

# Human rights abuse and other criminal violations in Port-au-Prince, Haiti: a random survey of households



Athena R Kolbe, Royce A Hutson

## Summary

**Background** Reliable evidence of the frequency and severity of human rights abuses in Haiti after the departure of the elected president in 2004 was scarce. We assessed data from a random survey of households in the greater Port-au-Prince area.

**Methods** Using random Global Positioning System (GPS) coordinate sampling, 1260 households (5720 individuals) were sampled. They were interviewed with a structured questionnaire by trained interviewers about their experiences after the departure of President Jean-Bertrand Aristide. The response rate was 90·7%. Information on demographic characteristics, crime, and human rights violations was obtained.

**Findings** Our findings suggested that 8000 individuals were murdered in the greater Port-au-Prince area during the 22-month period assessed. Almost half of the identified perpetrators were government forces or outside political actors. Sexual assault of women and girls was common, with findings suggesting that 35 000 women were victimised in the area; more than half of all female victims were younger than 18 years. Criminals were the most identified perpetrators, but officers from the Haitian National Police accounted for 13·8% and armed anti-Lavalas groups accounted for 10·6% of identified perpetrators of sexual assault. Kidnappings and extrajudicial detentions, physical assaults, death threats, physical threats, and threats of sexual violence were also common.

**Interpretation** Our results indicate that crime and systematic abuse of human rights were common in Port-au-Prince. Although criminals were the most identified perpetrators of violations, political actors and UN soldiers were also frequently identified. These findings suggest the need for a systematic response from the newly elected Haitian government, the UN, and social service organisations to address the legal, medical, psychological, and economic consequences of widespread human rights abuses and crime.

## Introduction

In February, 2004, an armed insurrection overthrew Jean Bertrand Aristide, the democratically elected president of the Republic of Haiti. Since that time, supporters of Aristide and Haitians who align themselves with the movement of which he was part (Lavalas), have accused UN troops, the Haitian National Police (HNP), personal militias hired by private citizens, and military irregulars associated with the disbanded Haitian army, of mounting a campaign of human rights abuses aimed at members of the Lavalas political party.<sup>1</sup> Leaders in the interim Haitian government, members of the Civil Convergence political movement opposing the Aristide government, and other political groups have countered with claims of rampant human rights abuses by Lavalas partisans and pro-Aristide gangs in the country's impoverished urban neighborhoods.<sup>2</sup>

The number of people in Haiti who experienced human rights violations since the departure of Aristide on February 29, 2004, was uncertain. Claims ranging from several hundred to more than 100 000 have been made.<sup>3</sup> Neither the UN, which has had a peacekeeping presence in the country since mid-2004, nor the Haitian government, had a firm estimate of the human rights violations that have been committed or the identity of the perpetrators.<sup>4</sup> Qualitative studies from the US State Department,<sup>5</sup> Human Rights Watch,<sup>6</sup> Amnesty Inter-

national,<sup>7</sup> Freedom House,<sup>8</sup> and the University of Miami<sup>9</sup> indicated that gross human rights abuses had occurred and perhaps even increased in frequency and severity under the interim Haitian government. The human rights abuses reported included extrajudicial killings, prolonged illegal detentions, politically motivated executions, and physical and sexual attacks.

We aimed to use survey research to estimate the number of victims and patterns of perpetration of human rights violations in the population of the greater Port-au-Prince metropolitan area between Feb 29, 2004 and December 2005.

## Methods

### Sampling techniques

Standard random sampling techniques for survey research, such as stratified and cluster sampling, often cannot be used in developing countries because they require publicly available census data or address lists. This challenge can be overcome through advances in geographical information systems. The availability and affordability of Global Positioning System (GPS) locators enable random sampling of households in communities without address lists, telephone numbers, or other household identifiers commonly used in sampling methods. GPS locators allow the user to identify the latitude, longitude, and altitude of their location. Random

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Wayne State University, School of Social Work, Thompson Home, 4756 Cass Avenue, Detroit, MI 4802, USA  
(R A Hutson PhD,  
A R Kolbe MSW)

Correspondence to:  
Dr Royce A Hutson  
roychutson@wayne.edu

GPS coordinate sampling is increasingly being used in geology, seismology, and botany research.<sup>10</sup> It has also been used as a sampling method in marketing studies and in public-health research in rural areas<sup>11</sup> and war-torn countries.<sup>12</sup> Random GPS coordinate sampling differs substantially from more traditional selection techniques in that lists of addresses or other such identifiers are not used in the selection process. Instead, selection is based on randomly determined spatial location. The geographical boundaries of the area examined are determined before selection, and then GPS locations within the specified boundaries are randomly generated.

We wished to achieve a 95% CI of about plus or minus 1000 households. Because no reliable estimates of the average size of Port-au-Prince households were available at the time of the survey, the precision of the sample size was calculated at the household level. Assuming a Poisson distribution and a 10% response rate for any given violation during the 22-month period examined (crude rate 5455 per 100 000 per year), about 1100–1200 randomly selected households were deemed necessary. We assumed that about 15% of randomly generated points would be uninhabited, and that 10% of the sample would be non-responders. We therefore selected 1500 random GPS coordinates within the boundaries of the greater Port-au-Prince area.

Simple random sampling was chosen as the preferable sampling method for this study. Reliable data on population numbers were not available at the time of this survey, making probability proportion to size cluster sampling unfeasible. When a single unit dwelling was located at the randomly generated GPS point, that household was selected. The GPS locators were accurate to within 10 feet. When the GPS location was not a residence, but more than one residence was located within 20 yards, all household within 20 yards were identified and the location to be surveyed was randomly chosen from among all identified households. Randomisation was achieved with a technique commonly used to choose randomly in Haitian culture (*jwèt chans*). A rock was put in a bag for each household identified, with one rock demarcated as the selector. A rock was chosen for each household until the selector was chosen. The household whose turn was up when the selector rock was chosen was then chosen for the survey. When the GPS location was a multi-unit dwelling, all households within the dwelling were identified. Random selection was then achieved with the aforementioned technique.

For the purposes of this study, residence was defined as the permanent home of a household. Households living in substandard structures consisting of tin or cardboard shacks were included regardless of whether they had a legal right to reside on the land, but only if the structure was their primary residence, they intended to continue living in the structure, and the structure had existed for at least 30 days. In the event that several households were located in one structure, the

participating household was chosen randomly using the method described above.

During a 1-month period ending Dec 24, 2005, a research team visited each location up to four times until an adult (18 years old or older) household member was located. The research teams consisted of at least two people. An attempt was made to include at least one female researcher with each team, although this was not possible on some occasions; a male-only research team interviewed 283 of the 1260 households (22·5%). Interviewers were university graduates who spoke fluent Haitian Kreyol. All but one of the interviewers was Haitian. Because of the politically polarised nature of the human rights situation in Haiti, none of those chosen to be research team members were politically active beyond voting in elections. None of the interviewers were a current or past member of the Lavalas or Lespwa political parties. Interviewers assisted in field-testing and revision of the survey instrument.

At each residence a researcher requested an interview with the head of the household to whom he or she explained the purposes and risks of the study. Informed oral consent procedures were completed for all adult household members who were present. The survey was administered to whichever adult household member present had had the most recent birthday. In the event that a household member did not know his or her birthday, the adult surveyed was randomly chosen. No material incentives were given to participants.

A researcher orally administered the survey. Respondents were reminded periodically throughout the survey that they had the right not to answer a question if they did not want to. Respondents who did not feel comfortable speaking freely enough to complete the survey at their home were allowed to choose an alternative location in which to meet. Four respondents took advantage of this option.

This study was approved by the Wayne State University Human Investigations Committee.

### Information collected

The survey began with a list of household members and their birth year, employment status, education level, student status, and relationship to the respondent. Interviewers also asked about the status of the individual in the household, to ascertain that the individual was still a part of the household and whether he or she had resided in the home before Feb 29, 2004, or had become part of the household after that date.

Because the concept of household is not readily understood in Haitian culture, interviewers defined the term for respondents by saying, "Your household is you and all the people who live in the same home with you and with whom you share finances, food, and living space. This includes people such as a boyfriend or girlfriend who lives with you all the time and a friend or relative's child that lives with you and that you care for."

Individuals were not included as a member of the household if the home was not their primary residence. Household members working as domestic servants in another location who were provided with housing and required to live at that other location as a condition of their employment were included in the household only if the majority of their belongings were stored at the surveyed location, if they had a permanent sleeping space such as a mat or bed available to them at the surveyed location, if their income was part of the household income, and if they intended to return to the household at the conclusion of their employment.

Household members were only included if they resided in the house during the 22 months studied. Murder victims were not included in the calculation of rates of other violations. The questionnaire queried whether the member had exited, entered, or re-entered the household after Feb 29, 2004. However, the date of entry or exit was not established. For the purpose of calculating crude rates, all members were considered conservatively to be household members for the full 22 months examined.

The main section of the survey asked respondents for retrospective information about his or her experiences and the experiences of other household members with human rights and crime in the 22 months since the departure of Aristide on Feb 29, 2004. Researchers attempted to reduce errors in subject recall, particularly with the dates of incidents, by asking probing questions and referring to a calendar that had been filled in with the dates of significant events that could be used by respondents to pinpoint the exact time during which the human rights violation occurred. Categories of acts that took place during the incident (eg, beating on the soles of the feet) were taken from a standardised list provided by HURIDOCs.<sup>13</sup>

For each question regarding events experienced by the respondent, a standard set of information was collected including the date, the perpetrator of the violation (if known), where the event took place, and the circumstances of the violation. For the sections on murders, physical assaults, sexual assaults, arrests, and detentions of household members, the same information was obtained. Additionally, the respondent was asked what his or her relationship was to the victim (eg, cousin, wife). The incident was then linked to the victim, assuring that only information about people residing in the household during the study period was recorded (and not, for example, information about extended family members living elsewhere). For each section of the survey, space was allocated to record several events for the same individual.

The respondent was asked whether any household member had been the victim of a property crime since Feb 29, 2004. Property crimes were defined as larceny, robbery, vandalism, destruction of personal property, and the expropriation of land or land deeds. Breaking and entering was not recorded as a property crime

unless the respondent also reported a theft during the incident. Each respondent who said yes was asked to provide details, including the value of stolen or destroyed property.

Next, the respondent was questioned about arrests or detentions by members of the Haitian National Police or foreign military. Although being arrested is not necessary a violation, preventing access to legal representation, not releasing those who have been ordered free by a judge, and patterns of arbitrary arrests and prolonged detentions can be indicative of systematic human rights violations. Respondents who claimed that they or a member of their household had been detained by the police or foreign soldiers were asked to provide specific details about the event, including whether the arrested person saw a judge within 48 h, as is mandated by the Haitian constitution,<sup>14</sup> had been released, and had been allowed to see an attorney.

Amnesty International and other international human rights organisations described extrajudicial detentions in parts of Haiti where ex-soldiers and armed anti-Lavalas leaders acting as de facto government agents were arresting their opponents by abducting them and then holding unofficial trials.<sup>15</sup> Respondents were asked if they or a member of their household had been detained by anyone other than the Haitian National Police or foreign military. Those who responded yes were questioned about the circumstance, including the length of time the person was held and whether they had been released.

The householder was then asked if they or a household member had actually been physically attacked. Physical attacks were defined for the respondent as "incidents where someone physically harms or tortures another person on purpose". Respondents were also asked to detail the specific content of the assault such as whether instruments (eg, a machete, gun, or lit cigarette) were used and the method (eg, beating the soles of the feet) used to hurt them. Respondents were also asked if the assault took place while the victim was under arrest or in detention.

Respondents were asked if they had been forced to do something sexual or watch something sexual that they had not wanted to do or see. Those who said yes were asked about the exact acts committed during the sexual assault. The householder was then asked if any household member had been sexually assaulted and the standard questions regarding the incident.

Respondents were asked how many members of their household had been killed since Feb 29, 2004. Only household members who were murdered were included. Deaths due to accidents or attributable to illness were not included. For each murdered household member, the respondent was asked the method by which the person was killed and the circumstances surrounding the death.

Respondents were also asked if they had been threatened with death, physical injury, or forced sexual contact. For each section, the number of separate

incidents was recorded for each perpetrator. Incidents of death threats that included other physical threats were excluded from the physical threats section. In the event that several threats had been made during the same incident, only one threat was recorded. The same format was used for questions about threats of death, physical injury, or forced sexual content made to other household members.

For each section, perpetrators were grouped into seven main categories and interviewers asked probing questions as needed to ascertain to which group the perpetrator belonged. The categories included: HNP, former members of the Haitian Army that was disbanded in 1995, members of an organised anti-Lavalas paramilitary group (eg, Lame TiMachete), partisans of the unarmed anti-Lavalas political movement (eg, Democratic Convergence, GNB, or Group of 184), members or partisans of Lavalas, criminals, unidentified masked armed men, foreign soldiers, and others (including neighbours, friends, and family members). Perpetrators from the HNP were further grouped under three subcategories: HNP officers who were wearing uniforms; specialised security agents including HNP riot police, CIMO (Special Forces Crowd Control), the palace security, and the HNP anti-gang unit; and HNP officers not wearing uniforms. Foreign soldiers were grouped on the basis of their country of origin, if known. CIVPOL officers (blue-helmeted civilian police serving with the HNP as part of the UN force) were coded as foreign soldiers rather than as police officers.

Criminals were defined as individual perpetrators who were not associated with or acting on behalf of any government or political group. Although human rights violations are criminal acts, for the purposes of this study human rights abuse was defined as crimes committed by political actors. The assumption of this definition is that these criminal acts are for political purposes. This definition presents challenges because the motivation of an individual perpetrator is unknown. However, whereas isolated incidences of crimes by individual political actors might occur, when patterns of abuse by various political actors emerge it could be concluded that systematic human rights abuses are occurring.

#### Data analysis

Data were entered with SPSS (version 13.0). A third of all cases were randomly selected to be double entered and then compared with the first file to check for systematic data entry errors. Each individual case file was then examined and compared with the original paper documents to check for accuracy. Data examination and organisation was done with SAS (version 9.1).

Data were analysed with SAS (version 9.1) and SPSS (version 13.0). We calculated the number of reported homicides, physical assaults, sexual assaults, property crimes (theft, looting, and vandalism), death threats,

threats of sexual violence, detention by government authorities, and kidnappings. Data were calculated at both the household and individual level. Percentages stated in the text represent proportions of the random sample; 95% CIs are provided for the purpose of extrapolation to the overall population. For calculating all crude rates the following equation was used: number of incidents/number of person-months lived in household $\times 12 \times 100\,000$ . For murders, victims were only included in the overall sample for calculation of the crude murder rate, and not for calculations of rates of other types of crime. Property crimes were reported at the household level due to the structuring of the question. To estimate the total number of victims in the region, we applied crude rates to the estimated population of the greater Port-au-Prince area in 2003 (2121000).<sup>16</sup> For all rates, a Poisson distribution was assumed for the purpose of calculating the confidence intervals.

Because the sampling method was not self-weighting, households in denser neighbourhoods might have been undersampled. Reports suggest that a substantial proportion of human rights violations occurred in the more densely populated regions of Port-au-Prince.<sup>15</sup> If more violations occurred in the denser communities, the sampling method used in this survey could have resulted in an undercount of violations. We therefore did a post-stratification analysis to assess whether rates of victimisation for murder, sexual assault, and physical assault differed between so-called popular zones (dense communities in Port-au-Prince) and other zones. Rates of adult high school graduation, age, and income were also compared between the two types of zone.

#### Role of the funding source

The sponsor of the study had no role in study design, data collection, data analysis, data interpretation, or writing of the report. The corresponding author had full access to all the data in the study and had final responsibility for the decision to submit for publication.

#### Results

Of the 1500 sites, 32 were invalid because the location was impassable. Another 79 sites were invalid because they were located more than 20 yards from a currently occupied residence. A final list of 1389 valid locations was established. At 51 locations, an adult household member was present when the researchers approached the residence but he or she refused to participate in the study. At 77 locations the residence was visited at least four times and an adult household member was never located. One household was removed from the dataset because the research team paid for the medical treatment of a household member who had been sexually assaulted. The remaining 1260 households were successfully surveyed and remained in the dataset, giving a response rate of 90·7%.

The 1260 households interviewed accounted for 5720 residents during the survey period. The average

household size was 4·5 individuals (95% CI 4·4–4·7). Of residents surveyed, the median age was 25 years old with an average age of 27·0 years (SD 16·3). Residents aged younger than 16 years accounted for 28·3% (n=1618) of the sample, while those younger than 20 years accounted for 38·4% (2198). 52·7% (3014) of the overall sample were female.

The educational attainment of this sample was limited. Of adults (18 years old and older), 23·2% (870) had graduated from secondary school. However, only 15·9% (596) passed the state graduation exam. Of school-aged children (5–17 years old), 53·5% (910) were not currently enrolled in school.

Most of the sampled households had low incomes. The median yearly household income was 62 400 gourdes per year (US\$1543 per year). Of the sample, 62 households (4·9%) had incomes of less than 15 000 gourdes per year (\$371), 270 households (21·4%) less than 30 000 gourdes per year (\$742), and 412 households (32·7%) less than 45 000 gourdes per year (\$1112).

On the basis of anecdotal reports from social services providers, the sample seemed to be demographically and economically representative of the population of the Port-au-Prince metropolitan area. However, no reliable quantitative data on the demographic characteristics of Port-au-Prince were available at the time of this study to compare with our sample.

The crude rates and estimated numbers of victims of each type of human rights violation are shown in table 1. 23 respondents reported that someone in their household had been murdered, representing 0·4% of all individuals (95% CI 0·2–0·6). The most common cause of death identified by respondents was by gunfire with 15 households (65%) reporting this cause. Other causes identified were beating or blow from an object (four), torture (two), stabbing or wound from a knife or sharp object (one), and asphyxiation (one).

All victims of sexual assault reported were female. 3·1% (95% CI 2·5–3·7) of all female individuals had been sexually assaulted during the period investigated (table 1). The majority of sexual assaults perpetrated involved penetration of the victim's mouth, anus, or vagina with the perpetrator's genitalia or some other object (92·1%; 95% CI 86·6–97·6). The remainder of assaults involved sexual touching without penetration and the forced watching of sexual acts.

Sexual assaults reported in this study often occurred against children and adolescents (table 1). 53·1% of all victims (95% CI 38·4–67·8) were younger than 18 years, 37·2% (95% CI 24·9–49·5) were between the ages of 11–17 years old and 16·0% (95% CI 7·9–24·1) were 10 years old or younger. Overall, 4·6% (95% CI 3·4–5·8) of all female children in the sample were victims of sexual abuse.

*Restaveks*, children (younger than 18 years, mostly female) who work as unpaid domestic servants living in a household and are unrelated to other household members,

	Crude rate per 100 000 per year (95% CI)	Estimated number of victims, February, 2004 to December, 2005 (95% CI)
Murder	219 (129–309)	8000 (5000–12 000)
Sexual assault (female only)	1698 (1354–2041)	35 000 (28 000–41 000)
Sexual assault (female <18 years old)	2498 (1806–3190)	19 000 (14 000–24 000)
Sexual assault ( <i>restaveks</i> )	5209 (3458–6960)	13 000 (9000–17 000)
Physical assault	563 (419–707)	21 000 (11 000–32 000)
Governmental detention or arrest	343 (231–455)	13 000 (8000–17 000)
Kidnapping and extrajudicial detentions	277 (176–377)	11 000 (6000–15 000)
Property crime (per household)	3810 (3014–4606)	32 000 (25 000–39 000)
Death threats	NC	40 000 (29 000–51 000)
Threats of physical injury	NC	69 000 (54 000–85 000)
Threats of sexual violence	NC	27 000 (17 000–37 000)

NC=not calculated.

Table 1: Estimated crude rate and number of victims by type of violation for greater Port-au-Prince area

accounted for a substantial proportion of all sexual assault victims (table 1). This group of children represented 36·2% (95% CI 24·0–48·4) of all sexual assault victims, and a large proportion (68·0%; 45·1–90·9) of child victims of sexual assault. 9·6% (95% CI 6·5–12·7) of all female *restaveks* had been victims of sexual assault. Compared with girls who were not *restaveks*, the relative risk of sexual assault for *restaveks* was 4·5 (95% CI 2·5–8·1).

Of all individuals in the study, 1·0% (95% CI 0·5–1·5) were identified as having been assaulted physically (table 1). The most frequent types of assault were beatings without (34·2%) and with (23·3%) an instrument. Six incidents (8·2%) of stabbing or cutting with a sharp instrument and five incidents (6·8%) each of gunshot woundings, beatings of the soles of the feet, and burning with a cigarette were identified.

Detention and arrest by government or foreign soldiers were not as frequently encountered as the other incidences examined (table 1). 0·6% of individuals (95% CI 0·4–0·8) were reported as being detained by the police, HNP, or a foreign military. Preventative detention, used in Haiti to detain juveniles who have not been accused of a crime, accounted for 22·2% (95% CI 14·8–29·7) of the arrests. Haitian law stipulates that all arrestees are entitled to an appearance before a judge within 48 h of detention.<sup>14</sup> Of all 36 detentions detected, only one individual was reported as having seen a judge within the stipulated period. Most Haitian detainees were not represented by an attorney. 17 (47%) of detainees were reported as having been allowed to see an attorney and 11 (28%) were not; five (14%) did not ask to see an attorney, and only four (11%) reported seeing an attorney. Nine (25%) were reported as still being imprisoned. Kidnapping and detentions by armed groups were reported for 0·5% of the population (95% CI 0·3–0·7; table 1).

	Murder	Sexual assault	Physical assault	Governmental detention or arrest	Kidnapping or extra-judicial detentions	Property crime (household)	Death threats*	Threats of physical violence*	Threats of sexual violence*
HNP and other government security forces	21.7% (2.7-40.7)	13.8% (6.3-21.3)	20.3% (11.5-31.8)	75.0% (50.5-99.5)	n/a	5.7% (1.0-10.7)	20.1% (11.2-29.0)	17.9% (12.5-23.3)	21.1% (11.4-30.8)
Demobilised army	13.0% (0.27.7)	3.2% (0.6-8)	3.4% (0.8-1)	n/a	20.7% (4.1-37.3)	1.1% (0.3-3)	5.9% (1.1-10.7)	4.1% (1.5-6.7)	1.0% (0.3-1)
Armed anti-Lavalas groups	13.0% (0.27.7)	10.6% (4.0-17.2)	22.0% (10.0-34.0)	n/a	17.2% (2.1-32.3)	13.6% (5.9-21.3)	8.8% (2.9-14.7)	6.4% (3.1-9.7)	7.4% (1.7-13.1)
Partisans of anti-Lavalas groups (eg, GNB)	None	1.1% (0.2-2)	8.5% (1.0-16.0)	n/a	3.4% (0.10.1)	12.5% (5.1-19.9)	1.1% (0.3-2)	1.0% (0.2-3)	1.2% (0.3-5)
Lavalas members or partisans	None	None	1.7% (0.5-0)	n/a	None	1.1% (0.3-3)	2.9% (0.6-2)	6.2% (3.0-9.4)	1.2% (0.3-5)
Criminals	47.8% (19.6-76.0)	45.7% (32.0-59.4)	27.1% (13.8-40.4)	n/a	37.9% (15.5-60.3)	21.6% (11.9-31.3)	35.5% (23.7-47.3)	30.9% (23.8-38.0)	39.6% (26.3-52.9)
Foreign soldiers	None	None	1.7% (0.5-0)	13.9% (1.7-26.1)	n/a	1.1% (0.3-3)	19.6% (10.8-28.4)	16.8% (11.5-22.1)	14.4% (6.4-22.4)
Unknown (or undisclosed)	4.3% (0.12.7)	24.5% (14.5-34.5)	15.3% (5.3-25.3)	11.1% (0.22.0)	20.7% (4.1-37.3)	43.2% (29.5-56.9)	5.4% (0.8-10.0)	15.8% (10.7-20.9)	9.5% (3.0-16.0)
Other	None	1.1% (0.2-2)	None	None	None	None	1.0% (0.3-0)	1.0% (0.2-3)	4.7% (0.1-9.3)
Number of occurrences	23	94	59	36	29	88	97.76	232.59	86.05

n=5720 (1259.36 for weighed analyses). Rates are percentages (95% CI) of specified violations committed by specified group, extrapolated to the greater Port-au-Prince area. Numbers of occurrences are absolute frequencies derived from the sample. n/a=not applicable. \*Respondent only (weighted).

Table 2: Perpetrators of human rights violations

Property crimes were recorded at the household level only. Theft, vandalism, looting, larceny, and destruction of personal property were experienced by 6.8% (95% CI 5.4-8.2) of households (table 1). Two households reported multiple incidences of property crime. To estimate the number of households that were victims of property crime (table 1), we estimated the number of households in the greater Port-au-Prince area to be about 471000 (95% CI 451000-482000) by dividing the population estimate by the average household size.

Death threats, threats of physical violence, and threats of sexual violence were also assessed. Of all households, 7.6% (95% CI 6.1-9.1) identified as having someone threatened with death. Eleven households (0.9%; 0.5-1.4) reported that both the respondent and a household member had been threatened with death at least once. Because of the structure of the questionnaire, threats could not be linked to individual family members, with the exception of the respondent. However, taking the estimated number of households in the greater Port-au-Prince area derived from this survey and assuming only one threatened individual per household, or two individuals in the case of both a respondent and another householder having been threatened, we arrived at a conservative estimate of the number of individuals threatened with death (table 1).

This formula was also used to conservatively estimate the numbers of people who received threats of physical violence or threats of sexual assault (table 1), both of which were frequently reported by households. Of all households, 12.7% (95% CI 10.9-14.5) reported that

someone in the household had been threatened with physical violence at least once. 26 households (2.1%; 1.3-2.9) reported that both the respondent and another household member had been threatened at least once. 4.6% (95% CI 5.8-3.4) of all households reported that at least one person in the household had been threatened with sexual violence. 15 households (1.2%; 0.6-1.8) reported that both the respondent and another household member had been threatened with sexual violence.

For murder, sexual assault, physical assault, detention or arrest, and property crime, respondents were queried about the perpetrators of acts to themselves and to household members. With threats, respondents were questioned about the identity of the perpetrators who had threatened them. Because of the structure of the questionnaire, the perpetrators of threats to household members could not be linked to an individual household member and was excluded from the analysis. To address the potential for bias, respondent identification of the perpetrators of threats against themselves were weighted by sex and age using demographics derived from all adults sampled.

Criminals were most frequently cited as perpetrators of the acts measured in this study (table 2). They were the largest group identified as having committed sexual assaults, physical assault, and kidnappings and extrajudicial detentions. For property crimes, the proportion due to criminals was second to that attributed to unknown perpetrators. Criminals were also reported as responsible for about a third of all death threats, threats of physical injury, and threats of sexual violence.

	Murder	Sexual assault (female only)	Physical assault	High school graduate	Mean age (years)	Mean per-head income per week (gourdes)
<b>Popular zones</b>						
Martissant/Grand Ravine	0.0%	0.6% (0·1-8)	1.0% (0·2-1)	21.2% (15·3-27·1)	29·0 (27·1-30·9)	456·4 (389·6-523·2)
Lavil/Bel Air	0.0%	2.2% (0·5-2)	0.5% (0·1-5)	21.9% (13·8-30·0)	29·1 (26·6-31·6)	512·7 (444·5-580·9)
Port/La Saline/Cite Soleil	1.4% (0·3-0)	7.1% (1·8-12·4)	2.7% (0·5-4·9)	13.3% (7·5-19·1)	30·5 (28·1-33·0)	310·2 (252·2-368·2)
Northwest Port-au-Prince	1.6% (0·3-2)	7.7% (3·1-12·3)	2.7% (0·7-4·7)	12.7% (7·0-18·4)	26·0 (23·8-28·2)	313·3 (281·6-345·0)
Nazon	0.7% (0·1-7)	3.8% (0·8-6·8)	2·4% (0·6-4·2)	34.7% (26·4-43·0)	26·2 (24·5-28·0)	432·3 (381·5-483·1)
Cite Militair/Cite Simon	0.6% (0·1-8)	4.3% (0·1-8·5)	1·2% (0·2-9)	16.8% (9·0-24·6)	26·9 (24·5-29·3)	424·7 (364·7-484·7)
All popular zones	0.4% (0·1-0·7)	4.1% (2·7-5·5)	1·8% (1·1-2·5)	21.0% (18·1-23·9)	27·9 (27·0-28·8)	406·7 (383·0-430·4)
<b>Other zones</b>						
Archachon/Western Carrefour	0.2% (0·0-6)	2.3% (0·7-3·9)	0·9% (0·2-1·6)	19.2% (15·0-23·4)	27·0 (25·7-28·3)	463·2 (425·9-500·5)
Ca'va Comera/Eastern Carrefour	0.4% (0·1-0)	3.3% (1·1-5·5)	0·2% (0·0-6)	19.7% (15·2-24·2)	27·1 (25·7-28·5)	448·8 (362·8-534·8)
Carrefour Heights	1.1% (0·2-3)	0·7% (0·1-5)	1·5% (0·3-0)	24·2% (17·4-31·0)	29·3 (27·3-31·2)	578·4 (469·6-687·2)
Petionville	0·2% (0·0-6)	0·4% (0·1-2)	0·0%	27·9% (21·9-33·9)	27·9 (26·5-29·3)	758·3 (623·8-892·8)
Delmas	0·1% (0·0-3)	3·5% (2·1-4·9)	0·9% (0·4-1·4)	25·6% (22·1-29·1)	25·4 (24·5-26·2)	470·7 (371·1-570·3)
Pacot, Bourdon, Canape Vert	0·2% (0·0-6)	0·4% (0·1-2)	0·6% (0·1-3)	28·6% (22·6-34·6)	25·8 (24·4-27·3)	471·8 (388·3-555·3)
Cazeau/Airport	0·7% (0·1-4)	5·8% (3·1-8·5)	0·8% (0·1-1·5)	23·6% (18·8-28·4)	27·2 (25·8-28·5)	399·6 (350·2-449·0)
All other zones	0·4% (0·2-0·6)	2·7% (2·0-3·4)	0·7% (0·5-0·9)	24·0% (22·2-25·8)	26·7 (26·2-27·2)	536·6 (499·1-574·1)

Data are proportion of individuals in zone that were victimised during the period assessed, extrapolated to entire population for the zone (95% CI).

Table 3: Post-stratification analysis

Officers in the Haitian National Police and members of other government security forces were identified by respondents as committing a substantial proportion of sexual assaults and murders (table 2). Respondents reported police officers or government security forces as responsible for a fifth of all physical assaults; this group was also reported to have made death threats, threatened to hurt people physically, and threatened people sexually.

Political groups on both sides of the spectrum were named as responsible for violent and criminal acts (table 2). Ex-soldiers from the disbanded Haitian army along with members of armed anti-Lavalas groups (eg, Lame TiMachete) reportedly committed 26·0% (95% CI 5·2–46·8) of murders, 23·8% (11·3–36·3) of all physical assaults, 13·8% (6·3–21·3) of sexual assaults and 37·9% (15·5–60·3) of kidnappings and non-governmental detentions. Lavalas members and partisans of the Lavalas movement were also named as having committed such acts (table 2).

Foreign soldiers serving with the Multinational Forces (February to June, 2004) and the United Nations Stabilization Mission in Haiti (June, 2004, to present) were not named as responsible for any murders or sexual assaults (table 2). They were identified by respondents as having issued death threats, threats of physical injury, and threats of sexual violence. For death threats, the most commonly cited soldiers were from an unknown country (31·3%; 95% CI 6·2–56·4), from Brazil (31·3%; 6·2–56·4), or from Jordan (22·1%; 1·1–43·1); for threats of physical violence, Brazilian soldiers (54·0%; 31·0–77·0) and foreign soldiers of unknown origin (27·7%; 11·2–44·2)

were most commonly blamed; and for sexual threats, 30·0% (0–60·5) of the foreign soldiers were from an unknown country, 33·1% (1·1–65·1) were identified as Jordanian, and 23·1% (0–49·9) as Brazilian. Most UN troops wear uniforms that have the flag of their country displayed either on their blue helmet or on their uniform sleeve over the upper arm. Other UN troops, particularly those with CIVPOL or working within other units (eg, not on a regular patrol, but rather, working as crowd control, trainers, etc) do not wear the same uniforms. They are known to be UN because they have blue helmets, but witnesses and victims might not know the country of origin of the troops.

Results of the post-stratification analysis (table 3) showed that rates for murder were the same between the popular and the other zones. Sexual assaults were more common in the popular zones than in other zones, but this difference was not statistically significant. The findings of this analysis suggested that residents of the popular zones were significantly more likely to be victims of physical assaults than were residents of less dense neighbourhoods. Demographically, residents of the popular zones had lower per-head income than those in other zones.

## Discussion

Our findings show that human rights violations were common in the greater Port-au-Prince area in the post-Aristide period. Our estimates suggest that about 8000 individuals were murdered, with almost half of the perpetrators identified as political actors. Sexual abuse, especially among children, was also a frequent occurrence. Our data suggest that 35 000 women and girls were raped

during the time period examined; more than half of the victims were children. Death threats, threats of sexual violence, and threats of physical violence were also common occurrences. Criminals, the Haitian National Police (and other governmental security forces), and UN peacekeepers were the most identified perpetrators of threats of bodily harm. Brazilian and Jordanian peacekeepers were the most frequently identified among foreign soldiers.

We did not assess changes in human rights violations over time. There are no quantitative data that would allow us to compare other rates with our findings during the same period or previous periods. The period examined was chosen as an attempt to control for the possibility of changes in rates of violations as a result of the armed overthrow of the elected government.

Our study has several other limitations. Only households in Port-au-Prince were studied. The geographical limitations of this study prevent us from predicting the frequency of human rights violations in the rest of the country. Statements from international human rights organisations,<sup>17</sup> news reports,<sup>18</sup> and data in this study indicated that some respondents suffered human rights violations in other cities before moving to Port-au-Prince. On the basis of these statements, we surmise that some serious human rights violations occurred in the areas of St Marc and Cap Haitian during early 2004 as rebel forces were seizing the country. However, in this study, we did not examine human rights abuses occurring in the areas where prolonged fighting took place during early 2004.

Additionally, some households that were subjected to human rights violations in Port-au-Prince might have relocated to other parts of the country to avoid further violence. No estimate of the number of internally displaced families in Haiti exists, but anecdotal evidence from human rights workers, non-governmental organisations, and journalists indicates that a substantial number of households who experienced human rights violations during March and April, 2004, fled Port-au-Prince for the provinces. If this is the case, then the data presented in this study might under-report the extent of violations.

Because we used a single-stage spatial sample, households in denser communities and those in multi-unit dwellings are likely to have been underrepresented, relative to households with larger parcels of land or in single-unit dwellings. The rates of physical assaults seemed to systematically differ between those who live in dense areas and those in less dense areas, resulting in reporting bias. In view of the post-stratification analysis findings, we have probably undercounted the occurrence of physical assaults. Additionally sexual assaults might have been underreported as a result of sample bias, since they were reportedly more frequent in the denser neighbourhoods, although this pattern was not statistically significant. Although this sampling method might be viewed as a major limitation, it seems that any

bias that might have occurred as a result of single-stage sampling would produce conservative estimates of physical (and possibly sexual) assault, rather than overestimates.

We only studied eight types of human rights violations: property crimes, arrests and detentions, physical assaults, sexual assaults, murders, death threats, and threats of sexual or physical violence. We did not investigate the violations to Haitians' social and economic rights during the post-Aristide period. From news reports<sup>19</sup> we know that some Haitians have been expelled from their homes, fired from their jobs, prevented from going to school, and forced to become refugees; all these circumstances can include human rights violations, but we did not address such violations in this study.

The reliability of the respondents' recollection and identification of perpetrators might also be a limitation. It is likely that some respondents did not report the correct identity of those who violated their human rights. Respondents might have feared repercussions or hoped to further their political cause by blaming the violation on foreign soldiers or political groups that they oppose. Additionally, recall might have been affected by the time between the event and the survey (up to 22 months). We were unable to verify information given by the respondents because of the absence of reliable governmental health or crime reporting systems.

Respondents were also asked to convey information about abuses that occurred to household members. In such cases, the respondent could have been mistaken about the circumstances of a particular violation that he or she reported. Some abuses that household members experienced might also have gone unreported to the respondent. Published work suggests that victims of sexual abuse are often reluctant to admit to being sexually violated.<sup>20</sup> Participants who were interviewed by all-male research teams (22.5% of all respondents) might have been less likely to report being sexually assaulted. It seems likely that some sexual assaults against household members could have remained unknown to the respondent, or that respondents were reluctant to report sexual assaults against themselves. Additionally, respondents might have been reluctant to report sexual abuse of a *restavek* committed by themselves or by another household member. Intrafamily violence, sexual or otherwise, went entirely unreported, and was probably underreported.

Although we believe that all types of sexual abuse were probably under-reported, the extreme frequency at which sexual abuse was reported suggests that under-reporting might not be as severe as could be expected. *Restaveks* are often viewed as property<sup>21</sup> and any violation of these children by others represents an attack on the household's assets. In these situations, we believe that the respondent would probably have been forthcoming about sexual abuse of a *restavek* in his or her home by a non-household member. Because respondents might have been more

likely to report the sexual assault of a child than they were to report that of an adult, the reported frequency of sexual assault by age may be skewed.

Because data on dates of entry and exit from the household were not collected, we assumed that all members of the household were members for the full period examined. Statistically, this should result in a slight under-reporting of the crude rates.

Our data suggest that about 12 individuals per day were murdered in Port-au-Prince during the period investigated. Armed anti-Lavalas groups and their partisans, along with the HNP and other government security forces, accounted for almost half of all identified perpetrators, with the other half identified as criminals. Regarding criminals and anti-Lavalas partisans, establishment of a responsive police and judicial system is tantamount if this rate of murder is to be diminished. This task may be difficult, since elements within the police department also seem to be responsible for some of these killings. Stringent oversight and training for all current and incoming police officers to prevent extrajudicial killings seems to be necessary. Identification and vigorous prosecution of the perpetrators might ameliorate this murder rate.

The rates of sexual abuse for all age groups are shocking. We are particularly troubled by the very high rates of child sexual abuse reported in this study. We estimate that about one in 40 girls younger than 18 years are sexually assaulted per year in the greater Port-au-Prince area. Further, the rate of sexual assault for female *restaveks* is almost four and a half times greater than that for girls who are not *restaveks*. Of female *restaveks*, we estimated that one in 19 are sexually assaulted per year, compared with one in 84 girls who are not *restaveks*.

*Restaveks*, in particular, are victims in two disturbing ways. First, *restaveks* are often relegated to second-class citizenship and in many ways could be considered modern-day child slaves. Few attend school and many often work in labour-intensive activities that would be judged as human rights abuses by international standards.<sup>22</sup> Secondly, this second-class status seems to make them more vulnerable to sexual exploitation by others, although respondents might have been more likely to report abuse of *restaveks* than abuse of other children in the household, because of the *restavek's* perceived status as household property.

Criminals and unknown assailants were the most cited perpetrators of sexual abuse. Improvements in law enforcement, vigorous prosecution of perpetrators, and increased awareness about child sexual abuse through public education campaigns could decrease the rate of such abuse substantially.<sup>23</sup> Rapes by police officers present a different challenge. HNP officers and other official government security forces reportedly committed almost one in eight rapes. As with murders, we believe that a reordering and retraining of the police force in Haiti might be necessary to address this problem. Identification

and prosecution of police officers who commit sexual offences should be a priority for the new administration.

Threats of death, bodily harm, sexual violence were common and came not only from criminals, but also from both the HNP (and other government security forces) and foreign troops. The most commonly identified perpetrators of death threats, besides criminals, were UN troops. Of the UN troops identified, half were from Brazil or Jordan. Brazilian and Jordanian soldiers were also noted by respondents for issuing the majority of physical threats and threats of sexual violence by foreign soldiers. These findings support media reports<sup>24</sup> of abuse by UN peacekeepers, particularly Brazilian<sup>25</sup> and Jordanian troops.<sup>26</sup> The retraining of some peacekeeping soldiers seems to be necessary.

Non-governmental organisations, churches, and women's organisations might need to establish coordinated services to meet the needs of sexual assault survivors. The number of rape victims shows the overwhelming need for psychological, medical, and social support services. Culturally appropriate therapeutic interventions should be developed, especially for vulnerable populations such as children and elderly victims.

Medical services should be offered to victims of torture and other physical and sexual assaults. Extensive research already exists on the most effective ways of providing such services to victims, their families, and their communities through the establishment of neighbourhood clinics, public-health programmes, and peer intervention projects. Haitians should be able to access free or affordable medical services to resolve problems caused by human rights violations.

The newly elected government of René Préval, the UN leadership in Haiti, and social service non-governmental organisations need to take concrete measures to investigate the extent of human rights violations throughout the country. Understanding the extent and severity of the abuses experienced by individuals and communities can provide the necessary information for development of programmes to address the health consequences and alleviate the emotional suffering of victims.

The frequency of human rights violations, and especially the prevalence of sexual violence against women, demands a serious and thorough response from the international community, the new Haitian government, and non-governmental organisations working in the region. The new administration should take steps to stop any ongoing human rights abuses through various domestic and international systems.

#### Contributors

A Kolbe was principally responsible for survey instrument design, hiring, training, and overseeing the interview staff, leading the study teams, coordinating all logistical aspects of the study, and data entry and organisation. R Hutson was principally responsible for data analysis and data interpretation. The authors were jointly responsible for sampling design and preparation of the manuscript.

**Conflict of interest statement**

We declare that we have no conflict of interest.

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