Reflections on the development and utility of a participatory community violence surveillance methodology

Deborah Isobell[1]
South African Medical Research Council-University of South Africa's Violence, Injury and Peace Research Unit/ Institute for Social and Health Sciences, College of Graduate Studies, University of South Africa

Naiema Taliep
South African Medical Research Council-University of South Africa's Violence, Injury and Peace Research Unit/ Institute for Social and Health Sciences, College of Graduate Studies, University of South Africa

Sandy Lazarus
South African Medical Research Council-University of South Africa's Violence, Injury and Peace Research Unit/ Institute for Social and Health Sciences, College of Graduate Studies, University of South Africa

Mohamed Seedat
Institute for Social and Health Sciences, College of Graduate Studies, University of South Africa/South African Medical Research Council-University of South Africa's Violence, Injury and Peace Research Unit

Esmeralda Toerien
Spiritual Capacity and Religious Assets to Transform Community Health by Mobilising Males for Peace and Safety (SCRATCHMAPS) Research Team

Anna James
Spiritual Capacity and Religious Assets to Transform Community Health by Mobilising Males for Peace and Safety (SCRATCHMAPS) Research Team

ABSTRACT

The goal of this study was to illustrate the development and utility of a community violence surveillance methodology, as a component of a larger participatory violence prevention project in a low-income South African community. Using focus group discussions, data were collected from 12 community and academic research partners. These discussions were audio recorded, transcribed and then thematically analysed. The findings revealed that the participatory orientation to the research enabled researchers to develop an instrument that was appropriate for the community, collaboratively. The collaborative creation of the violence surveillance questionnaire and the use of community members to implement the system after intensive capacity building instilled a sense of ownership and promoted sustainability in this project. In addition, data generated by the surveillance system provided baseline and prevalence data which could be used to advocate for violence prevention and develop relevant interventions. This process also resulted in the provision of victim support through debriefing and referrals. Future research could focus on developing and implementing similar surveillance systems in communities and monitoring the effects thereof over time.

Keywords: participatory, community, violence surveillance methodology

1 Please direct all correspondence to: Ms Deborah Isobell, Violence, Injury and Peace Research Unit, PO Box 19070, Tygerberg 7505, South Africa; Email: 2636988@myuwc.ac.za

INTRODUCTION

This article illustrates the development and utility of a community-based participatory violence surveillance system that was implemented in a low-income South African community in the Western Cape Province, as a component of a larger participatory violence prevention project.

The high magnitude of violence in South Africa presents a salient public health concern (Collins, 2013; Seedat, van Niekerk, Suffla & Ratele, 2014). Common expressions of violence in the country include homicide, intimate partner violence and child abuse (Seedat, van Niekerk, Jewkes, Suffla & Ratele, 2009). Yet, statistics from the South African Police Services (SAPS) only partially account for the extent of violence due to under-reporting (e.g. Masho, Schoeny, Webster & Sigel, 2016), reflecting only reported crimes (Brodie, 2013), limiting timely access to information, and consequently, community-driven violence prevention programmes (Newham, 2013). Reliable, quality and routinely available data are therefore needed to inform responses to violence (Masho et al., 2016).

Surveillance systems, usually developed by public health researchers and practitioners, provide information on the frequency and distribution of violence, those at risk of being victims and perpetrators, and changing trends, all of which can effectively inform decision-making (Parks, Johnson, McDaniel & Gladden, 2014). Conventionally, surveillance systems are initiated and driven by experts who record the "who, what, where, when, and how" of a violent incident (Zavala & Hazen, 2009, p. 13). Active surveillance, which includes regular contact with the target population to seek information, ensures a high degree of accuracy but incurs substantial expenditure. In contrast, passive surveillance, which operates at a lower cost, relies on institutions to provide data to a central repository and varies with respect to data quality and timely availability or access to data (Nsubuga et al., 2006). Community surveillance systems represent an alternative to conventional public health surveillance (Auer & Andersson, 2001a).

Partnering with and building communities' capacities is central to strengthening violence prevention responses (Mercy, Rosenberg, Powell, Broom & Roper, 1993). "Participatory approaches to research emphasise forging partnerships with the research participants, pursuing mutual learning processes, ensuring that the research agenda serves academic and social ends, and assume that the research process itself is a vehicle through which change can be achieved" (Isobell, Lazarus, Suffla & Seedat, 2016, p. 6–7). Participatory research augments the relevance and appropriateness of interventions, research translation, and sustainability. The process of participatory research is empowering and supports the agency of the 'researched', and, as both partners cooperatively create knowledge, it is appropriate to the needs of the community, promoting community action (Isobell et al., 2016). A participatory research approach to violence prevention has been used successfully with youth (e.g., Suffla, Kaminer & Bawa, 2012) and adults (e.g., Lazarus, Taliep, Bulbulia, Phillips & Seedat, 2012) in many contexts. For example, Suffla et al. (2012) conducted a participatory project with young people in South Africa, Mozambique, Ethiopia, Uganda, Egypt and Zambia to explore their depictions of safety and threats to safety in their communities, using Photovoice. When given a platform to voice their views, youth could serve as social change agents, identifying threats to safety and designing interventions accordingly. The principles of a participatory research approach guided the development and implementation of the surveillance system discussed in this article.

Citizen-based, participatory (Purenne & Palierse, 2017), community-based (Auer & Andersson, 2001b; Purenne & Palierse, 2017) and community-centred (Brussoni, Olsen & Joshi, 2012) surveillance systems have been developed or funded by government (see Gutierrez-Martinez, Espinosa, Fandiño, & Oliver, 2007; Purenne & Palierse, 2016), implemented in the community (Sugimoto-Matsuda et al., 2012) or pursued in conjunction with the police (Purenne & Palierse, 2016). Community surveillance systems stand to address the lack of community-level data and inform related remedial and preventative strategies and programmes (Auer & Andersson, 2001a). However, few studies focus specifically on the participatory development of community surveillance systems (Auer & Andersson, 2001a). This indicates a need to explore academic and community researchers' views of

the participatory development and utility of a surveillance instrument and system to draw out successes and weaknesses of using a community-based participatory system of surveillance to address violence in communities. The following question, therefore, guided this study: What are academic and community researchers' views of the participatory development and utility of a surveillance methodology?

We commence with a description of the development of the violence surveillance methodology, and then outline how we obtained and analysed community and academic perspectives on the development and utility of the system. This is followed by the presentation and discussion of the research findings. We conclude with comments on the implications of this research for violence prevention.

DESCRIPTION OF THE COMMUNITY VIOLENCE SURVEILLANCE METHODOLOGY

The overall aim of the SCRATCHMAPS[2] project is to prevent violence and promote peace and safety in one low-income community in the Western Cape, South Africa. One of the critical research activities pursued within this project was the development and implementation of a violence surveillance system, guided by the principles of a community-based participatory research approach. The main aim of the SCRATCHMAPS violence surveillance system is to provide baseline data on violence and non-fatal intentional injuries in the local community context to inform violence prevention responses. In this project, interpersonal violence constituted the focus, with data being collected on sexual and physical acts, abuse and neglect, and self-harm.

The research methodology of this study, comprising the development of the violence surveillance instrument and system, design, description of participants, data collection, procedure, and analysis, is outlined in the section that follows.

DEVELOPMENT OF THE VIOLENCE SURVEILLANCE INSTRUMENT

A violence surveillance draft instrument was initially constructed by a small group of academic researchers from the South African Medical Research Council-University of South Africa's Violence, Injury and Peace Research Unit (VIPRU) who reflected diverse areas of expertise, including community psychology, violence prevention, and safety and peace promotion. Experts from the National Injury Mortality Surveillance System (NIMSS) in South Africa, hosted by the Institute for Social and Health Sciences (University of South Africa) and VIPRU, were also consulted during the initial stages of the instrument development. Informed by the NIMSS instrument, the first version of the instrument was pre-tested with the SCRATCHMAPS local community research team (n=10) and the project's advisory committee (n=11), which consisted of local service providers, community members, and the academic research team. The local community research team, who has been with the project since 2011, comprise residents (including adults and youth) who have been through numerous capacity building processes focused primarily on developing relevant research skills.

The community research team have played a key role in developing and refining the instrument, drawing on their knowledge of the community context. Revisions included simplifying the language and format of the instrument, re-wording or removing any problematic or ambiguous questions, and adding items that were relevant to the community concerned. A key challenge in instrument development is the accessibility of the questionnaire items to community members. Language difficulties, such as the level of language comprehension (Matza, Swensen, Flood, Secnik, & Leidy, 2004), and the literacy level can have a bearing on the outcomes of the questionnaire (Taliep & Florence, 2012; Taliep, Ismail, Seedat, & Suffla, 2014). A further challenge in questionnaire development

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is administering a questionnaire in a language that is not the first language of the respondents (Taliep & Florence, 2012). The instrument was thus subsequently translated into Afrikaans by the community research team and checked by a bilingual member of the academic research team. Following training of the community research team, two members of the team and the academic researcher who verified the translation, pilot tested the translated instrument with members of a local non-governmental organisation (NGO) working in partnership with the project (n=16). The instrument was again adapted in accordance with the feedback obtained, which included rewording the instructions for clarity.

THE SCRATCHMAPS VIOLENCE SURVEILLANCE INSTRUMENT

The surveillance instrument is a six-page, paper and pencil document attached to a clipboard. The instrument follows a structured response format throughout, consisting mainly of binary, short answer, and multiple-choice responses. A single unstructured response format was included at the end of the instrument for additional, pertinent information not recorded earlier. The instrument consists of three parts: Part 1 examines the date and time that an incident of violence occurred, as well as the type of violence and whether police were notified thereof. Table 1 provides the comprehensive list of classifications of types of violence that data collectors are asked to specify in Part 1 of the instrument. These include murder, attempted murder, assault, assault leading to grievous bodily harm, robbery with aggravating circumstances, domestic violence, child abuse and neglect, youth abuse and neglect, suicide, intimate partner violence, attempted rape, rape, gang violence, xenophobic attacks, bullying and other. For clarity, the related operational definitions are also included here.

Table 1: Classification of type of violence

1. Murder	Intentionally ending the life of another person (SAPS, 2016)
2. Attempted Murder	Deliberate acts intended to end the life of another person, which fails to kill them (SAPS, 2016)
3. Assault	Purposeful contact (direct or indirect) or threats of contact with another person to harm them (SAPS, 2016)
4. Assault leading to grievous bodily harm	Purposeful contact (direct or indirect) with another person's body to harm them (SAPS, 2016)
5. Robbery with aggravating circumstances	Use or threats of force in order to acquire another person's property (SAPS, 2016)
6. Domestic violence	Abuse and violence within a domestic relationship (e.g. amongst cohabitants, blood relatives) (Domestic Violence Act, 1998)
7. Child abuse and neglect	Neglect and abuse by a carer towards persons under 18 years (Center for Disease Control and Prevention, CDC, 2017)
8. Youth abuse and neglect	A carer's neglect and abuse of persons aged 18 years and older (adapted from CDC, 2017)
9. Suicide	Intentional, self-inflicted injurious acts resulting in death (CDC, 2015)
10. Intimate partner violence	Violence committed by a current or past partner (CDC, 2017)
11. Attempted rape	Attempts to commit non-consensual sexual penetration of another person (adapted from SAPS, 2016)

12. Rape	Sexual penetration of another person in the absence of their consent (SAPS, 2016)
13. Gang violence	Violence enacted by members of an identifiable group (Decker, 1996)
14. Xenophobic attacks	Targeted attacks on foreign nationals and/or their possessions (Pillay, Barolsky, Naidoo, Mohlakoana & Hadland, 2008)
15. Bullying	Deliberate, recurrent or likely to be recurring, aggression by youth(s) towards youth leading to distress or injury (Gladden, Vivolo-Kantor, Hamburger & Lumpkin, 2014)
16. Other (specify)	

Part 2 seeks to elicit the number of perpetrators and victims involved, the demographic information of these parties, and the relationship between them (companion; parent or step-parent; other family member (e.g. grandfather or brother); unrelated supervisor; an acquaintance; friend; legal guardian; stranger; an unknown person or other specific person(s).

Part 3 pertains to the nature of the violence, and the circumstantial details including the type of weapon used (if any), and the motive for the violence, as well as the type and extent of the injury, sustained. Space is provided at the end of the instrument for community researchers to provide any other information relevant to the incident. Possible response categories for the circumstances include alcohol/ drinking; drugs; arguing and fighting; financial problems; conflict with family; run-ins with the law; domestic violence; bullying; gang activity; break-ins and robbery; physical provocation; psychological problems; power dynamics; lack of visible policing and other reasons that may be specified.

SCRATCHMAPS PARTICIPATORY VIOLENCE SURVEILLANCE PROCESS

In the section that follows, we describe the features of the surveillance methodology that was developed. The four data collectors from the local community research team who were assigned the responsibility of managing the data collection process were Afrikaans speaking (the language of the community), with ages ranging between early the twenties to early fifties. At the time, three of these data collectors were part of the Neighbourhood Watch and thus had first-hand knowledge of incidents when they occurred. These data collectors were self-selected from the pool of ten community researchers initially recruited into the SCRATCHMAPS project at its inception. The latter recruitment process included rigorous selection interview procedures, led by the local community Advisory Committee guiding the project as a whole.

Following instrument development, the data collectors were assigned to four geographical zones, covering the entire neighbourhood involved in the SCRATCHMAPS project. These zones each comprised two adjacent streets, with one data collector being assigned to each of the four geographical zones. Zones were typically populated by houses, backyard dwellings, mobile shops, and taverns. The community researchers were trained to register all incidents of violence as reported to them or reported by them. The data collectors were therefore required to be "in zone" daily to record cases relatively soon after or as they occurred. Through participant observation, conducted monthly throughout the two years (2012 and 2013), community researchers recorded acts of violence witnessed first-hand, or of which they were made aware. Data collectors were made aware of an incident through telephonic contact, being approached on the street or in their home. A drawback of this approach is the potential for reporting bias due to community members feeling stigmatised when reporting events of a sensitive nature to neighbours. The target community for data collection included all members of the community: men and women, adults and children, perpetrators and victims/survivors of violence. The community was briefed regarding reporting incidents to the data collectors during bi-monthly community meetings.

After the initial implementation of this surveillance system in 2012, the community researchers received formal training from the VIPRU academic research partners on how to enter collected data into an electronic template. This was followed by data analysis which was carried out by one academic researcher. Two technical reports, covering the 2012 and 2013 surveys, were then compiled to document the findings of the surveillance system. Both reports were written by a junior academic researcher, with input from community researchers. Unlike other aspects of the surveillance process, the community researchers' involvement in this phase was not adequate to build their report writing capacity – a challenge that should be addressed in future. Finally, community and academic researchers jointly decided which stakeholders would receive copies of the reports. The stakeholders identified included the nearby SAPS station, Social Services and the Hearts of Men NGO. These stakeholders were also invited to attend the public presentation of the data and conclusions of the reports. The public presentation was advertised through door-to-door visits to community members and through formal written invitations. Table 2 provides a sample of findings contained in the 2013 technical report, where the salient types of violent acts are identified.

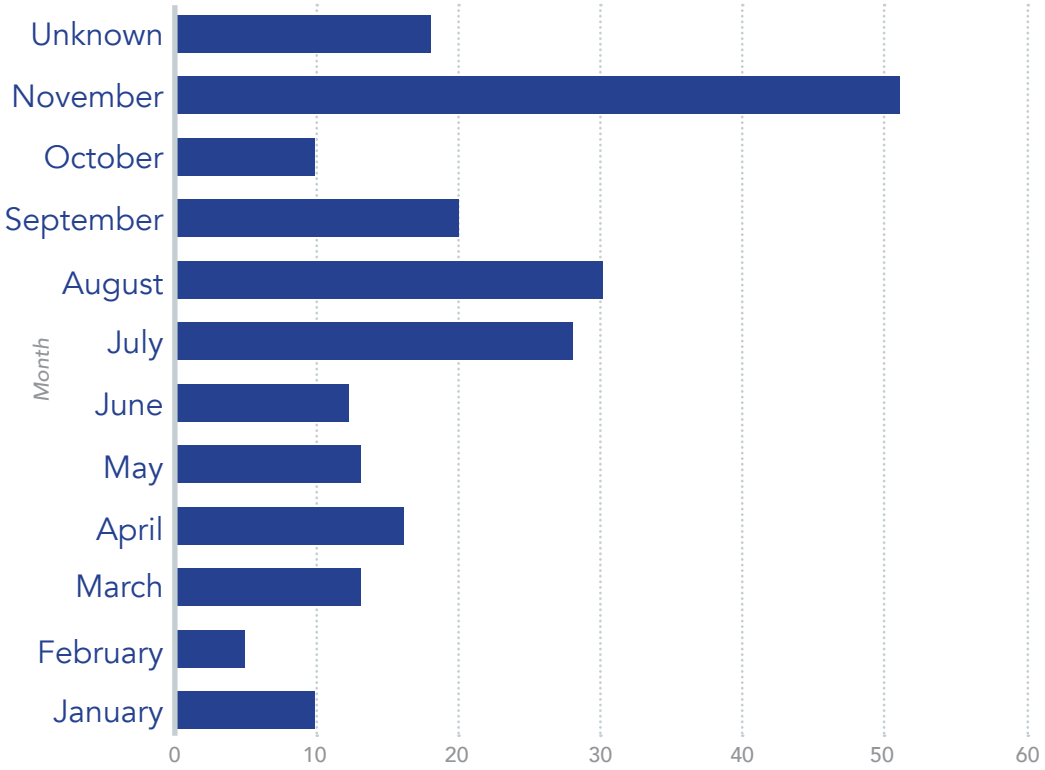
Table 2: Salient types of violence

Type of violence	Frequency	Percentage
Murder	4	1.8
Attempted murder	3	1.3
Common assault	**96**	**42.5**
Assault with serious injury	**61**	**27**
Robbery with aggravated circumstances	2	0.9
Domestic violence	**52**	**23**
Child abuse and neglect	1	0.4
Youth abuse and neglect	1	0.4
Suicide	0	0
Intimate partner violence	**27**	**11.9**
Attempted rape	0	0
Rape	0	0
Gang violence	0	0
Xenophobic attacks	0	0
Bullying	**16**	**7.1**
Other	4	1.8

In summary, common assault (n=96; 42.5%) and assault with serious injury emerged as the most salient types of violence (n=61; 27%). Domestic violence was also highly prevalent, constituting 23% (n=52) of all cases, and intimate partner violence constituted the fourth leading type of violence in the community (n=27, 11.9%). Figure 1 below provides another sample of results from the 2013 report, showing the monthly distribution of when violent acts occurred.

Of the 226 cases analysed in 2013, the highest number of violent incidents were reported for December (n=51; 22.6%), August (n=30; 13.3%) and July (n=28; 12.4%), whereas during February (n=5; 2.2%) the least number of incidents were recorded. This diverges from the 2012 surveillance findings that reported November as having the highest prevalence.

Figure 1: Date of incident (N=226)



METHOD

The section that follows discusses the method of the present study which aimed to illustrate the development and utility of the community violence surveillance methodology discussed above.

RESEARCH DESIGN

A qualitative methodological framework was used to explore community and academic researchers' views of the development and utility of the SCRATCHMAPS violence surveillance methodology. Given that qualitative research endeavours to provide an in-depth, insider's account of phenomena (Tuli, 2011), it was deemed best suited to satisfy the aim of the current exploratory study.

PARTICIPANTS AND SETTING

The SCRATCHMAPS community-academic partnership within which this violence surveillance study is located was formalised in 2011. The target community[3], which was defined geographically, is located within 4km of Strand in South Africa's Western Cape Province. The community is characterised by numerous backyard dwellings, minimal

3 Unnamed for anonymity

educational attainment among residents and low monthly income (less than R1500; at the time of writing, 111 USD per month). This partnership is based on a 15-year relationship between the community and academics. The partnership was established when community members, who were aware of our work in the violence prevention arena, approached academic researchers who were working in a neighbouring community to request that they extend their work into their area. Subsequent formal entry into the community was, therefore, a straightforward process negotiated with a gatekeeper who facilitated a community walkabout so that the academic researchers could familiarise themselves with the community. The academic researchers from the VIPRU who were leading the SCRATCHMAPS project then met with members of the community in a public stakeholders meeting. This was followed by the establishment of two community structures: a community advisory committee and a community research team. The committee comprised community leaders and members, service providers, and members of the VIPRU. The community research team recruited, included the ten residents referred to earlier.

During the life of the SCRATCHMAPS project, the community researchers met on a weekly basis for team meetings which were mostly led by the VIPRU academic researchers. As the community research team gained agenda-setting, chairing and minute-taking skills, they assumed responsibility for these and other project management tasks, particularly in the final year of the project. Discussions were organised around a formal agenda that included spaces for feedback on current project activities, opportunities for the community and academic researchers to contribute mutually, as well as formal training and presentations. As each community researcher was tasked with specific portfolios of work within the project, this genuine engagement in weekly meetings was critical to the progress of the project. The advisory committee, which met every two months for a period of roughly three hours on the weekend, served as the primary decision-making structure for approval of all project-related activities, including who would be employed, and financial management. Both the advisory and research team structures have served as channels for the academic and community members to engage optimally.

DATA COLLECTION

The University of South Africa granted Institutional Review Board approval for this project. A formal research ethics agreement was developed and signed by the VIPRU and local advisory committee representatives. Before the interviews reported on here, informed consent was obtained from all participants.

Three audio-recorded focus group discussions (FGDs) were conducted with both sides of the community-academic partnership, one with five academic researchers and two with seven community researchers each. The FGDs were guided by a semi-structured interview schedule developed by the academic researchers, with interview questions covering the development of the surveillance instrument and methodology, whether and how the development and implementation processes contributed to local action in the community, and whether the violence surveillance methodology is relevant, responsive to and supportive of the needs of the local community. A semi-structured protocol was preferred as it enabled similar questions to be asked of participants across groups. The focus groups were facilitated by a research intern involved in other aspects of SCRATCHMAPS' work. The FGD with the academic researchers was hosted in their workplace, while the FGDs with their community counterparts took place in a community hall that serves as the venue for the weekly research team meetings. The latter FGDs were arranged at a mutually agreed upon time when community research team members were available. The FGDs enabled an exploration of community and academic researchers' perspectives on the value of the surveillance system but excluded members of the broader community.

DATA ANALYSIS

Data were analysed in accordance with Aronson's (1995) four-stage thematic analysis approach. Stage one involved transcribing audio-recordings of FGDs verbatim, familiarisation with transcripts through repeated

reading and noting trends within the text through coding. In stage two, supporting extracts were identified, while in stage three sub-themes were formulated. In the fourth and final stage themes were presented with reference to extant research literature. The community researchers were not directly involved in this analysis process. However, the findings were shared and verified with them at a later stage.

FINDINGS

The findings from the focus group discussions are organised into two themes. The first theme, Participatory Research Informs Relevant and Responsive Interventions, highlights the value of the collaborative creation of the violence surveillance questionnaire and the use of an 'insider' approach, that is, members of the target community, who were intensively trained to serve as researchers. The second theme, Utility of the Violence Surveillance System, presents participants' views on how the surveillance system provides baseline and prevalence data; can inform advocacy and interventions; raises awareness; deters violence; and provides victim support via debriefing and referrals.

PARTICIPATORY RESEARCH INFORMS RELEVANT AND RESPONSIVE INTERVENTIONS

COLLABORATIVE DEVELOPMENT OF THE QUESTIONNAIRE

Community and academic research partners collaboratively developed the questionnaire administered in the surveillance system. The central involvement of the community research team ensured that the language, content, and structure were suitable for use in the community. Moreover, this involvement of the community was said to have instilled a sense of ownership of the project, as evidenced in the following in the quotations.

>> "We directly consulted our partners in this whole process of development - [another participant interjects] - we didn't just consult, because consultation is a limited partnership approach. We worked with them, alongside them … The outcome was something that was owned and was relevant to the community" (Academic Researchers, FGD 1).

Community researchers assumed a key role in this instrument development process, as well as during implementation:

>> "So, from the piloting to finalising the language that would be used in the instrument; its structure, its layout, all of that … to actually going out into the community and starting to collect data. They have been involved every step of the way" (Academic Researcher, FGD 1).

The community research team also described their key role in ensuring the appropriateness of the instrument for use:

>> "We actually did a piloting in the beginning... with Hearts of Men and people from the community. People were familiarised with the questions from the beginning … we found that some of the words were too big for the community and sat about a month to make it more understandable to the community" (Community Researcher, FGD 2).

INSIDER APPROACH

A distinguishing characteristic of the surveillance methodology was the inclusion of community members as researchers throughout the process. The community researchers could draw on their relationship with other community members, and their unique insights into community dynamics, to assist in data collection. However, there was an expressed concern that by collecting data in their own neighbourhood, they could potentially be placed in unsafe situations:

>> "It's important to note that the system we use is insiders. Insiders are actually reporting. The positive side is that there is a relationship. The negative side, and we were worried about this, is whether it placed them at risk. So that is something that I think really needs to be grappled with - that we need to look at. Have any of the team actually said that they have been in danger?" (Academic Researcher, FGD 1). However, safety concerns were not raised by the community research team.

Despite the risks associated with using residents to collect data, an advantage was said to be their rapport with fellow residents. As an academic researcher highlighted, 'often people in the community find it easier to report to someone that they know in the community than to actually access additional stakeholders and service providers'. Community members concurred that they enjoyed the trust and that this facilitated the disclosure of sensitive information: '… so, at the end of the day, people trust you more- the one who does the data collection or the one who documents the violence - and therefore they trust you with important information while you are collecting the data'.

A further benefit was researchers' local knowledge, which assisted in understanding the data yielded by the surveillance methodology:

>> "… I was able to have a presentation with them about some of my findings, and in doing that, they were able to give me reasons, or insight into why certain things appeared to present in the community, so assisting me with the interpretation of the findings as well" (Academic Researcher, FGD 1).

CAPACITY BUILDING

Community researchers described a range of skills that they had acquired during the development and implementation of the surveillance system. This included both research and interpersonal skills. As these participants expressed:

>> "I learned coding, capturing data, how to collect data, I learned how to change wording so that it could be understandable to people living in the community ... Piloting, data-capturing, data collecting, self-confidence, listening skills, computer courses" (Community Researcher, FGD 2).

The academic researchers corroborated this:

>> "They have gained more skills …The team feels more comfortable in taking this forward. For example, … I was able to do some training on how to capture surveys with the team ... The sense of accomplishment when each person, at their own time, was able to acquire the skill - that was really meaningful to me" (Academic Researcher, FGD 1).

However, given that academic researchers initially took the lead in compiling the research report and coordinating the implementation of the surveillance system, three areas where the need for the further capacity building of community members was identified include the analysis process, report writing, and project coordination. This is highlighted in the following discussion:

>> "I think that through this process, and with the skills that they've gained, they will be able to take this forward on their own… [another participant interjects] except for the report writing; that's something that you [referring to the academic researcher] took over. If it is going to continue, then they would need initial support to move into that 'doing it on our own' phase, because we have been there in the background … [the first speaker responds] I do also think that in drawing the community members into publications as co-authors, we are building capacity in terms of writing. We are already moving towards that point" (Academic Researchers, FGD 1).

Another academic researcher supported this, stating that the community researchers require capacity building to coordinate the implementation of the surveillance system independently of academics: 'I think there does need to be more skills transfer in terms of the project management side ... So that they know how to, once they have all the tools and materials, how to implement it'.

UTILITY OF THE VIOLENCE SURVEILLANCE SYSTEM

Academic and community researchers found that the surveillance methodology provided baseline and prevalence data on violence and non-fatal injuries resulting from violence and highlighted the types of violence that occur in the community. Other ways in which the surveillance appears to have been useful for the community include advocacy and interventions, raising awareness to deter violence and victim support.

THE VIOLENCE SURVEILLANCE METHODOLOGY PROVIDES BASELINE AND PREVALENCE DATA

The lack of data on non-fatal injuries resulting from violence, and limited insights gained from police data, were believed to be addressed by the surveillance system:

>> "It's important for learning - for lessons for ourselves and other people from this particular instrument and this particular narrow focus and really does create prevalence data. Because of the lack of information on non-fatal injuries for the whole country on really what's going on" (Academic Researcher, FGD 1).

Data generated from the community surveillance system supported anecdotal evidence of high rates of domestic violence, and non-fatal injuries, which are not accounted for in SAPS statistics:

>> "… Mortality rates are very low - in other words, police statistics won't tell you that [this community] is a dangerous area because they don't have lots of [dead] bodies [in mortuaries] … and then there's underreporting … but we very quickly heard there was a lot of non-fatal [injuries] and most of it seemed to be domestic. The figures showed that, but we were told that right at the beginning…" (Academic Researcher, FGD 1).

It was also essential to understand violence in this community to inform the work of the project:

>> "… SCRATCHMAPS is a violence prevention project, and so the first thing you think about when you do violence prevention is you have to get baseline data, and you're dealing with violence, you have to know what you're dealing with. What are you preventing?" (Academic Researcher, FGD 1).

Community researchers similarly recognised the relevance of the surveillance system for understanding trends in violence:

>> "Our aim is to develop a safe and peaceful community through interventions so that we can help others and groups [that] are also involved in this type of work, we need to know more about the distribution of the type of violence in our community to write down specific incidents that happened in the community. All this information will be combined in a report" (Community Researcher, FGD 2).

ADVOCACY AND INTERVENTIONS

Participants, although all in agreement about the utility of the data yielded from the surveillance system, presented mixed views regarding the improvement of service delivery, and the use of a violence surveillance system to inform community-led interventions. The need to disseminate the findings more broadly within the community and intensify capacity building pertaining to the use of the report emerged as areas for improvement. The local violence surveillance report, an output of the surveillance activities, was seen as a tool for advocating for service delivery, by an academic researcher: "it provides something tangible to go to service providers and stakeholders and government, and say look, this is what we've documented in the community".

The research reports were disseminated within the community, but more widespread dissemination was needed.

>> "So, these reports, and we've now got two reports - one that was handed out last year - is for [the community's] leaders: the community, the churches … whoever … to have access to that report so that they can use it, especially the summary of findings. We shared that with the team. I think those findings need to be presented publicly … We started that process, but I think that's part of the challenge of how to use the system; that once you have a report, there needs to be a presentation …" (Academic Researcher, FGD 1).

This academic researcher also expressed the need to more intentionally direct the use of the report to promote change in the community:

>> "Then we also need a process of, once the findings are compiled, of how to share that so that people can see the trends, then to help them and say, 'how can you use this' and this is maybe a challenge that we need to look at for the next year … We need to put some more effort into the capacity building around how to use the report for their community building ..." (Academic Researcher, FGD 1).

Another academic researcher expressed the value of the information obtained from the surveillance system for informing community-led action for change:

>> "Importantly, what also gets shown is where these incidents are, so it gives them an indication… for the interventions: so, our Neighbourhood Watch needs to be at the park every Friday evening, 'cause that's where this is happening, or we need to get the police in to monitor the park every Friday evening …" (Academic Researcher, FGD 1).

However, it appears that there were already instances of community members intervening to address issues related to violence as one community researcher explained '[name of community researcher] has this Women's Day event. What she has realised is that some of the women are actually being abused and having this event helps'.

Furthermore, specific suggestions for advocacy were raised by community researchers:

>> "In the questionnaire, a lot of people stated that the police are not visible or some simply don't contact them. This means that now that you have these statistics you can go to the police station with the information so that at the end of the day this will help us, the police and everybody in the community" (Community Researcher, FGD 2).

Examples of improved service delivery and a change in reporting practices to the police were also highlighted by the community, where participants reflected that '… after reporting on the statistics of police visibility in the community at the Advisory Committee meeting and knowing of course that one of the members was a police officer, the visibility increased'. As another participant noted, residents were encouraged to report violence to the police: 'Another thing is that in the beginning people didn't involve the police when something happened, until we told them to get the police involved if things go wrong ...'.

RAISING AWARENESS TO DETER VIOLENCE

The act of recording incidents of violence on an ongoing basis was believed to deter violence, as community members were aware that they were being observed. Furthermore, community members said that the violence surveillance system raised awareness about what constitutes violence, and in so doing highlighted community norms around violence.

>> "Although a lot of people in the community have an idea of what violence is, this idea is very vague. For example, if someone gives someone a slap, many people in the community feel that that is not a 'huge' violence. So, at the end of the day if the people of the community see the results of the surveys they get a picture of how truly violent the community is, and that thing they don't consider to be violence is then, in fact, a violent behaviour. So, it makes them aware of the different forms of violence" (Community Researcher, FGD 2).

Raising awareness of violence through the surveillance system, therefore, provided an opportunity to challenge existing community norms:

>> "Using the violence survey, you make people aware, because they think it's a normal behaviour to just smack somebody around. So, by making people aware of what we document we can change their mindset and perceptions around what violence is and they can react based on that" (Community Researcher, FGD 2).

Similarly, the community researchers also held the view that the surveillance system deterred violence, as one participant reflected, '… It's like a mirror that the community could hold up to themselves … [name] stated that since they began with the violence survey the violence decreased and a lot of people have talked about this fact'.

The extract below recounts an instance where violence ceased due to surveillance activities:

>> "… A while back there was a fight going on in our street. My sister, who is aware of the survey, told me to go get the book in which I documented events. So, when I came outside with the book almost instantly the people stopped fighting. So not just has the fighting decreased, but also the anger. People became aware and are taking note of us" (Community Researcher, FGD 2).

One academic researcher concurred that violence had reportedly decreased in the community, noting that "they have actually said that since they have begun collecting this data, people have actually become more mindful of their actions, and if they are actually around, would actually stop fighting or arguing".

VICTIM SUPPORT: DEBRIEFING AND REFERRALS

Victims of violence reported that the community researchers supported them through debriefing and the establishment of informal referral networks within the community. When victims recounted their experiences, they were said to have shared additional information with community researchers:

>> "… after somebody was involved in a fight you go to them to do an interview, then when you get there you are more than an interviewer, you become this person who is the shoulder on which they can cry. Because while doing the interview you not only hear about the cause of the fighting, you at times hear about other stuff that happened way back. You become their strength in their weakness … sometimes they are truly grateful that you have listened to them" (Community Researcher, FGD 2).

With knowledge of the circumstances associated with the violent acts they were recording, appropriate referrals could be made:

>> "We held workshops with the service providers where we heard that if a person had that problem or this problem they could be referred to someone, for example, if someone was raped they could go for counselling by [name] or if someone has a drug addiction they could be sent to [name] who is located in the [area] police station" (Community Researcher, FGD 2).

Networks were established and leveraged to support victims and perpetrators:

>> "So, when we did this survey we collected information and sometimes the information is serious. When it's that case you draw on all the resources you've got and refer a person. Sometimes it is to people who are on the Advisory. So, it's like all of us simply connect …you become that resource to the other resources" (Community Researcher, FGD 2).

These community researchers clearly recognised themselves to be resources to the community and when necessary, the bridge to further aid for victims.

DISCUSSION

This research demonstrates the value of a participatory approach to violence surveillance through reflections on the development and use of a community violence surveillance methodology, from the perspective of academic and community partners of a violence prevention project in South Africa. These findings resonate with findings and conclusions drawn by others (see Auer & Andersson, 2001a; Masho et al., 2016; Schensul, Berg & Williamson, 2008).

Participatory methods actively engage the community and academic researchers throughout the research, which enriches the value of the findings for both partners and, in this instance, partially equipped the community research team to sustain the surveillance methodology beyond the project. Participatory research occurs on a continuum, with varying degrees of community-academic partnership. While our engagement with the community has been optimal in most aspects, in the case of the instrument development, the process was more researcher-driven. As our organisation developed the NIMSS, the present work was informed by that existing measure. However, the

community researchers actively engaged in the revision thereof, altering its language, content, and structure to suit the community. They also implemented the system and played a key role in the analysis and presentation of findings. Hence, using participatory methods, community partners can be equipped with skills and made aware of their own capacity to facilitate changes in the community (see Schensul et al., 2008; Suffla et al., 2012). This is especially pertinent in the South African context where inequality persists. However, to achieve this outcome, long-term, on-going support and monitoring is required from academic partners, if research knowledge and skills comprise an important part of the change strategy. To yield desired outcomes, potential power dynamics in the community-academic partnership as well as conflicts, must also continually be reflected upon and addressed.

The accent on the action in participatory forms of research aided our violence surveillance activities. Community researchers highlighted that the surveillance system served as a deterrent to violence within the community, exemplifying its utility for community-led violence prevention (see Auer & Andersson, 2001a). However, it should be noted that the purpose of this study was not to test these assertions, in part due to the pilot nature of the study and related methodological limitations of both the surveillance system and SAPS data - as noted earlier. It has, however, been demonstrated that timely access to statistics on violence can reduce violence in communities (Newham, 2013). By reflecting current trends and patterns of violence, community-led violence surveillance can be useful for communities and other role-players for the purposes of designing and evaluating crime prevention activities (Mercy et al., 1993). In our case, findings from the surveillance pilot have been used to inform future violence prevention in the community. However, we recognise that there is a need to utilise data from the surveillance methodology more deliberately to support advocacy and community action and that such strategies should be built into the research (Schensul et al., 2008).

Our collective reflections have highlighted areas for improvement which need to be addressed to develop a more rigorous system which can be used in similar contexts. This includes debriefing community researchers and providing more training to equip the community to generate related research reports. The need to consult with relevant experts to address the methodological weaknesses of the surveillance methodology itself has also emerged as a valuable lesson.

As highlighted by the community and academic researchers in this study, community-led violence surveillance requires continuous monitoring and technical support to ensure the integrity of the data, as well as systematic capacity-building to ensure the utility of the system. Similarly, in other contexts, Sabol and colleagues (2004) have motivated for capacity development for violence prevention within local communities.

The study is limited by its qualitative methodology which does not permit generalisable conclusions. We also recognise that the participatory nature of the surveillance process was not optimal in that the academic researchers played a central role in most of the steps of the process. The proposed surveillance system also presents challenges for data quality (which is related to ongoing training of community researchers and individual proficiency), as well as the ability to draw long-term comparisons across data sets and with SAPS statistics (Auer & Andersson, 2001a).

PREVENTION IMPLICATIONS

Despite the lack of an optimal participatory process pursued in the development and implementation of the surveillance system, participants in the current study perceived that the community-academic partnership for violence prevention worked effectively in this context. The participatory orientation of the research enabled researchers to collaboratively develop a community violence surveillance instrument and methodology that was appropriate for and useful to the community concerned.

Our findings have implications for the SAPS, as well as government departments such as Justice, Correctional Services, and Social Development. These institutions could consider developing and supporting community-led violence surveillance systems within their community policing strategies to address the lack of community-level data (Auer & Andersson, 2001a). One practical way in which this could be pursued is through existing Neighbourhood Watches or Community Policing Forums who could be supported through a similar participatory process. In addition, local schools and health clinics could be used as a forum for further knowledge-sharing around what constitutes violence, alternative coping strategies that could be employed in place of violence, as well as what to do in instances where there is interpersonal violence, especially in the case of minors and intimate partner violence. Organisations working in and around the community to address other key social issues such as substance use could also benefit from recognising the potential role of a community violence surveillance methodology to promote violence prevention.

Despite the proposed value of the process and product discussed here, it should be noted that the assessment of the value of the SCRATCHMAPS community violence surveillance methodology was limited to a small group of community members and the academic researchers who were in partnership with them. Furthermore, the system is still being improved, with this research informing future developments in the community concerned. Future research should, therefore, include an expanded assessment of the surveillance methodology developed in this study, as well as a focus on developing, implementing and evaluating similar surveillance systems in other communities. By participating in their own violence prevention initiatives, communities no longer place the full responsibility for reducing crime on the government.

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