

Vulnerability to homicide in Karachi: political activity as a risk factor

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Background	Previous studies analysing Karachi ambulance data from 1993 to 1995 identified neighbourhoods in Karachi disproportionately affected by homicide. As a step toward developing intervention programmes to curb violence, we conducted a study to identify risk factors for becoming a homicide victim in a high violence area of Karachi.
Methods	We interviewed families of 35 cases, individuals intentionally killed through acts of violence between January 1994 and January 1997, and 85 community-based controls frequency matched by sex, from Orangi, a high violence area of Karachi.
Results	Most of our cases and controls were male (97% and 92%, respectively) and had similar socioeconomic and ethnic backgrounds. All the victims were killed by firearms; 4 (11%) had been tortured prior to death. Most of the victims were killed in the streets ($n = 25$, 71%). Of these, 7 (36%) had been killed by law-enforcement officers, while 6 (24%) died from indiscriminate firing. People who were killed were 34 times more likely to have attended all political processions (29% versus 1%, odds ratio [OR] = 34; 95% CI: 4–749, $P < 0.001$), 19 times more likely to have attended political meetings (31% versus 2%, OR = 19; 95% CI: 4–136, $P < 0.001$), and 17 times more likely to have held an important position in a political party (29% versus 2%, OR = 17; 95% CI: 3–120, $P < 0.001$) than controls.
Conclusions	Homicide in Orangi was political. Efforts to improve trust between ethnic groups and to build legitimacy for non-violent forms of conflict resolution are important steps to limit future violence.
Keywords	Political violence, homicide, Pakistan, risk factors for homicide, organized violence, ethnicity
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Homicide, defined as fatal injuries inflicted by another person with intent to injure or kill,¹ causes over 500 000 deaths per year worldwide.² According to ambulance service data in Karachi, Pakistan, between October 1993 and January 1996, 4091 people sustained violent injuries and were subsequently transported to a medical facility. Of these, 2400 (58%) died en route to a

hospital emergency room, hence becoming homicide victims. Of these victims of violence, 95% were males under the age of 30 years, and 46% of the violent injuries were sustained in only 4 of the city's 41 neighbourhoods.³ These four neighbourhoods were dominated by a single ethnic group,³ Mohajirs, people and their descendents who had migrated to Pakistan at the time of partition from India in 1947.

Homicide is a common endpoint of many different behavioural pathways⁴ including arguments between acquaintances, escalating domestic violence between spouses, robberies perpetrated by strangers and organized political violence. Organized violence is violent behaviour that strives to achieve the specific political, economic, or social objectives of a social or political group.⁵

The different behavioural pathways of homicide call for different preventive strategies. As a step toward developing sound preventive strategies, we conducted a study to identify group characteristics of homicide victims, and to evaluate risk factors for homicide at the individual level in a high violence, low

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socioeconomic area of Karachi, Pakistan. We hypothesized that homicide in these neighbourhoods was a result of organized political violence and so people who were politically active would be at increased risk of homicide.

Methods

We conducted a case-control study in Orangi, the largest squatter settlement in Karachi with an estimated population of 1.2 million.⁶ While there are a number of ethnic groups settled in this area, Mohajirs, which literally means refugees, the Muslim immigrants from India who emigrated to Pakistan in 1947 at the time of the partition of Muslim Pakistan from India, are the predominant ethnic group. Ambulance records note that Orangi had the second highest number of individuals with intentional injuries from 1993 to 1995.³ These included 243 people who were either dead at the scene or died during transport to the hospital. Their mean age was 32 years (range 6–85); 97% were male and 93% were killed by a firearm (Habib Chotani, personal communication). We chose to study Orangi, rather than Korangi a similar squatter settlement, but with the highest number of violent injuries, because the Orangi Pilot Project, a trusted community-based organization, was willing to co-operate with the project. The Orangi Pilot Project is a non-governmental organization which has focused primarily on developing low cost sanitary latrines and sewer lines in Orangi using local financial and managerial resources.⁶ Their principle methodology involves identifying leaders in the community, providing them training in community organization and technical details, and then providing ongoing guidance and supervision. In addition to improved sanitation, community development efforts have been expanded to include a low cost housing programme, primary health care, family planning and a micro credit programme to support small family enterprises. Through its years of service in the community, the Orangi Pilot Project is generally trusted by the community, and this made the study team's access to people's homes and discussion of the sensitive subject of homicide possible. In some areas where the Orangi Pilot Project was not as active, Orangi Pilot Project representatives introduced the study team to other community-based organizations that identified a few additional cases.

We defined cases as individuals who lived in Orangi and were killed in Orangi between January 1994 and January 1997, due to intentional violence, by firearms, sharp or blunt trauma.

Karachi's municipal government divides Orangi into 103 neighbourhoods. We focused on identifying cases in the 15 neighbourhoods within Orangi, which Orangi Pilot Project workers identified as the highest violence neighbourhoods in the area. Field workers from the Orangi Pilot Project directly identified households within these neighbourhoods where they knew someone had been killed. In a few cases they also contacted other social organizations in the community to help identify homicide victims they were aware of in the community. The study team was introduced to each household which had suffered a homicide by members of the Orangi Pilot Project or other community-based organizations.

A prior study had already demonstrated that being a male aged 20–40 years was a risk factor for violent injury.³ We were interested in understanding specific behaviours that put this group at risk.

We recruited controls from a subset of households enrolled in a related study conducted at the same time in the same 15 neighbourhoods. The objective of this related study was to evaluate the health burden of violence in these communities. The Orangi Pilot Project provided maps and population estimates of the 15 neighbourhoods they characterized as 'high violence'. The sample size for the Burden of Violence Study was 350 households. The Burden of Violence Study team calculated the number of households to be approached per neighbourhood proportional to the population in each neighbourhood. A point on each neighbourhood map was randomly chosen as the starting point for the neighbourhood. The study team approached the closest house to the identified starting point and if household participants consented, interviewers completed a burden of violence questionnaire. Next, the study team identified the fourth closest house, and requested their participation in the study. This process was repeated until the prescribed number of households in that neighbourhood had been approached. The control questionnaire for this risk factor case-control study was administered to the first household in each neighbourhood that participated in the burden of violence study, and then every fourth participating household from each neighbourhood.

The interview team designated any individual in the 18 to 60-year age group in the household as a control, provided there were no other family members that fitted the case definition. They enrolled one female control for every nine male controls, because previous studies suggested that males were nine times more likely to be victims of violence than females.³ When there was more than one potential control in the same family, the interview team chose the head of the family or the eldest child depending on who was in the 20 to 40-year-old age category. All the cases and controls were enrolled between November 1996 and January 1997.

We attempted to administer the questionnaire to the wife of the study subject; if she was inaccessible or unwilling to participate, we administered the questionnaire to the wife of the head of the household. Since the controls were not enrolled as pairs with the cases, though they came from the same general neighbourhoods as cases and were frequency matched assuming an age structure and sex ratio similar to ambulance data available at the initiation of the study, we conducted a non-pair matched analysis. We compared the prevalence of potential risk factors between cases and controls using odds ratios (OR), calculated CI using maximum likelihood estimates, and evaluated the probability of random sampling error using the χ^2 test or the t-test as appropriate. To evaluate if the associations between political involvement and homicide were a result of confounding by age, we calculated an age-adjusted OR by stratifying the analysis for people above and below the median age of the study population (30 years), and calculating a maximum likelihood estimate summary OR and exact CI. We used Epi-Info⁷ software for all statistical calculations.

Results

Of 37 cases identified by community organizations in high violence areas of Orangi, 35 (95%) agreed to participate in the study. Of the 350 households approached in the burden of violence study, 309 (88%) consented to participate. All 85 households who participated in the burden of violence study

and who were asked, agreed to be interviewed as control households for the case-control study. Thirty-four (97%) of the cases and 78 controls (92%) were males. The mean age of the cases was 27 years (range 16–60 years) and they had completed an average 7 years of education. Most of the cases worked as tailors (18%), unskilled factory workers (18%) or had been unemployed (15%). Their mean personal income was 3000 rupees (US\$65) per month. They came from households with an average of nine members and a median household income of 6000 rupees (US\$ 129) per month. Within the family, the son of the head of the family was most often the victim (71%) followed by the head of the family (20%). Controls were a mean 5 years older than cases, but had a similar socioeconomic background (Table 1). Although family sizes of cases and controls were similar, case households had more sons (2 versus 1.5; $P < 0.001$). Most of the cases and controls were ethnically Mohajirs (94% and 93%, respectively).

All 35 victims were killed by firearms. Four (11%) were tortured prior to death. Methods of torture included beating with wires and ropes, breaking of limbs, cigarette burns and drilling of holes in the eyes and body. Most of the victims were killed in the street ($n = 25$, 71%), 7 (28%) reportedly by law-enforcement personnel, and 6 (24%), including the only female case, by indiscriminate firing (i.e. apparently random firing by

unknown assailants). Twelve cases (31%) were arrested prior to the incident; 3 (25%) of whom were subsequently killed while in police custody. None of the cases had a previous history of being injured due to violence, nor did any come from households in which such injuries had occurred.

Individuals who were killed were 13 times more likely to be an active member of a political party (OR = 13; 95% CI: 2.9–62.9; $P < 0.001$). By almost all measures of participation, cases were substantially more likely to be involved in political activities than were controls (Table 2). For example, people who were killed were 34 times more likely to have frequently attended political processions, 19 times more likely to have attended political meetings, and 17 times more likely to have held an important position in a political party. Adjusting the analysis for the age difference between cases and controls did not substantially affect these results (Table 2).

People who were killed in Orangi were six times more likely to have been previously arrested than controls (65% versus 35%; OR = 6.0; 95% CI: 1.8–21; $P < 0.001$). Similarly, cases were 12 times more likely to come from families in which another family member had been arrested (80% versus 20%; OR = 12; 95% CI: 2.2–91; $P < 0.001$).

Among people who were politically active, those who were killed were no more likely to be arrested than controls (45%

Table 1 Socioeconomic status of homicide victims versus controls in Orangi, Karachi, Pakistan, 1995–1997

	Homicide victims (n = 35)	Controls (n = 85)	P-value ^a
Mean age	27	32	<0.001
Average years of education	7	8	0.2
Mean family size	9	8	0.2
Mean number of sons in family	2	1.5	<0.001
Occupation			
Unskilled labourers	6 (18%)	10 (12%)	0.5
Tailors/embroiderers	6 (18%)	8 (9%)	
Weavers	1 (3%)	8 (9%)	
Other	6 (18%)	23 (27%)	
Unemployed	5 (15%)	13 (15%)	
No response	11 (32%)	23 (27%)	
Average income	Rs 2924 (US\$62)	Rs 2839 (US\$61)	0.9
Frequency of wages received			
Daily	10 (35%)	11 (16%)	0.3
Monthly	11 (38%)	37 (54%)	

^a P-values were calculated by χ^2 for categorical variables and student's t-test for continuous variables.

Table 2 Involvement in political activities as a risk factor for homicide in Orangi, Karachi, Pakistan, 1995–1997

Political activity	No. (%) of cases involved N = 35	No. (%) of controls involved N = 85	Odds ratio (95% CI)	Age-adjusted odds ratio ^a (95% CI)
Frequently attended processions	10 (29)	1 (1)	34 (4–749)	32 (4–1544)
Attended meetings	11 (31)	2 (2)	19 (4–136)	19 (3–203)
Held meetings at home	1 (3)	0 (0)	Undefined	Undefined
Considered a community leader	5 (14)	1 (1)	14 (2–336)	21 (2–1178)
Held an important position in the party	10 (29)	2 (2)	17 (3–120)	12 (2–122)
Involved in conflicts	2 (6)	0 (0)	Undefined	Undefined

^a Age adjustment was performed by stratifying above and below the median age of the study population, and calculating a maximum likelihood estimate summary odds ratio and exact 95% CI.

versus 66%; OR = 0.42; 95% CI: 0.1–9.7; $P = 0.52$). However, among those who were not politically active, people who were killed were much more likely to have been arrested (25% versus 5%; OR = 6.5; 95% CI: 1.4–31.7; $P = 0.003$).

Discussion

The epidemiology of homicide in Orangi is most consistent with organized political violence. All of the risk factors significantly associated with becoming a homicide victim (attending a political procession, attending a political meeting, being considered a community leader and holding an important position in the local political party) were measures of political activity. Organized political violence is consistent with 46% of the violent injuries in the city being isolated to four of the city's 41 neighbourhoods that are Mohajir dominated enclaves.³ Cases and their families were much more likely to be arrested than controls. Amnesty International reports that unrecorded arrests and interrogation are commonly used in Karachi to intimidate political opponents.⁸

The competition for political power in Karachi is divided along ethnic lines, principally between the Mohajirs who emigrated in 1947 and the native Sindhis.⁹ Glazer and Moynihan suggest that the root of contemporary ethnic conflict typically lies in competition for control of the finite economic resources of the state.¹⁰ Gallagher notes the central role that political leaders play in fomenting ethnic conflict.¹¹ Political leaders often distort or selectively interpret history to create an ethnic myth to mobilize their constituency. They appeal to this ethnic myth to legitimize what are basically personal, political or common material interests. In Karachi the conflict between Mohajir and the Sindhi ethnic group became more violent in the mid 1980s with the end of martial law and open competition for control of governmental power.⁸

Zwi and Ugalde describe a cycle of political violence where repressive violence is directed by the state at people living within it, usually when a government attempts to rule not in the interest of the nation as a whole, but in order to serve the political or economic objectives of a small ruling elite.^{5,12} Opposition groups, lacking the constitutional means of expressing their views, resort to terrorism. Although not a part of this study, terrorism by Mohajir groups against Sindhis and other government supporters is well documented.⁸ Governments launch repressive campaigns to reaffirm their authority, using state terror, disappearances, torture and indiscriminate killings, which in turn leads to an escalation of violence, and counter violence with spill-over effects on other communities and strains on the bonds that sustain civil society.^{5,12,13} Indeed, in this study, a minority of all homicide victims were politically active.

There are important limitations to this study. First, this study focused on a single area of Karachi and the dynamics of homicide in this area may not be representative of the causes of violence throughout the city. Indeed, there was not as much diversity in ethnicity and socioeconomic status as would be found if neighbourhoods throughout Karachi were studied. Thus, ethnicity as distinct from political activity, and poverty may be risk factors for homicide. However, there was substantial variation in socioeconomic status within Orangi, and we found no difference in income, occupation, or education among cases and controls.

A second limitation is that Orangi was a politically charged community. Some of the contacts who helped us identify homicide cases likely had strong political sentiments and may have been particularly aware of politically active people who were murdered, and so these may have been over-represented among cases. However, since the Orangi Pilot project and the other community-based organizations that identified homicide cases were not political organizations we would not expect them to disproportionately identify homicides of politically active people. Indeed, the parameters available for comparison—age, sex, and percentage of victims killed by firearms—were similar between homicide victims enrolled in the case series and those listed in ambulance data from Orangi. Moreover, there is no available objective method to identify all homicide victims in Karachi. Previous studies of road traffic injuries in Karachi, for example, demonstrated that police records identified only 56% of the deaths and 4% of serious injuries.¹⁴ We chose to have the organizations closest to the community identify the homicide victims.

A third limitation of the study is that all information for the case's homicide was collected from family members. Family members were often not eyewitnesses and the people supplying information to families may have been biased in reporting events, especially in the identification of the perpetrators of the homicide.

A fourth limitation is that the families who contained the individuals killed might have been less threatened by reporting political activity than families with living people. However, considering that both cases and controls lived in extended family households and had other sons alive, we believe that they were equally likely to be forthcoming in their accounts of the political affiliations of family members.

The political situation in Karachi has changed since this study. An election replaced the civilian government in February 1997, and a military coup removed the civilian government in October 1999. The number of homicides in Karachi, which peaked in 1998, has reportedly decreased 10-fold in 1999/2000.¹⁵ Nevertheless, this study demonstrates that ethnic and political tensions in Karachi represent an ongoing risk for violence. Efforts to improve trust between ethnic groups, and build legitimacy for non-violent forms of conflict resolution will be important steps to limit future violence.

KEY MESSAGES

- Prior studies in Karachi, Pakistan demonstrated that males aged 20–40 years were at greatest risk of becoming homicide victims.
- This study, conducted in a high violence neighbourhood in Karachi, found that homicide victims were much more likely to be politically active than controls of similar age and sex.
- This suggests that organized political violence contributes importantly to homicide in Karachi.

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Commentary: Studying political violence: we should push for more from epidemiology

Anthony B Zwi

There is limited analytical work examining the epidemiology of political violence and state repression: the paper by Mian *et al.*¹ appearing in this issue of the *International Journal of Epidemiology* is a useful contribution to an under-explored field. While numerous publications concerning epidemiology and public health and war, refugees, exile and asylum, have emerged in the last two decades, reflecting the increased attention being devoted to humanitarian issues, debate on state violence and of the risks faced by those challenging the policies of undemocratic states is often neglected. This reflects, in part, the risks faced by both researchers and their informants in such politically charged environments.

The difficulties of conducting epidemiological work in situations of conflict were explored by Armenian^{2,3} from his experience in Beirut more than a decade ago. Among the difficulties identified by him and others⁴ are the fact that wars and instability are dynamic, constantly changing and adapting, as are the affected populations, many of which may respond by migrating. This makes enumeration difficult: neither numerators nor denominators are stable. Surveillance systems may be undermined or paralysed by lack of resources: skills, materials,

and money. A dearth of trained personnel means that whatever limitations were previously associated with routine data collection and analysis may be further compromised. Security concerns on the part of both researchers and participants in research may undermine the validity and completeness of data collection; with researchers themselves often facing risks, or perceiving risks, to their own security.

The authors of this report have done well to uncover a human rights problem, and using traditional epidemiological techniques, to reveal aspects of its magnitude and form. Mian *et al.* employ a case-control study design to examine the risk factors for homicide in a low socioeconomic area of Karachi, Pakistan, over the period 1994–1997. They focus on a neighbourhood in which homicide levels were particularly high, and in which the Mohajir community, descendants of Indian Muslims who fled to Pakistan in 1947, are the main ethnic group. The paper concludes that the victims of homicide were far more likely than controls to have been politically active.

The authors identify the key limitations of their research. Two methodological concerns stand out head and shoulders above the others: these relate to the potential for both selection and information biases. Firstly, the cases were victims of homicide identified through local community organizations. Could these cases have been selected *because* they were politically active, hence

revealing, as a result of this bias, a much greater relative risk of political involvement, however measured? It is difficult to assess the potential magnitude of such a bias, although the authors seek to reassure us that the community organizations involved were not politically active *per se* and would not have had any motive for selectively identifying cases with greater degrees of political involvement.

Secondly, the authors identify a risk of information bias. In particular, information elicited from the families of the controls. They were live members of the same communities from which the homicide victims had been identified and may have been much more reluctant to reveal details of political leadership and participation than the equivalent family informants of the cases, who had been killed earlier. Such an information bias may arise in any situation of political instability and victimization, in which family members would have sought to protect their live family members by denying any involvement in politics, while the opposite may be true among family members of those who had died, about whom there may have been greater willingness to reveal evidence of political involvement, especially at an organizational level. Both these biases would have served to increase assessment of whether homicide victims in Pakistan in the period concerned were more likely to have been politically active than general members of their communities.

The methodological limitations need to be considered alongside the work, but do not invalidate it. In fact, evidence from human rights organizations confirms that the groups identified as at increased risk of political violence in this study had been widely targeted by state security forces in Pakistan in the mid-1990s.⁵

Classical teaching in epidemiology suggests that we err on the side of conservatism and that the methods adopted underestimate rather than overestimate risks. Being provocative, one could highlight a potential ethical question here as this insensitive approach may lead to an under-identification of risks to the health of communities, especially worrying where these risks are imposed by others, such as the state and its associated security forces as in this case.

Developing and refining models and frameworks to understand the circumstances in which violence against individuals and groups occurs is an important challenge. The authors refer to ethnic violence as the main problem. However, in many places where 'ethnic' violence has been examined, other inter-group differences, whether in relation to socioeconomic status or access to political power, for example, are present. Ethnicity or religious identity may be used by unscrupulous leaders as a rallying point in order to rationalize discrimination, repression or structural violence. The work by Mian *et al.* highlights the importance of understanding the context within which violence occurs in communities. While we have the bones of an analysis, there is far more to understand, emphasizing the importance of interfacing public health and epidemiology with anthropology, political science, history and sociology, among others. A particularly worrying feature of the study presented here was the involvement of the police and other security forces, groups which under normal circumstances should be charged with protecting the security of the community, not threatening it.

Later this year the World Health Organization will release the first World Report on Violence⁶—an attempt to place the issue of violence on the public health and policy agenda. It will seek to stimulate debate around the pressing need to respond to

violence at all levels in society and will devote particular attention to the need to develop more effective interventions, involving a range of sectors, to the range of forms of violence affecting all societies.

This study is valuable and more like it are to be encouraged: placing experience from the micro-level into the public domain serves a purpose in allowing such material to be contested and debated. If there are other explanations for the unusual patterns of violence presented here, they should be offered for debate. If what is presented is an accurate representation of the forms of abuse taking place in the time and place studied, then other issues demand our attention, such as whether such trends could be detected much earlier on in order that advocacy around prevention and human rights promotion could be supported with data at a time when it might have made a difference.

There remain immense challenges in how health-related organizations can work with human rights groups to promote a safer and more secure environment: more accurate identification of problems and abuses is one important step along the way.⁷ As stated by Leaning: 'From the human rights perspective people are approached as persons who can claim rights from the state and must be protected from the predations of power.'⁸ A recent analysis of the role of health professionals in South Africa under apartheid draws attention to how physicians and health workers generally played a role both in perpetrating and perpetuating apartheid, while others in the profession both individually and collectively played a crucial role in opposing the abuses under apartheid.⁹ Drawing on the health submissions to the South African Truth and Reconciliation Commission places it in the public domain. It is a valuable catalogue and analysis of the complicity of apartheid-supporting professionals and of the many activities which concerned professionals and their organizations engaged in as part of the anti-apartheid struggle.

Epidemiology and public health must engage in the study of political violence, of its effects, and in responding to it, if we are not to hear, time and time again, the lament that 'good men stood by'.

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