RESEARCH ARTICLE

A theory of change for community interventions to prevent domestic violence against women and girls in Mumbai, India

[version 1; peer review: 1 approved with reservations]

Nayreen Daruwalla¹, Surinder Jaswal², Prakash Fernandes³, Preethi Pinto¹, Ketaki Hate¹, Gauri Ambavkar¹, Bhaskar Kakad¹, Lu Gram⁴, David Osrin⁴

¹Program on Prevention of Violence Against Women and Children, SNEHA, Mumbai, Maharashtra, 400017, India
²School of Research Methodology, Centre for Health and Mental Health, School of Social Work, Tata Institute of Social Sciences, Mumbai, Maharashtra, 400088, India
³Independent Researcher, Mumbai, Maharashtra, 400050, India
⁴Institute for Global Health, University College London, London, WC1N IEH, UK

Abstract

Background: We describe the development of a theory of change for community mobilisation activities to prevent violence against women and girls. These activities are part of a broader program in urban India that works toward primary, secondary, and tertiary prevention of violence and includes crisis response and counselling and medical, police, and legal assistance.

Methods: The theory of change was developed in five phases, via expert workshops, use of primary data, recurrent team meetings, adjustment at further meetings and workshops, and a review of published theories.

Results: The theory summarises inputs for primary and secondary prevention, consequent changes (positive and negative), and outcomes. It is fully adapted to the program context, was designed through an extended consultative process, emphasises secondary prevention as a pathway to primary prevention, and integrates community activism with referral and counselling interventions.

Conclusions: The theory specifies testable causal pathways to impact and will be evaluated in a controlled trial.

Keywords

Domestic violence, gender-based violence, intimate partner violence, theory of change, India, Mumbai
Corresponding author: David Osrīn (d.osrin@ucl.ac.uk)

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Introduction

Although its pervasiveness and harms have long been addressed by the women’s movement, the importance of violence against women and girls as a public health priority has only been acknowledged relatively recently. The health effects are profound. Violence causes non-fatal or fatal injury: 21% of homicides in southeast Asia are committed by an intimate partner, constituting 60% of all female homicides (compared with 1% of male homicides) (Stöckl et al., 2013). Other harms include sexually transmitted infections, miscarriage, induced abortion, stillbirth, low birth weight, preterm delivery, harmful drug and alcohol use, anxiety and depression, self-harm, suicide, and trans-generational recapitulation of violence (Garcia-Moreno et al., 2015; WHO and London School of Hygiene and Tropical Medicine, 2010; WHO, 2013). Physical and psychological trauma and fear also lead to mental health problems, limited sexual and reproductive control, somatoform conditions (WHO, 2013), difficulties in seeking healthcare, and lost economic productivity (Solotaroff & Pande, 2014).

Some 30% of women have experienced physical or sexual violence by an intimate partner or sexual violence by a non-partner (WHO, 2013). A recent systematic review suggested that 22% of women in India had survived physical abuse in the past year, 22% had suffered psychological abuse, 7% sexual abuse, and 30% multiple forms of violence (Kalokhe et al., 2017). Non-partner sexual violence is reported regularly in the media (Raj & McDougal, 2014), but culturally sanctioned household maltreatment (Silverman et al., 2016) in the form of emotional and economic domestic violence and abuses of power, control, and neglect have been reported as particularly common in India (Kalokhe et al., 2015). India was one of 189 signatories to the 1980 Convention on the Elimination of All Forms of Discrimination Against Women (United Nations, 1979). The United Nations declared a response imperative in 2006 (UN, 2006), the World Health Organization (WHO) named it a health priority in 2013 (Garcia Moreno et al., 2015), and its elimination is a target of the fifth Sustainable Development Goal. The emphasis of the first wave of interventions—driven largely by feminist activism by the women’s movement from the 1960s—was support for survivors of violence, reduction in secondary perpetration, strengthening legal recourse, and advocacy (Ellsberg et al., 2014). This constitutional, rights-based approach led to the consolidation of services such as women’s shelters, counselling, legal advice, and, in India, laws such as the Protection of Women from Domestic Violence Act 2005. A second wave of interventions, again led by civil society organisations, emphasized primary prevention and community activism and took a public health position which emphasized population-based, interdisciplinary, and intersectoral interventions (WHO and London School of Hygiene and Tropical Medicine, 2010).

The Society for Nutrition, Education and Health Action (SNEHA) is a non-government organisation addressing the health needs of women and children in the context of urban informal settlements in India. The program on prevention of violence against women and children follows a socio-ecologic model developed by Heise after the work of Bronfenbrenner (Bronfenbrenner, 1979; Heise, 1998), with an understanding that determinants of violence need to be addressed at a range of levels, within families, communities, and societies. The program aims to develop strategies for primary prevention, ensure survivors’ access to protection and justice, empower women to claim their rights, mobilise communities around ‘zero tolerance’ for violence, and respond to the needs and rights of neglected groups.

The program delivers three sets of activities: community mobilisation, crisis counselling and extended response for survivors of violence, and work with police, medical and legal services. Community mobilisation includes group activities and individual voluntarism. Neighbourhood groups of women, men, and adolescents develop awareness, initiate campaigns and local action to support survivors, and build leadership. An emergent cadre of volunteers identify and support survivors through crisis intervention and case management, linking them with counselling, police, and medical services. This encompasses both primary and secondary prevention. The program runs five community-based and four hospital-based counselling centres. Immediate and longer-term support for survivors of violence is provided by counsellors at each centre. Counsellors take a stepped-care approach to identification, intervention, and referral of survivors of violence with common and severe mental health disorders, including in-house psychologists when required. They also work with medical, legal, and police services, for whom collaborative training programs are regularly conducted. Counsellors collaborate with the police and District Legal Aid Services Authority to assist women in filing legal cases in response to domestic violence, sexual assault and rape, and other matters pertaining to civil and criminal acts.

Our program is comprehensive and aspires to ‘community building’. Its characteristics include horizontal complexity (across sectors), vertical complexity (across socio-ecologic levels), community building (participatory efforts to enhance the capacities of individuals and connections between them and outside resources), political, economic, and infrastructural contextual issues with little power to affect them, flexibility over time, and community saturation (clusters rather than individuals) (Auspos & Kubisch, 2004).

After 15 years of cumulative program development, we wanted to understand how the components of the program fit together, think about the sequence of outcomes and indicators that we might measure, and evaluate effectiveness. We contemplated expansion and felt a need to crystallise the program for ourselves, for others, and for protocolised rollout. We felt that the service aspects of the program were intrinsic to a rights-based response in the spirit of the Istanbul Convention (Council of Europe, 2011). Community mobilisation is less defined, despite its potential to prevent violence against women and girls (Ellsberg et al., 2014), and the theory of change focused on it for this reason. A theory of change is a hypothetical explanation of how and why an initiative works (Weiss, 1995). It seeks to understand how program activities might lead to outcomes—desired or undesired—by articulating the connections between them (Stein & Valters, 2012). Each program activity is linked with outcomes
and each outcome is defined and assigned indicators (Taplin et al., 2013). Like a logic model, a theory of change is a kind of program theory (Rogers et al., 2000), or pragmatic framework (De Silva et al., 2014), in which concepts are linked with empirical findings in steps that are potentially examinable and falsifiable. Shaping evaluation around theories of change has been recommended for a variety of social programs (Chen & Rossi, 1980; Chen, 1994). Evaluators in the field of health promotion were early adopters (Birckmayer & Weiss, 2000), and there has been growing interest in evaluating complex public health interventions (De Silva et al., 2014). We were particularly interested in developing a theory of change for the prevention of violence against women that fit our specific context of work among informal settlements in urban India.

We developed a program theory of change informed by general theories of behaviour change (Davidoff et al., 2015; Michie et al., 2011), combined with tacit theory based on experience (Birckmayer & Weiss, 2000; Chen & Rossi, 1980; Mason & Barnes, 2007; Weiss, 1997). Our focus was on two general types of behaviour: stimulation of pro-social action and bystander intervention, and identification, support, and secondary prevention for survivors of domestic violence. In this paper, we aim to describe our theory of change.

**Methods**

**Setting**

Informal settlements (slums) are features of urbanization in India and have been described in two-thirds of cities and towns. The most recent estimate is that 41% of Mumbai’s households are in such settlements (Chandramouli, 2011). The latest National Family Health Survey (NFHS-4) suggests that 21% of ever-married women in Maharashtra state, the location of our work, have experienced intimate partner violence (IIPS, 2015). Risk factors for both physical and sexual violence include poverty, exposure to parental violence, childhood maltreatment, limited education, unemployment, young adulthood, mental disorder, substance use, individual acceptance of violence, weak community and legal sanctions, and gender and social norms supportive of violence (WHO and London School of Hygiene and Tropical Medicine, 2010). These risk factors meet in Mumbai’s urban informal settlements, along with population density and stressful living conditions, and their toll in terms of violence is the reason for our activities. UN-HABITAT characterizes them in terms of overcrowding, insubstantial housing, insufficient water and sanitation, lack of tenure, and hazardous location (Ministry of Housing and Urban Poverty Alleviation, 2010; United Nations Human Settlements Program (UN-Habitat), 2003). Women and girls in these communities lack both financial and social resources and an understanding of the possibility of relief from endemic violence.

**Activities**

We developed the theory of change in five overlapping phases. In the first phase (July 2015 to November 2016), an external consultant (Fernandes) met with our teams for counselling and community mobilisation, police and hospital liaison, two clinical psychologists, and a lawyer to understand their experiences, challenges, and perceptions of outcomes. He interviewed seven clients of our crisis and counselling services, six police officers, and five healthcare providers, and conducted focus group discussions with eight members of a community women’s group, 15 members of a men’s group, 17 members of a youth group, and nine adolescents involved in an education program (report available as extended data (Osrin, 2019)).

To begin the second phase, we convened a three-day research workshop (August 2015) with nine team members and four researchers in the field of violence against women and girls, anthropology, ethics, and public health. The discussions were primarily about outcomes: whether the impact towards which the theory of change would be directed was a reduction in violence against women and girls, gender-based violence, intimate partner violence, domestic violence, or violence perpetrated by others outside the home. The decision, supported by subsequent discussions, was to focus on domestic violence against women and girls.

The third phase, bracketed by workshops at the beginning and end involving members of the core team, data collectors, and SNEHA researchers, interrogated the first draft of the theory of change in terms of program experience and ethics. Participants discussed and refined potential outcomes, how they were related to preventing violence, and how they could be measured. This was accompanied by two activities: an action documentation exercise and a study on gender norms around domestic violence (Daruwalla et al., 2017). The action documentation exercise documented community mobilisation team members’ experiences of the kinds of action that community members had undertaken in the past. It yielded 76 actions as a result of community mobilisation, which were then categorised as organisational, group, community, and individual actions or combinations thereof (Table 1). Adverse effects were also documented (although flare-ups in communities might actually suggest that the program was having an effect). Actions are documented as extended data (Osrin, 2019).

The fourth phase involved collective adjustment of the theory of change. The program core team (six SNEHA program and research members and one UCL researcher) met 15 times to work on the theory, for 2-3 hours each time. During these meetings, we used ‘backward mapping’, in which we started with agreed outcomes and then stepped backwards sequentially to understand the necessary preconditions to meet them. This was accompanied by examination of assumptions and rationales, a strategic weighing of possible interventions, and the development of indicators with which to test the causal sequence (Taplin & Clark, 2012). At the end of this phase, we presented, discussed, and adjusted the emerging theory in four workshops. We invited external activists, academics, and practitioners in Mumbai, our program base (April 2016), Delhi, where policy and advocacy expertise is concentrated (July 2016), and London, our collaborative academic base (July 2016). A summary of these meetings is available as extended data (Osrin, 2019).
### Table 1. Examples from action documentation exercise, classified by type of violence, type of action, and intervention function.

<table>
<thead>
<tr>
<th>Example</th>
<th>Action type</th>
<th>Intervention function</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Domestic physical violence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• A community organiser persuaded a survivor of violence to seek help in a situation in which her husband was a local crime lord</td>
<td>Encouraging disclosure</td>
<td>Education Persuasion Enablement</td>
</tr>
<tr>
<td>• A woman told a community organiser that her neighbour was being beaten and locked in the house by her partner. The community organiser organised campaigns in the area and gathered a group who visited the house repeatedly, heard the woman inside, and got the police to effect entry. The woman and her partner were counselled by our organisation and continue to live together.</td>
<td>Encouraging disclosure</td>
<td>Education Persuasion Enablement</td>
</tr>
<tr>
<td>• When a community organiser encouraged a woman to attend group meetings, she said that her partner was physically violent and used drugs and alcohol. The group suggested referral to a dependency support program and, although he relapsed, the violence stopped.</td>
<td>Encouraging disclosure</td>
<td>Education Persuasion Enablement</td>
</tr>
<tr>
<td>• A community volunteer sangini knocked on the door while a father was beating his daughter, but was refused entry. She returned with her women's group and community organiser, but was threatened by the father's relatives. A collective meeting was organised, but the daughter was sent to live elsewhere.</td>
<td>Collective meeting</td>
<td>Education Persuasion</td>
</tr>
<tr>
<td>• A women's group visited a man who was using alcohol and beating his wife. He responded violently and they called the police, who detained him temporarily. The violence decreased, but did not stop.</td>
<td>Invoking law enforcement</td>
<td>Education Persuasion Coercion</td>
</tr>
<tr>
<td>• A sangini intervened when a couple were fighting in the street, accompanied by their two young children. They had doused themselves in kerosene and were threatening to set fire to themselves. Other residents appeared and the sangini called the police. The couple returned later to thank the sangini.</td>
<td>Bystander intervention Invoking law enforcement</td>
<td>Persuasion Coercion</td>
</tr>
<tr>
<td>• A woman fled to her mother's home after her partner hit her, but he came after her and attacked both her and her mother. They shouted for help and other group members detained the man and called the police, who arrested him. The couple are in a counselling program.</td>
<td>Bystander intervention Invoking law enforcement</td>
<td>Coercion Education</td>
</tr>
<tr>
<td>• A man killed his wife by setting fire to her after a dowry dispute. He locked her in and fled. Women residents found her after seeing the smoke and forcing the door. When the police didn't come, they took her body to the police station in protest. Our organisation became involved in negotiations between community protestors and the police and, after the case was filed, some local women acted as witnesses for the prosecution and went on to form a women's group.</td>
<td>Campaign Invoking law enforcement</td>
<td>Persuasion Education</td>
</tr>
<tr>
<td>• A man with whom a woman had ended a relationship began to stalk her and eventually stabbed her. Two bystander women took her for medical treatment and to the police. Sanginis gathered a women's group, who arranged counselling and for local men to be vigilant. They identified the perpetrator and called the police, who arrested him.</td>
<td>Bystander intervention Invoking law enforcement</td>
<td>Persuasion Coercion</td>
</tr>
<tr>
<td><strong>Domestic economic violence</strong></td>
<td>Legal support</td>
<td>Education</td>
</tr>
<tr>
<td>• A sangini helped a bride-to-be deal with dowry demands from the groom's family by explaining the law and her rights and then discussing them with the family.</td>
<td>Collective meeting</td>
<td>Education Persuasion</td>
</tr>
<tr>
<td><strong>Non-intimate partner sexual violence</strong></td>
<td>Collectively</td>
<td>Education Persuasion</td>
</tr>
<tr>
<td>• Community organisers helped women's groups to complain about ration shop vendors who were sexually harassing them.</td>
<td>Invoking legal rights</td>
<td>Coercion Restriction</td>
</tr>
<tr>
<td>• Community men's and women's groups organised police intervention in an area close to toilets in which women were being sexually harassed.</td>
<td>Invoking law enforcement</td>
<td>Coercion Restriction</td>
</tr>
<tr>
<td>• A sangini who was helping women complain about sexual violence was assaulted by local gang members. She pointed them out to community organisers and they were arrested by the police.</td>
<td>Invoking law enforcement</td>
<td>Coercion Restriction</td>
</tr>
<tr>
<td>• A women's group got a salesman who was harassing women to sign a letter committing him to stop.</td>
<td>Contractual reasoning</td>
<td>Education Persuasion Coercion</td>
</tr>
</tbody>
</table>
Example

- After community organisers called the police to intervene swiftly in a case of sexual harassment, word got round that the organisation had connections ‘higher up the chain of command’.
- A sangini led a women’s group to repeatedly confront a group of drug users who were harassing women. The harassment stopped and the sangini became a community leader in a male-dominated area.
- Sanginis detained a group of drug users who attempted to rape a woman in a public toilet.

Non-intimate partner sexual and physical violence

- A young married woman was being harassed by two gang members. When she rejected their advances, they beat her up, set her on fire and locked her in her house. At the public mourning after her death, a large group of relatives and friends banded together and sought help from our organisation to form a group. Our organisation communicated with both the group and the police to make sure that process was followed and the perpetrators were jailed.

Child sexual abuse

- A sangini heard her neighbour’s seven-year-old daughter shouting for help when a local man attempted to rape her. She gained access to the house, prevented him from leaving, and called for help. A group of neighbours took him to the police station, where he was arrested.

Structural violence

- Groups worked together to clean up localities, so successfully that the municipality made an educational video about them.
- Groups collected money from residents to employ a cleaner for public toilets.
- Groups called public meetings and deputations to the municipal corporation in order to have the local water supply fixed.
- Groups wrote letters of complaint about fuel rations being withheld, which led to government intervention.
- A women’s group successfully had an illegal mobile phone tower removed after representatives of the municipal corporation saw a TV news item they had got a local cable operator to make and broadcast.

Unintended effects

- A women’s group member stood out as a leader. She started her own group, which undertook several successful actions, but took community action on herself and would not allow others to lead. Eventually, community members would not buy in to an electricity campaign and when she moved out of the area nobody took her work forward.
- After a group session on ration rights, a men’s group member called for a violent protest.
- Ration shopkeepers threatened a sit-in outside our organisation’s office because of our help with complaints. This led to more volunteers joining the organisation.

*Education, Persuasion, Enablement, Coercion, Incentivisation, Training, Modelling, Environmental restructuring, Restrictions (Michie et al., 2011)

The fifth phase involved an examination of mechanisms in the literature (PROSPERO CRD42018093695; a full review is forthcoming). We carried out a search for theories of change, logic models, or conceptual models of population-based interventions to prevent domestic violence. We included articles in English and excluded studies from high-income settings according to World Bank classifications. We limited the search to articles published between January 1960 and November 2018. We used Boolean combinations of the terms (“theory of change” OR “logic model” OR “conceptual model”) AND (“intimate partner violence” OR “domestic violence” OR “violence against women” OR “sexual violence” OR “physical violence” OR “economic violence” OR “emotional violence” OR “gender-based violence”) to search for articles on PubMed, Scopus, Web of Science, Google Scholar and Google sites. To limit the scope of the search, we inspected only the first 10 pages of Google Scholar.
and Google searches. We also read published impact evaluations listed in existing evidence reviews of interventions seeking to reduce domestic violence (Bourey et al., 2015; Ellsberg et al., 2014; Gibbs et al., 2017; Marshall et al., 2018; Yount et al., 2017).

Ethical approval
Approval for research associated with the development of the theory of change was given by the Ethicos Independent Ethics Committee (ref: 3rd December 2015). Participants in interviews and focus groups provided written consent to use of anonymised information.

Results
Primary and secondary intervention
Figure 1 summarises the emerging theory of change over a sequence of human resources or inputs, changes or outputs, and outcomes. The assumptions underlying the model are numbered and the activities of people involved are numbered and linked with a summary in Table 2. Raw data from interviews and focus groups are available (Osrin, 2017). Overall, the theory envisages counsellors, community mobilisers, community volunteers and groups of women, men, and youth working together to bring about collective and individual change with the ultimate aim of reducing domestic violence. The theory suggests that community mobilisation encourages transformation of participants and pro-social action prevents violence against women and girls, as well as bystander intervention, while local support and response, crisis counselling, medical, psychosocial, police and legal support contribute to the identification and support of survivors of violence. Visible instances of support and justice for survivors are thought to encourage greater community activism, thus completing a positive feedback loop between primary prevention (through community mobilisation) and secondary prevention (through institutional support for survivors). The detailed steps are described below.

Resources and interventions
First, the program inputs comprise salaried counsellors, community organisers, community officers, and coordinators, as well as voluntary human resources from women, men, and young people who join groups. Table 2 summarises expected roles for each type of individual, keyed numerically with Figure 1.
### Table 2. Community interventions to prevent violence against women and girls.

<table>
<thead>
<tr>
<th>1 Community mobilisation and group formation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Community organisers</td>
<td>• Identify community members who want to join groups of women, men, and young people</td>
</tr>
<tr>
<td></td>
<td>• Convene and facilitate groups</td>
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<tr>
<td></td>
<td>• Share experiences and deliver modules on gender norms, understanding violence against women and girls, vulnerabilities to it and appropriate responses, rights, and negotiation skills</td>
</tr>
<tr>
<td></td>
<td>• Identify women who want to become volunteer sanginis</td>
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<td></td>
<td></td>
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<tr>
<td>2 Crisis intervention, counselling and legal support for survivors</td>
<td></td>
</tr>
<tr>
<td>Community volunteer sanginis</td>
<td>• Identify incidences of violence against women</td>
</tr>
<tr>
<td></td>
<td>• Assess safety, provide initial counselling and information on rights and law to survivors</td>
</tr>
<tr>
<td></td>
<td>• Record incidents, negotiate action, and intervene to ameliorate conflict</td>
</tr>
<tr>
<td></td>
<td>• Arrange referral to SNEHA</td>
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<tr>
<td></td>
<td>• Organise temporary shelter and childcare</td>
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<tr>
<td></td>
<td>• Support survivors in accessing family interventions and police or health services</td>
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<tr>
<td></td>
<td>• Locate perpetrators of violence and negotiate with them and families</td>
</tr>
<tr>
<td></td>
<td>• Conduct community follow-up</td>
</tr>
<tr>
<td>Community organisers, officers, coordinators</td>
<td>• Support sanginis in their field activities</td>
</tr>
<tr>
<td></td>
<td>• Provide support to survivors of violence and coordinate family interventions</td>
</tr>
<tr>
<td></td>
<td>• Arrange referral to SNEHA, police, or health services</td>
</tr>
<tr>
<td></td>
<td>• Coordinate and undertake community follow-up</td>
</tr>
<tr>
<td></td>
<td>• Act as main contact between community and counselling teams, and communicate with stakeholder networks</td>
</tr>
<tr>
<td>Groups of women, men, and young people</td>
<td>• Identify incidences of violence and inform sanginis and community officers</td>
</tr>
<tr>
<td></td>
<td>• Intervene to ameliorate conflict</td>
</tr>
<tr>
<td></td>
<td>• Arrange referral to SNEHA</td>
</tr>
<tr>
<td></td>
<td>• Support survivors of violence in accessing family interventions and police or health services</td>
</tr>
<tr>
<td></td>
<td>• Locate perpetrators of violence and negotiate with them and families</td>
</tr>
<tr>
<td>Counsellors</td>
<td>• Provide crisis counselling and intervention services</td>
</tr>
<tr>
<td></td>
<td>• Counsel survivors of violence and their families</td>
</tr>
<tr>
<td></td>
<td>• Make home visits for crisis intervention, family discussions, and follow-up</td>
</tr>
<tr>
<td></td>
<td>• Organise referral to police, health and legal services and negotiate with them</td>
</tr>
<tr>
<td></td>
<td>• Assess survivor mental health and refer for therapy</td>
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<td></td>
<td></td>
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<tr>
<td>3 Community action and system liaison</td>
<td></td>
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<tr>
<td>Community organisers, officers, coordinators</td>
<td>• Organise and participate in community campaigns and support visible collective action</td>
</tr>
<tr>
<td></td>
<td>• Liaise with police and health providers and negotiate with community bodies</td>
</tr>
<tr>
<td>Groups of women, men, and young people</td>
<td>• Participate in community campaigns and contribute to visible collective action</td>
</tr>
<tr>
<td></td>
<td>• Liaise with police and health providers and negotiate with community bodies</td>
</tr>
<tr>
<td></td>
<td>• Negotiate with municipal representatives for infrastructure and entitlements</td>
</tr>
<tr>
<td>Community volunteer sanginis</td>
<td>• Support and participate in community campaigns and contribute to visible collective action</td>
</tr>
<tr>
<td></td>
<td>• Liaise with police and health providers and negotiate with community bodies</td>
</tr>
</tbody>
</table>
in three categories. Mobilisation is primarily the remit of community organisers who identify potential group members, bring them together, and facilitate a sequence of modules and discussions. They also identify survivors of violence and help group members to respond. Organisers are initiators and points of contact for involvement of counsellors and follow-up with survivors. They facilitate community events and campaigns and liaise with medical, police, and legal services. Counsellors are based close to communities and conduct crisis intervention, counselling, and home visits, as well as providing institutional support. Group members become involved in campaigns and identify and support survivors of violence. After about one year of group activity, individual volunteers with particular leadership potential, called sanguinis, emerge and are trained to identify and support survivors, as well as in communication and liaison with services. Community organisers work closely with sanguinis whom they identify and mentor.

Changes

Second, the theory proposes three forms of local change: an increase in identification of and support for survivors of violence, changes in the beliefs and actions of group participants and volunteer sanguinis, and broader changes in communities. Survivors are able to view their experience in a broader context, get help when they feel they need it, and take action to improve their situation. This visible secondary prevention leads to community awareness, increased identification and consultation, and a broad base of support. Participation in groups leads to changes in members and awareness of gender issues. This yields action in terms of individual and collective efficacy based on precedent, and visibility in the community for groups and individuals who take on leadership and volunteer roles.

Outcomes

Third, group and individual activities, linked with tangible service provision and successful interactions with counsellors, the police, and lawyers, lead to increased disclosure of violence. We believe that changes in attitudes are more likely to follow changes in behaviour than the other way around. Although there is a place for awareness and attitudinal change, our programmatic experience suggests that changes in social norms and attitudes can be accelerated by visible instances of successful response to the needs of survivors of violence. These responses themselves reduce the prevalence of domestic violence through secondary prevention, but the accompanying awareness and belief in rights and recourse is a form of primary prevention. Our main emphasis is on domestic violence, but it is conceivable that changes in community norms and bystander intervention will also reduce the likelihood of non-partner sexual violence outside the home.

Undesirable changes

Finally, the intervention might lead to a number of changes for the worse in homes and communities (Chen & Rossi, 1980). These are based on program experience and have been called ‘dark logic’ in the context of program theory (Bonell et al., 2015). Community interventions might lead to an increase in violence against women and girls as gender norms are transgressed and people push back against existing controls on women’s behaviour. This could be a short-term negative effect. Conversely, growing opposition to violence might lead to vigilantism and precipitate action and punishment meted out to either survivors or people who were not perpetrators. Awareness of the problem of non-partner sexual violence might lead families to set limits to women’s mobility, and awareness of community and legal sanctions might lead perpetrators to modify the kind of violence they use. As concerns surface, it is conceivable that group members, volunteer sanguinis, community organisers, counsellors, or the families of survivors of violence might face threats or exclusion. The program’s focus on personal development and leadership might support people with personal agendas not entirely aligned with its aims, or might lead to favouritism.

Discussion

Our theory of change differs from existing theories of change in a number of ways: it is adapted for the program’s context; it was designed through an extended consultative process from 2015 to 2017; it places major emphasis on secondary prevention as a pathway to primary prevention; it integrates community activism with referral and counselling interventions; and it makes explicit specific testable causal pathways to impact, which will be evaluated within the context of an on-going cluster-randomised controlled trial. While some previous theories of change share some of these characteristics, to our knowledge, no previous theory has had them all.

This article describes the theory of change behind a comprehensive community-based intervention to prevent violence against women through primary and secondary prevention. It took 22 months to develop the theory and involved primary data collection with multiple stakeholders, multiple workshops with critical commentators, and many team meetings. This long and careful process of theory building has resulted in a theory that improves on existing theories of change for the prevention of violence against women in a few ways.

First, the theory highlights the interconnectedness of primary and secondary prevention through a positive feedback loop. Community members become mobilised to identify and refer survivors to crisis counselling and institutions; in turn, successful resolution of cases of violence with institutional actors raise awareness and strengthen community members’ confidence in their own activism. Community activism still takes place through individual outreach, small group discussion and reflection, or community-wide campaigns, but it is closely linked to institutional support from local counselling and legal support centres. This model contrasts with previous theories of change, which have tended to place their main emphasis on primary prevention through community activism and capacity building to develop awareness of burden, rights, law, and recourse (Abramsky et al., 2016; Falb et al., 2016; Pettifor et al., 2015; Wagman et al., 2015).

Second, the theory was fully adapted to the local context of urban informal settlements in India, while previous theories of change have predominantly been developed for a Sub-Saharan African context (Abramsky et al., 2016;
Falb et al., 2016; Pettifor et al., 2015; Wagman et al., 2015) with the notable exception of a single study in Nepal (Clark et al., 2017). Many elements of the current theory of change reflect previous program experience over the past 15 years of program activity.

Third, the theory provides greater specificity than previous theories. These can broadly be categorised into three types: quasi-linear logic models (Clark et al., 2017; Wagman et al., 2015), stages of change models (Abramsky et al., 2014; Falb et al., 2014; Michau, 2007), and ecological models (Abramsky et al., 2016; Michau et al., 2015). Ecological models tend to see violence reduction as arising from the simultaneous operation of a large number of activities and processes at individual, household, and community levels which interact in unspecified ways. Stages of change models view violence prevention activities as progressing in stages from community entry to awareness-raising to behaviour change, but do not always specify why or how communities progress from one stage to the next. Quasi-linear logic models present intervention processes as a block of activities leading via a block arrow to another block of changes and outputs. Such models often lack clarity on the exact ‘context-mechanism-outcome configurations’ (Pawson & Tilley, 1997) that are expected to occur. The current theory of change lists the pre-conditions that need to be fulfilled for each component of the theory to ‘work’, the causal connections between each component, as well as any adverse effects that may arise.

Theories of change are necessarily provisional, and may not be right, but they still serve useful functions as guides to evaluation (Birckmayer & Weiss, 2000). By providing a theoretical framework for collecting and analysing data, they can help overcome problems intrinsic to “omnibus data” (Auspos & Kubisch, 2004) that are insufficiently directional to test theory (Weiss, 1997). The current theory of change has allowed us to understand our program, consider the necessity of specific components, and be specific about intermediary changes (Birckmayer & Weiss, 2000). It also helped to clearly articulate program objectives across a range of team members—community organisers, qualitative and quantitative evaluators, anthropologists, economists, medical practitioners, psychologists, and legal advisors—with stakes in the program (Mason & Barnes, 2007). In turn, this has helped to draw lessons from experience, conduct strategic planning, communicate the working of SNEHA’s program to other people, and select outcomes and indicators for monitoring and evaluation.

We are currently doing a cluster randomised controlled trial of a scalable set of interventions, specifying components and evaluating effectiveness in direct response to the theory of change. Previous evaluations have presented program theories which were subsequently only partially used for evaluation purposes. For example, many individual proposed mediators of intervention effect remain untested. Changes in policymakers, community leaders, and professionals’ attitudes, knowledge and beliefs about violence against women and girls are often hypothesised as mediators of intervention effect, but they have rarely been measured or reported (Abramsky et al., 2016; Wagman et al., 2015). Similarly, policy change at national or sub-national levels is often included in the theory of change, but excluded in the intervention impact evaluation (Abramsky et al., 2016; Clark et al., 2017; Wagman et al., 2015). For example, Falb et al. (2016) hypothesised that their intervention would increase the human, social, physical, and financial assets of girls, but focused on human and social assets in their outcome evaluation. A recent review of 62 studies of theory-informed evaluation in public health noted that integration of theory into randomised controlled trials was often limited (Breuer et al., 2016). We intend to measure and evaluate all aspects of our theory of change in our cluster randomised controlled trial.

We faced one central challenge to the development and use of our theory of change: understanding how to frame work that has traditionally taken a feminist social position within the developing public health paradigm for complex interventions. Sociologists have proposed that randomised controlled trials could be used hypothetico-deductively to test and refine theories of change for complex public health interventions (Bonell et al., 2018). Coryn and colleagues have proposed five principles for theory-driven evaluation. It should (1) formulate a plausible program theory, (2) formulate and prioritise evaluation questions around the theory, (3) be used to guide planning, design, and execution of the evaluation, (4) measure constructs postulated in the theory, and (5) identify breakdowns and side-effects, determine program effectiveness or efficacy, and explain cause and effect associations between theoretical constructs (Coryn et al., 2011). These principles sometimes fit awkwardly with feminist concerns with building an activist social movement rather than a managerial, professional organisation. We are trying to do both.

Conclusion

20 years ago, Weiss said that, “If theory is taken to mean a set of highly general, logically interrelated propositions that claim to explain the phenomena of interest, theory-based evaluation is presumptuous in its appropriation of the word. The theory involved is much less abstract and more specific, more selective, and directed at only that part of the causal chain of explanation that the program being evaluated is attempting to alter” (Weiss, 1997). This certainly applies to several existing theories for prevention of violence, which include macro concerns such as national development, sectoral issues, organisational aims, or program aims (James, 2011), and whose lack of specificity has made it hard to apply them to the current theory of change.

We are particularly struck by the rapidity with which draft theories are often developed. The field tends to quite quickly adopt new approaches and there is a danger that, if theory of change is seen as something that can be produced after two or three variably attended workshops (Gooding et al., 2018), its undoubted benefits will be seen as a fad. Again, the assumption is that theory will be revisited and amended (Mason & Barnes, 2007), but program realities—and perhaps a lack of time and space to interrogate assumptions (Archibald et al., 2016)—conspire to make this uncommon.
We hope that our theory of change is plausible, feasible, and testable (Kubisch, 1997). In developing it, we had four advantages: sufficient time, 15 years of program activities to examine, evaluators as core team members, and stakeholder involvement (Auspos & Kubisch, 2004). This meant that we were able to ensure that the theory fitted the context and the opinions of diverse contributors (Moore & Evans, 2017). We hope that our theory will become a useful tool for researchers, practitioners and policy-makers working in similar contexts to think through the pathways through which they hope to achieve impact on violence against women.

### Data availability

**Underlying data**


This project contains transcripts of focus group discussions and interviews, translated into English. The safeguarded data files are made available to users registered with the UK Data Service under UK Data Archive End User Licence conditions. The data files are not personal, but—given the subject matter of the interviews and focus groups—the data owner and research ethics committee consider there to be a limited residual risk of disclosure.

**Extended data**

Open Science Framework: A theory of change for community interventions to prevent domestic violence against women and girls in Mumbai, India. [https://doi.org/10.17605/OSF.IO/47JMG](https://doi.org/10.17605/OSF.IO/47JMG) (Osrin, 2019).

This project contains the following extended data:

- Action_documentation_archive.xlsx
- Consultant_report_2016.docx (initial consultancy report)
- Reference_list.docx (reference list for development of theory of change)
- ToC_development_history.pdf (theory of change visual development history)
- ToC_meetings_summary.docx (theory of change meetings summary)

Extended data are available under the terms of the Creative Commons Attribution 4.0 International license (CC-BY 4.0).

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### References


Open Peer Review

Abigail M. Hatcher

1 Department of Medicine, University of California, San Francisco (UCSF), San Francisco, CA, USA
2 School of Public Health, University of the Witwatersrand, Johannesburg, South Africa

This manuscript was a joy to read and addresses an issue sorely under-explored in the violence prevention literature: how to design programs so that the underlying theory is testable. To be fair, the prevention of intimate partner violence is also lacking efficacious interventions (with or without theoretical underpinnings). Yet, if new projects can be developed with strong theories of change articulated alongside them, it is feasible for outcomes to be achieved alongside a consistent advance of the theory. This is laudable and I am grateful for the hard work the authors have led towards this goal.

I have a few comments that may inform future efforts for this team and for others aiming to prevent intimate partner violence.

1. How were the actions detailed in Table 1 chosen from among the 76 total actions documented by the community mobilization team? Were these coded thematically, and was that coding undertaken by a single researcher or multiple team members? How was consensus reached and discrepancies resolved? The “Action type” and “Intervention function” are interesting but these do not map onto the theory of change, as far as I can tell. A better description of these categories and what they mean would be valuable.

2. The theory of change itself in Figure 1 adds considerably to the literature. I am particularly impressed by the assumptions that are articulated. However, I’m concerned that the arrows leading from “Resources” to “Changes” seem to be, in and of themselves, something of a black box. I would like to know (and the IPV field is search for answers to the question of) how community volunteers and groups of women and men work together to change participants? Indeed, how do these volunteers and community members take up their work in such a way that communities change overall? Is it through solidarity and group mutual support? Or is it through personal change that leads to an overall community-level benefit (i.e. the whole is greater than the sum of its parts)? The mechanism of action is not identified, which makes it very challenging to test the underlying assumptions of the theory. One suggestion would be to highlight important Theory (as in, sociological or behavioral theory) either within the figure or the accompanying text.

3. The notion of a “ceiling of accountability” is interesting, and I wonder if the authors can discuss how many IPV prevention programs position themselves along these lines. While many programs cite their stated aim is to reduce domestic violence, few projects globally have ever proven that they are able to do this.

4. It would be nice to hear a bit more about how sanguinis “emerge” (or are chosen by the program to take up this role).
5. The section on “Undesirable changes” is excellent and crucial for the field, though this is the first time I have seen these concerns articulated so thoughtfully.

6. As above, the discussion statement around “makes explicit specific testable causal pathways to impact” is not entirely right, since the pathways themselves are poorly fleshed out. While the ‘context’ and ‘outcome’ configurations are indeed mapped out, I believe the ‘mechanism’ linking the two requires additional thinking.

7. I agree with the authors position that this is among the first projects to meaningfully combine primary and secondary prevention, and this is also crucial for the field.

8. The protocol by Christofides et al (2016)\(^1\) would be important to include in the discussion, given its emphasis on a theory of change for primary prevention of IPV in a similar peri-urban setting. This would be particularly valuable in the sections on the three types of theory and the section about how policy change is incorporated into a theory of change and the concomitant impact evaluation.

9. What methods beyond running a trial are the authors engaged with presently? For example, will they harness path analysis to unpack the mechanisms underlying intervention success? Will they conduct a qualitative process evaluation alongside the trial?

10. While the contradictions between feminist framing and the needs of trials/projects to be managerial in nature is important, I wonder if it could use additional thinking. In particular, this is an area where Theory (capital T) could be brought forward more intentionally, since the authors are clearly drawing from multiple approaches and epistemologies.

References

Is the work clearly and accurately presented and does it cite the current literature?
Partly

Is the study design appropriate and is the work technically sound?
Yes

Are sufficient details of methods and analysis provided to allow replication by others?
No

If applicable, is the statistical analysis and its interpretation appropriate?
Not applicable

Are all the source data underlying the results available to ensure full reproducibility?
Yes

Are the conclusions drawn adequately supported by the results?
Yes

*Competing Interests:* No competing interests were disclosed.

*Reviewer Expertise:* Intimate partner violence, randomised control trials, process evaluations, theory of change, gender norms.
I have read this submission. I believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.