Gaps:** Develop year-round engagement strategies to maintain CSF relevance beyond peak agricultural periods.
- **Incorporate Mental Health Services:** Integrate mental health screening and referral pathways into CSF operations for early intervention.
- **Promote Environmental Education:** Embed ecological literacy in community programs, highlighting the link between pesticide management, environmental sustainability, and public health.
- **Evaluate and Scale Up:** Conduct longitudinal studies to monitor CSF impact and replicate successful models in other rural contexts.

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