HARVARD HUMANITARIAN INITIATIVE

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"NOW, THE WORLD IS WITHOUT ME":

AN INVESTIGATION OF SEXUAL VIOLENCE IN EASTERN DEMOCRATIC REPUBLIC OF CONGO

A Report by the Harvard Humanitarian Initiative
With Support from Oxfam America
April 2010

"We found them in our house. They pillaged everything. They put my husband on the bed and beat him. Then two of the soldiers raped me. This story is so tragic - I can't believe this happened to me. I prefer death instead of life. Now, the world is without me because of my situation."

- 27-year old mother of three children who was raped in June 2002 and subsequently abandoned by her husband

HARVARD HUMANITARIAN INITIATIVE

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ACKNOWLEDGMENTS

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The photographs included in this report were taken with the permission of subjects. Photos do not link specific quotes or findings with the individuals depicted. Cover photo was taken by Megan App (University of Illinois at Chicago). All other photos were taken by either Justin Ide (Harvard University News Office), John Paul Doguin or Susan Bartels. The Institutional Review Board at the Harvard School of Public Health granted permission to quote the narratives of sexual violence survivors in a manner that protects the subjects' anonymity in accordance with human subjects research guidelines.

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EXECUTIVE SUMMARY

BACKGROUND

In the aftermath of the 1994 Rwandan genocide, conflict erupted in the Democratic Republic of Congo (DRC). This conflict has been become known as "Africa's World War" and has been responsible for an estimated 5.4 million deaths,(1, 2) making it the deadliest conflict since World War II. Despite an official end to the war with the signing of peace agreements in 2003, the fighting continues in Eastern DRC due to ethnic violence and due to competition for control of DRC's rich natural resources. The conflict in Eastern DRC has been marked by a number of human rights abuses, including the use of extreme sexual violence. Although the true extent of the sexual violence is not known, it is estimated that tens of thousands of women have been systematically raped by combatant forces.(3) The extraordinary brutality of sexual violence in Eastern DRC has also been documented, with reports of young girls and elderly women being tortured and violently raped.(4) Rape is an extremely effective wartime weapon. It is strategically used to shame, demoralize and humiliate the enemy. By systematically raping women and girls, armed groups assert power and domination over not only the women, but their men as well. The results are devastating. Rape survivors in Eastern DRC face multiple medical problems including HIV/AIDS and sexually transmitted infections. Pregnancy, infertility and genital mutilation are common consequences of rape in this context. The psychosocial consequences of being raped are also devastating. Fear, shame, insomnia and nightmares are frequently noted among sexual violence survivors.(2) In Eastern DRC, rape is highly stigmatized and social sequelae include spousal abandonment, inability to marry and being ostracized by the community. Spousal and community abandonment lead to isolation and homelessness.

PURPOSE

Research on sexual violence in DRC is extremely challenging. Sexual violence is deeply stigmatized in Congolese culture and many of those affected live in remote or insecure regions. Thus, rigorous data are lacking and many important questions remain unanswered. With the support of Oxfam America and in collaboration with medical staff at Panzi Hospital, researchers from the Harvard Humanitarian Initiative (HHI) performed a retrospective cohort study of sexual violence survivors presenting to Panzi Hospital with a specific aim of answering the following outstanding questions: 1) When, where and how are women being attacked and what makes them vulnerable to sexual violence; and 2) How has the rape epidemic in South Kivu evolved over the last five years?

METHODS

This was a retrospective cohort study conducted at Panzi Hospital in Bukavu, South Kivu Province. Using a non-systematic convenience sample, interviews were conducted on sexual violence survivors as they presented to Panzi Hospital requesting services from the *Victims of Sexual Violence Program.* The hospital's questionnaire asked basic demographic information

and then allowed the patient to describe her sexual violence experience in an open, self-reporting narrative. A total of 4,311 records, representing all post-rape interviews conducted at Panzi Hospital between 2004 and 2008, were reviewed and the relevant information extracted for quantitative and qualitative analysis. This study was limited by its retrospective nature, by the inherent selection bias that exists by studying only survivors presenting to Panzi Hospital and by the use of a non-systematic, convenience sample within Panzi Hospital. Further limitations include the open, self-reporting format and the fact that several translations were required prior to analysis.

RESULTS

In South Kivu, women are subjected to sexual violence regardless of age, marital status or ethnicity. The majority of rape survivors are illiterate and rely on subsistence farming to support their families. Most rape survivors wait extended periods of time before accessing medical care and many arrive at Panzi hospital alone, without the support of family or friends.

Women in South Kivu are not safe anywhere; they are attacked not only while they farm their fields or collect firewood in the forest but also in the supposed safety of their own homes, often while sleeping at night with their families. Just over half of all perpetrators (52%) were identified as being armed combatants. Although another 42% were identified only as "assailants", analysis of the patterns of violence, strongly suggests that this group is also comprised largely of armed combatants. Thus, the sexual violence in South Kivu is largely militarized.

Military rape in South Kivu is marked with a predominance of gang rape, which was described by almost 60% of sexual violence survivors presenting to Panzi Hospital. Sexual slavery was also common with some women being held captive for several years. Sexual slavery more frequently involved young, single women. The sexual assaults are also remarkable for extraordinary brutality including genital mutilation, instrumentation with foreign objects, forced rape between victims and rape in the presence of family members. There are also horrific reports of young children being slaughtered in front of their parents and of family members being tortured and killed. The military pattern of rape was also notable for a preponderance of pillaging with many survivors reporting the loss of cash, food, livestock, clothing and other valuables. Likewise, there were many descriptions of armed combatants demanding ransom in exchange for the victim's release from sexual slavery.

An analysis of sexual violence trends over time revealed that the total number of reported assaults at Panzi Hospital had steadily decreased between 2004 and 2008. The analysis also demonstrated a civilian adoption of rape. From 2004 to 2008, the number of civilian rapes increased by an astounding 1733% or 17-fold, while the number of rapes by armed combatants decreased by 77%. These findings imply a normalization of rape among the civilian population, suggesting the erosion of all constructive social mechanisms that ought to protect civilians from sexual violence.

As highlighted in the qualitative analysis, sexual violence survivors experienced a host of physical symptoms following rape, including pelvic, lumbar and abdominal pain as well as reproductive abnormalities such as infertility and premature labor and delivery. Women often expressed concern about infections, particularly HIV, after being raped. Psychological symptoms following sexual violence were also common. Women described sadness, anger, fear, anxiety, shame and misery. Many women also suffered significant losses such as the death of family members, spousal abandonment and loss of personal valuables as a result of the attack.

CONCLUSIONS

In South Kivu, sexual violence is pervasive, affecting women of all ages, ethnicities and marital statuses. Women are attacked everywhere, even in the privacy of their own homes. The sexual assaults are ruthless, with horrific reports of gang rape, sexual slavery, genital trauma, forced rape between victims and rape in the presence of family members. Sexual violence survivors often witness the torture and murder of their children and spouses.

Although the sexual atrocities in South Kivu are perpetrated primarily by armed combatants, we should not view the sexual violence as "collateral damage" of armed conflict. Peacekeeping mandates need to be amended to more explicitly protect civilians from sexual violence and peacekeeping forces will need to have sufficient resources to effectively meet those mandates. Because the attacks are often carried out on individual homes in rural regions, aid organizations will need to collaborate with local communities to identify new and innovative protection programs based on the patterns of attack most prevalent in South Kivu. To end the environment of impunity, national sexual violence laws will need to be fully enforced and the capacity to investigate and prosecute crimes against women will need to be greatly expanded.

After years of military rape in South Kivu, civilian adoption of sexual violence is becoming recognized as its own problem. To address this new wave of civilian perpetrated sexual violence, the environment of impunity in DRC must end. Congolese sexual violence laws must be fully enforced and perpetrators must be held responsible. In parallel with upholding accountability, the mindset of an entire society will have to be reset to recognize rape as a morally unacceptable and criminal act.

Meanwhile, sexual violence survivors require urgent support including medical services, psychological counseling and social assistance. The approach to survivor care must involve men at all stages, allowing families to recover together as a unit. In addition to assisting child survivors of sexual violence and children born out of rape, assistance must also be provided to all children who have been indirectly affected by sexual violence. With appropriate interventions, there exists an enormous opportunity to ameliorate the trauma and distress caused to the next generation in South Kivu.

INTRODUCTION

DRC CONFLICT

The 1994 Rwandan genocide sparked a new era of violence in the Democratic Republic of Congo (DRC) when two million Hutu refugees fled into the eastern region of the country.(5) The *Interahamwe* Hutu military quickly dominated the Congolese refugee camps and began attacking Rwandan Tutsis.(5) In anticipation of an *Interahamwe* Hutu invasion, the Tutsi-dominated Rwandan government supplied weapons to the Tutsi people of Eastern DRC. In an attempt to control Eastern DRC and to combat the Hutu militia, a Congolese rebel group led by Laurent-Désiré Kabila joined forces with Rwandan and Ugandan troops in late 1996.(3) After establishing a foothold in the East, Kabila's military marched to Kinshasa and, in May 1997 seized control of the country.(5) Kabila's rise to power and the fighting that accompanied it would later become known as the "First Congo War".

In an attempt to reorganize the nation in July 1998, President Kabila ousted the Rwandan troops who had helped put him into office and ordered all Rwandan and Ugandan forces out of DRC. Kabila's actions precipitated a joint invasion by Rwanda, Uganda and Burundi in what became known as the "Second Congo War".(4) This war, fought from 1998 to 2003 was dubbed "Africa's World War" because it involved eight African nations(4). Conflict continued subsequent to the official end of the war, resulting in an estimated 5.4 million deaths between 1998 and 2007(1) making it the deadliest conflict since World War II. Millions of people were displaced from their homes and many were forced to seek asylum in neighboring countries. Ethnic violence between Hutus and Tutsis was responsible for many of the deaths, although this is a gross oversimplification. There were many competing interests and varying agendas, usually surrounding the struggle to gain control over DRC's rich reserves of diamonds, gold and coltan.

City of Bukavu overlooking Lake Kivu, South Kivu Province
John Paul Doguin, ©2007

With the signing of the Luanda Peace Agreement, the "Second Congo War" officially ended in 2003 and a new government was elected in 2006.(4) However, the violence and insecurity continue, particularly in Eastern DRC, where armed militias exert local political influence in the largely un-policed region. The *Forces Démocratiques de Libération du Rwanda* (FDLR), whose Hutu leaders are linked to the Rwandan genocide, is believed to be largely responsible for the region's instability.(6) The other armed group responsible for much of the fighting and displacement is the Congolese Tutsi rebel group, *Congrès National Pour la Défense du Peuple* (CNDP) led by General Laurent Nkunda.(7) However, there are multiple other armed groups who have entered the fray.

In January of 2009, the Rwandan and Congolese governments joined forces against the FDLR in an attempt to disband it. Under this agreement, Rwandan soldiers were permitted to enter DRC to uproot the FDLR in exchange for Rwanda removing Nkunda from power. Nkunda was arrested in late January 2009 and the CNDP signed a peace treaty with the government to become a political party in March 2009.(7) However, the effort to disband the FDLR continues and has caused more fighting and more displacement in the eastern Provinces of North and South Kivu. It is estimated that up to 45,000 civilians continue to die each month, primarily from disease and malnutrition(1) and an estimated 1.8 million civilians have been displaced from their homes.(8)

RAPE AS A WEAPON OF WAR

Use of sexual violence as a weapon of war is usually strategic and systematic. Rape is used to terrorize civilian populations, causing people to flee and leave their homes, their belongings and their fields.(9) In other conflict settings, mass rape is used during cultural and ethnic cleansing as a means of polluting bloodlines and forcibly impregnating women to produce "ethnically-cleansed" children.(2, 9) These "ethnically-cleansed" children are often recognized as children of the enemy and they are extremely vulnerable to stigma, maternal rejection, statelessness, and abandonment.(10) Finally, rape is strategically used to inflict shame, suffering and humiliation. For women who have been raped, the capacity to care for their children and to participate in community life is greatly diminished. They find that the potential for re-integration into their relational social networks is starkly reduced. Because the stigmatization and humiliation can last for decades, widespread infliction of sexual violence may effectively destroy the cultural and social bonds of entire communities.(11) A key factor in this destruction is the impact that the rape of women has had on men in the victim's family and community. Sexual violence, as the ultimate display of power and dominance, is used by the opposing force to signify the weakness and inadequacy of the men in the targeted social grouping or community. These men absorb this message, perceiving their inability to protect women against assault as their own final humiliation in the war.(12)

Rape as a weapon of war has been employed by warring parties and occupying armies since early historical times.(9, 13) After World War II, the war crimes tribunal in Japan prosecuted perpetrators of the rape of Nanking, where an estimated 20,000 women were raped in the first month of the Japanese occupation of Nanking,(14) setting the precedent for the 1949 Fourth Geneva Convention, which prohibits wartime rape and enforced prostitution. This prohibition in

international humanitarian law has been amplified in judicial findings from the Ad Hoc Criminal Tribunals for Yugoslavia and Rwanda and has found final robust form in the language of the Rome Statute of the International Criminal Court (ICC), which establishes rape and sexual enslavement as crimes against humanity, and, in certain situations, rape as an act of genocide. (http://untreaty.un.org/cod/icc/statute/romefra.htm) .

Yet despite the progression of international norms, sexual violence in conflicts continues. In many modern conflicts, sexual violence has become ever more prevalent and destructive. Mass rape campaigns have been documented in Sierra Leone,(15-20) Rwanda,(21-25) Liberia,(26-28) the Balkans,(29-31) Uganda,(32) Sudan,(9, 33-37) and DRC(2, 38-45).

One of the head nurses walking past patients at Panzi Hospital's new wing (Justin Ide, Harvard University News Office)

RAPE EPIDEMIC IN DRC

The war and ongoing political instability in Eastern DRC have been marked by extreme violence including widespread rape. The true extent of sexual violence is not known. However, in 2008 the International Rescue Committee reported having assisted over 40,000 Congolese rape survivors since 2003 in the province of South Kivu alone and the UN reported 27,000 sexual assaults for the year 2006(44). Since rape is often underreported and many women do not seek medical care after sexual violence, it is likely that these numbers underestimate the true incidence of sexual assault. The extent to which Congolese men have been targeted for sexual violence remains largely unknown. Male rape has been even more difficult to investigate since men have traditionally been even more reluctant than women to report experiences of sexual violence.

Several international organizations, including Amnesty International, Human Rights Watch, Medécins Sans Frontières (MSF) and Malteser, have reported their observations from working with rape survivors in Eastern DRC (38, 39, 41, 42, 44-46). Collectively, they describe the

extraordinary brutality of sexual violence in DRC, which includes gang rape, instrumentation, kidnapping, forced "marriages" and genital mutilation.(38, 39, 41, 43, 45) MSF reported that over half of all victims were raped while working in the fields and concluded that, "Sexual violence has been so clearly linked to the military strategy of warring parties [in DRC] and has occurred in such a systematic way that it is wrong to think of it as a side effect of war."(42) Human Rights Watch described the extraordinary brutality of rapes in DRC – girls as young as five and women as old as 80 were reportedly shot in the vagina or mutilated with knives and razor blades.(45) Anneke Van Woudenberg, the Human Rights Watch specialist for Congo, believes that rape has been so widespread that "it [rape] has become a defining characteristic" of the DRC war.(47)

Two Congolese organizations, *Réseau des Femmes Pour un Développment Associatif* (RFDA) and *Réseau des Femmes Pour la Défense des Droits et la Paix (*RFDP) performed focus groups with nearly 500 rape survivors in 2003(2). Eighty-five percent of women participating in the focus groups reported vaginal discharge, 79% reported lower abdominal pain and 10% reported that they became pregnant as a result of the rape.(2) Fistulas were also common with 41% of assaulted women reporting urinary or fecal discharge from the vagina.(2)

Despite the magnitude of the sexual violence epidemic in Eastern DRC and despite the number of organizations devoting resources to sexual violence programs, rigorous data on sexual violence in DRC is lacking. Because rape is so stigmatized in the Congolese culture and because it is a challenging environment in which to work, little systematic research has been done on rape as a weapon of war in this context. Thus, many important questions remain unanswered. With the support of Oxfam America and in collaboration with medical staff at Panzi Hospital, researchers from the Harvard Humanitarian Initiative (HHI) performed a retrospective cohort study of sexual violence survivors presenting to Panzi Hospital with a specific aim of answering the following outstanding questions: 1) When, where and how are women being attacked and what makes them vulnerable to sexual violence; and 2) How has the rape epidemic in South Kivu evolved over the last five years?

PANZI HOSPITAL

Panzi Hospital is a 334-bed hospital in Bukavu, South Kivu Province that provides general services including OB/GYN, pediatrics, internal medicine, surgery, dentistry and nutrition. The hospital is equipped with radiology services (including ultrasonography), general laboratory services, and an endoscopy unit. Although offering a variety of services, the majority of patients at Panzi Hospital are rape survivors being cared for under the hospital's *Victims of Sexual Violence Program*. The *Victims of Sexual Violence Program* provides rape survivors with free medical treatment and free psychological and spiritual care in addition to socio-economic assistance. Two hundred of the 334 beds are allocated to the *Victims of Sexual Violence Program* and it is not uncommon to have 450 sexual assault survivors admitted to the hospital at any given time. The center can accept 10 to 12 new rape patients daily but additional survivors must be turned away and asked to return the following day.

Despite the high volume of rape patients, Panzi Hospital has only one specialty-trained gynecologist, Dr. Denis Mukwege. Dr. Mukwege has been at the hospital since 1999 and estimates that he treats about 3600 rape victims annually. Many of the women have developed fistulas, either genitourinary or rectovaginal, and much of Dr. Mukwege's work has focused on genital and pelvic reconstruction. Many of these surgeries are complex and many women require multiple surgeries over a period of time in order to repair their injuries.

Panzi Hospital has a trained psychologist and several social workers addressing the psychological consequences of sexual violence. The social workers do the initial intake/history and continue to follow the patients both during the hospital course and after discharge. The women also undergo vocational training while at the hospital to learn basic skills that might allow them to support themselves once they leave the hospital. A large percentage of the patients are either widows, or have been abandoned by their spouses and families because of the shame and stigma associated with rape.

METHODS

This is a retrospective cohort study conducted at Panzi Hospital. Using a non-systematic convenience sample, interviews were conducted on sexual violence survivors as they presented to hospital between 2004 and 2008. Individual women were chosen for interview based on staff availability and severity of trauma. The interviews were conducted in private by trained female officers using a two-paged, semi-structured questionnaire. The questions were asked in Kiswahili or Mashi and were recorded in French. The questionnaire asked basic demographic information and then allowed the patient to describe her sexual violence experience in an open, self-reporting narrative. All data sheets were subsequently filed in a locked administrative office at Panzi Hospital and were kept independent of the patient's hospital record. To date, the data collected in these interviews have not been analyzed.

Between November 2007 and April 2009, a total of 4,311 records were reviewed from sexual violence survivors presenting to Panzi Hospital. This represents all women who were interviewed under the *Victims of Sexual Violence Program* from 2004 to 2008. In the same five-year period, another 4,709 women accessed post-sexual violence care at Panzi Hospital. However, because of staffing limitations these women did not undergo the in-depth interview and detailed information on their sexual assaults was not captured. Although those 4,709 sexual assaults are not included in this analysis, for reasons explained in "Limitations", the omission of these cases is not believed to have affected the validity or significance of the data reported here.

For each questionnaire, a single sexual violence experience was recorded and this was the most recent sexual assault prompting the woman to seek medical attention. An individual woman may have had a prior rape experience but the details of that prior rape were rarely described in the questionnaire and even if described, were not included in this analysis. Thus, there are 4,311 sexual violence experiences in this dataset.

Bagabo Saleh (Panzi Hospital) and Dr. Jennifer Scott (HHI) review patient charts (Justin Ide, Harvard University News Office)

Data were entered into an electronic spreadsheet (Microsoft Excel 2004; Version 11.5.5) and quality assurance checks were performed. Quantitative analysis was performed using STATA (Statistical Software: Release 10.0. College Station, TX: Stata Corporation). For the qualitative analysis, two investigators read and re-read the narratives to identify recurring themes. Quotations from individual woman were chosen throughout the five years and used to illustrate the identified themes. An individual woman was not quoted more than once. This study was approved by the Institutional Review Board at the Harvard School of Public Health and by the medical director at Panzi Hospital.

For the purposes of this study, gang rape was defined as sexual violence committed by two or more assailants. Sexual slavery was defined as being held captive for the purpose of sexual violence for more than 24 hours. Rape Not Otherwise Specified (NOS) was taken to be sexual violence committed by a single assailant and not involving sexual slavery. It was also used to describe sexual violence in which the survivor simply stated that she was raped without providing further details.

RESULTS

QUANTITATIVE FINDINGS

DEMOGRAPHICS

The demographics of women presenting to Panzi Hospital between 2004 and 2008 requesting post-sexual violence care are provided in Table 1. Both the mean and median age was 35 years with an age range of 3.5 to 80 years. Six percent of survivors were less than 16 years of age and 10% were 65 years of age or older. The majority of women (53%) were married, 22% were widowed, and 9% reported that they had been abandoned by their spouses. The mean number of children per woman was 3.6 with a median of 3. The number of children per woman ranged from

0 to 12. The majority of women (59%) were illiterate and only 9% had attended secondary or post-secondary school. The majority of women presenting to Panzi Hospital reported agriculture as their source of livelihood (74%) and almost 10% reported that they were unemployed. The majority of women self-identified with the Bashi tribe (65%).

Demographic	Number	Percentage
Age:		
≤ 15	252	5.9
16 – 24	809	18.8
25 – 34	841	19.5
35 – 44	988	22.9
45 – 54	752	17.4
55 – 64	211	4.9
≥ 65	458	10.6
Total	4,311	100
Marital Status:		
Single & never married	641	14.9
Currently married	2,264	52.5
Widowed	956	22.2
Abandoned	402	9.3
Not Specified	48	1.1
Total	4,311	100
Highest Level of Education:		
Illiterate	2,552	59.3
Primary School	1,168	27.1
Secondary School	394	9.1
Post–Secondary School	4	0.10
Not Specified	190	4.4
Total	4,311	100
Occupation:		
Agriculture	3,173	73.6
Unemployed	401	9.3
Trader / Merchant	242	5.6
Student	158	3.7
Laborer	46	1.1
Housekeeper	22	0.50
Not Specified	96	2.2
Other	173	4.0
Total	4,311	100
Ethnicity:		
Bashi	2,785	64.6
Barega	450	10.4
Bahavu	252	5.9
Bafulero	240	5.6
Batembo	234	5.4
Babembe	69	1.6
Other	167	3.9
Not Specified	114	2.6
Total	4,311	100

Table 1. Demographics of rape survivors presenting to Panzi Hospital between 2004 and 2008.

PRESENTATION TO PANZI HOSPITAL

Many sexual violence survivors who presented to Panzi Hospital came alone (36%). Other women were accompanied by aid workers (13%), family members (7%) or other patients traveling to Panzi Hospital (7%). Less than 1% of women were accompanied by their husbands.

In total, 73% of women reported "vehicle" as their mode of transportation to Panzi Hospital without differentiating private vehicle, taxi, bus, ambulance or other. Another 18% walked to the hospital to receive care. Less than 1% of women took a flight to reach Panzi Hospital and less than 1% traveled by boat.

Most sexual violence survivors (92%) reported that they had accessed the services of a Non-Governmental Organization (NGO) prior to seeking medical care at Panzi Hospital. For 86% of those women, the service rendered by the NGO was transfer to Panzi Hospital.

A third of the sexual violence records did not include the month that the woman was raped. In many instances where the month of attack was missing, the rape had occurred several years prior to arrival at Panzi Hospital, thus representing cases where there was a significant delay between sexual violence and presentation to medical care. In order to calculate the time intervals between rape and seeking medical care, the month of attack was assumed to be June for any record in which the actual month was not provided.

As shown in Table 2, there was a significant time delay between the sexual assault and presentation to Panzi Hospital. The mean time delay was 10.4 months and the median time delay was 7 months. Only 12% of women presented within the first month following the sexual assault. Many women came within the first year following the attack or had a much-delayed presentation, not seeking help for more than three years following the assault.

Delay	Number	Percentage
< 1 month	511	11.8
2 – 12 months	1,593	37.0
13 – 24 months	443	10.3
25 – 36 months	152	3.5
> 36 months	1,612	37.4
Total	4,311	100

Table 2. Delay between sexual violence and presentation to Panzi Hospital. For the purposes of this calculation, the month was assumed to be June for any record in which the actual month was not provided.

Throughout the data collection period, the delay between sexual violence and time to presentation at Panzi Hospital did not shorten. For instance, the average time delay in 2005 was 9.4 months versus 13.7 months in 2008. The analysis for 2004 was difficult because so many of the sexual assault records for 2004 did not include the month of the sexual assault.

PATTERNS OF SEXUAL VIOLENCE

LOCATION AND TIMING OF ATTACKS

The majority of sexual assaults were initiated in the woman's own home (Table 3). The forest and fields also accounted for a large proportion of assaults. The category "Other" included the market, water sources and other people's homes, as well as public buildings such as hospitals, shops and offices.

Location	Frequency	Percentage
Own Home	2,437	56.5
Fields	706	16.4
Forest	633	14.7
Road	257	6.0
Other	178	4.1
Not Specified	100	2.3
Total	4,311	100

Table 3. Location of attack among sexual violence survivors presenting to Panzi Hospital.

Sexual violence survivors reported that the majority of attacks occurred at night (57%). Just over one third (34%) of women reported that they were attacked during the day and 7% reported that they were attacked in the evening.

PERPETRATORS

Each rape experience had only one code for perpetrator even though there may have been a group of perpetrators (example: a group of *Interahamwe* perpetrators would have had a single perpetrator code of *"Interahamwe"*). Additionally, there were no mixed perpetrators described in this dataset, (example: civilian perpetrator and *Mai Mai* perpetrator implicated in the same rape) thus each perpetrator code is exclusive.

The mean number of assailants per sexual assault was 2.5 with a median of 2 and a range of 1 to greater than 20 assailants. As shown in Figure 1, 42% of women simply described the perpetrator(s) as "assailant(s)" and no further identifying information could be gathered. Twenty-four percent of assailants were described as being either, "soldiers" or "men in military uniform" without identifying any particular military affiliation. Another 28% of perpetrators were identified as belonging to a specific military group and the final 6% of perpetrators were classified as civilians. Specific military affiliations included *Interahamwe*, Hutu soldiers, FARDC, *Mai Mai*, Nkunda soldiers, Congolese soldiers, Tutsi soldiers, *Soldats de 106*, Rwandan soldiers, FDD, RCD, *Mudundu 40*, *Mutebutsi,* and *Rasta.*

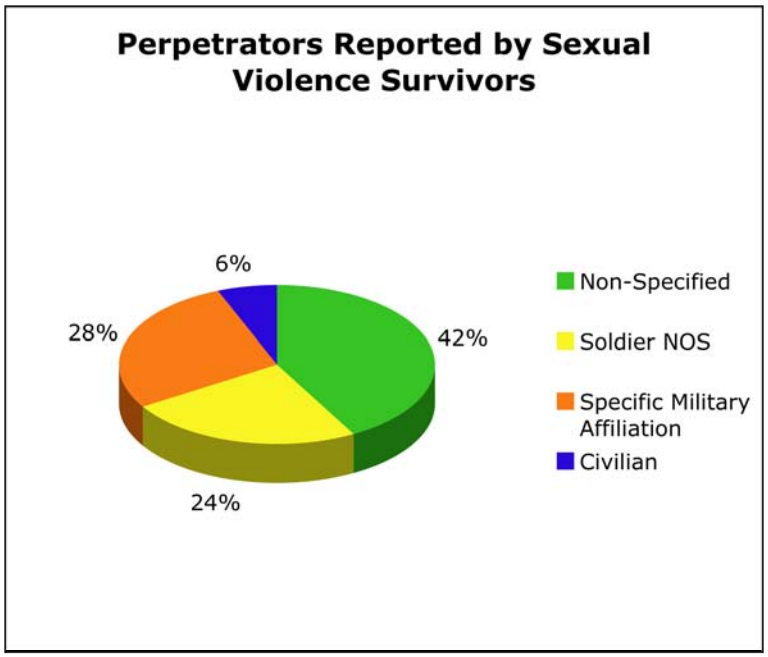

Figure 1. Perpetrators as described by sexual violence survivors presenting to Panzi Hospital. Soldier NOS refers to "Soldier Not Otherwise Specified" and indicates that the assailant was described as being a "soldier" or as being "in military uniform" without identifying any particular military affiliation.

Young woman awaiting medical consultation at Panzi Hospital (Susan Bartels, HHI)

The analysis focused on whether there were different patterns of sexual violence according to the affiliation of perpetrators: civilian versus military. It was hypothesized that many of the perpetrators in the "non-specified" category were indeed from the military or militia groups. Thus, further analysis was done to investigate the extent to which patterns of rape committed by "non-specified" perpetrators were similar to patterns of rape committed by military perpetrators. For the purpose of this analysis and discussion, armed combatant refers to the combined group of soldiers with a specific military affiliation (28%) and soldiers NOS or "men in military uniform" without a specified military affiliation (24%).

As shown in Figure 2, there were remarkable similarities between armed combatants and the non-specified perpetrators specifically with regards to gang rape (55% of gang rapes were committed by armed combatants and 44% by non-specified perpetrators versus 1% by civilian perpetrators). However, armed combatants were still the most common perpetrators for all types of sexual violence and civilian assailants were the least common perpetrators regardless of the type of sexual violence (Figure 2).

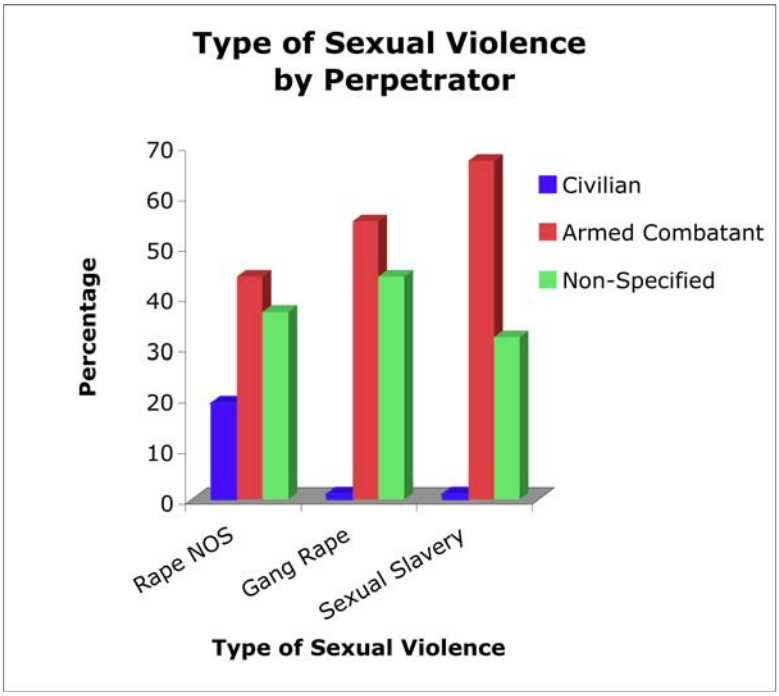

Figure 2. Type of sexual violence by perpetrator. Armed combatant refers to a combination of soldiers with a specific military affiliation and soldiers NOS without an identified military affiliation.

As shown in Figure 3, non-specified perpetrators were more similar to armed combatants than they were to civilian perpetrators with regards to location of attack. Figure 3 also illustrates that armed combatants were much more likely to attack in the forest and that civilian perpetrators most commonly attacked in other locations, such as private residences other than the victim's (often the assailant's residence), the market area and public buildings including hospitals, shops and offices.

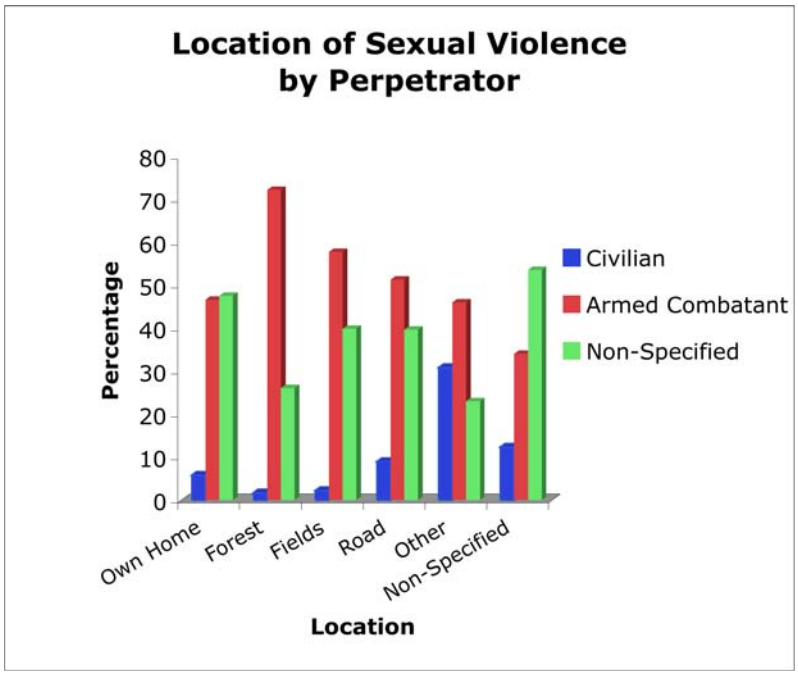

Figure 3. Locations of attacks by various perpetrators. "Other" refers to private residences other than the victim's (often the assailant's residence), the market area and public buildings including hospitals, shops and offices. Armed combatant refers to a combination of soldiers with a specific military affiliation and soldiers NOS without an identified military affiliation.

The behaviors of civilian perpetrators were notably different from those of armed combatants and non-specified perpetrators, giving rise to a distinct pattern of civilian perpetrated rape. For example, civilian perpetrators were much more likely to commit simple forms of rape such as rape NOS (Odds Ratio [OR] = 14.70, 95% Confidence Interval [CI] = 10.68 – 20.40). Civilian perpetrators were much less likely to commit sexual slavery (OR = 0.23, 95% CI = 0.11 – 0.46), gang rape (OR = 0.07, 95% CI = 0.05 – 0.11) or rape in the presence of family members (OR = 0.33, 95% CI = 0.16 – 0.68). The locations of attack by civilian perpetrators were also distinct from all other perpetrators. As illustrated in Figure 3, civilian perpetrators were much more likely to attack in "other locations" (OR = 8.66, 95% CI = 6.02 – 12.43) such as private residences other than the victim's (often the assailant's residence), the market area and public buildings including hospitals, shops and offices. Civilian perpetrators were also much less likely to attack in the forest (OR = 0.25, 95% CI = 0.13 – 0.46) or in the fields (OR = 0.32, 95% CI = 0.19 – 0.55). Collectively, these differences give rise to a civilian pattern of sexual violence that

was recognizable and distinct from the sexual violence committed by armed combatants and non-specified perpetrators.

TYPES OF SEXUAL VIOLENCE

An individual sexual assault could be coded as having more than one type of sexual violence. For instance, a woman who was gang raped in the presence of her children would have been coded as both gang rape and rape in the presence of family members. For the 4,311 records reviewed, there were 4,778 sexual violence codes.

Gang rape comprised the majority (almost 60%) of the sexual assaults (Figure 4). Rape NOS constituted over 20% of the attacks and 12% of the attacks involved being captured and held as a sex slave for at least 24 hours. The "Other" category of sexual violence included anal penetration, forced oral sex, sexual harassment, forced to undress, forced rape between victims and insertion of foreign objections into the vagina or anus.

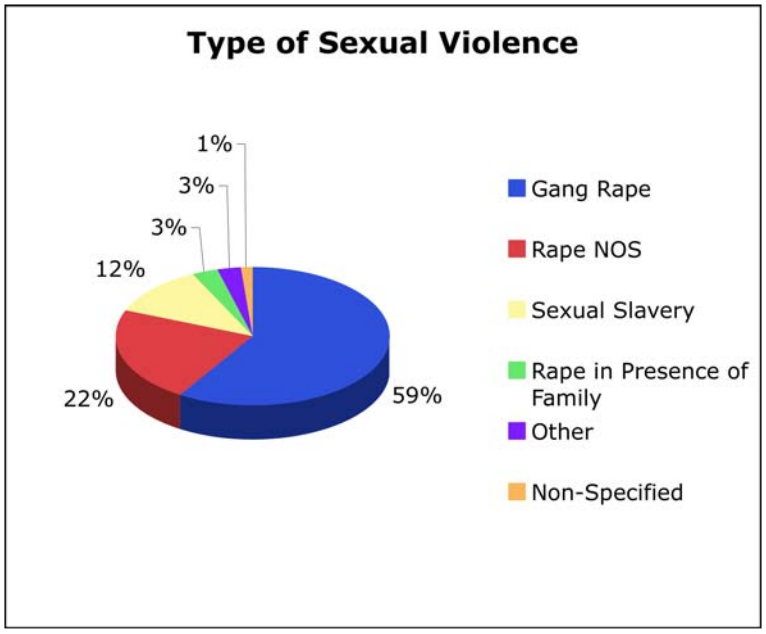

Figure 4. Type of sexual violence reported by survivors presenting to Panzi Hospital. Percentages refer to the percentage of all types of sexual violence coded since some women described more than one type of sexual violence (example: gang rape in the presence of family members). "Other" included anal penetration, forced oral sex, sexual harassment, forced to undress, forced rape between victims and insertion of foreign objections into the vagina or anus.

Women taken as sex slaves were on average younger than women who reported other types of sexual violence (mean age 29 years vs. 36 years, $P < 0.0001$). Women who self-identified with the Bafulero tribe were less likely to be taken as sex slaves compared to women who self-identified with other tribes (OR = 0.19, 95% CI = 0.03 – 0.81). There was a trend towards Bashi women being more affected by sexual slavery (OR = 1.18, 95% CI = 0.98 – 1.44). Single women were two and a half times more likely to be taken as sex slaves compared to married, divorced or widowed women (OR = 2.49, 95% CI = 2.01 – 3.08).

TRENDS OVER TIME

Thirty-four percent of sexual violence survivors did not report the month that the sexual assault occurred. Among those who did report the month of attack, there was a significant increase in the number of sexual assaults specifically in June of 2004 (Figure 5). Smaller spikes in reported cases of sexual violence were noted in April 2004, March 2005, June 2005 and April 2006.

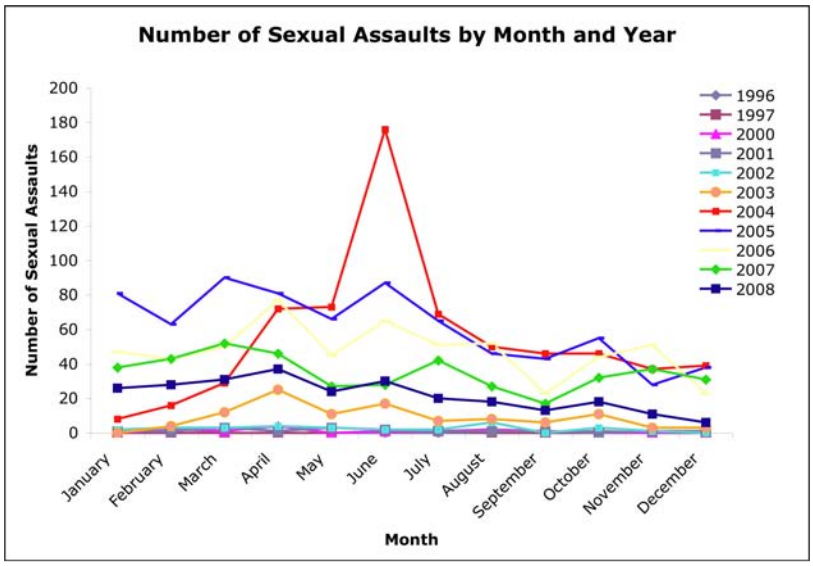

Figure 5. Number of sexual assaults by month and year.

The reported attacks extended back as far as 1994 with 32 sexual assaults (1%) occurring in the 1990's. The highest number of attacks occurred in 2004 and the number of assaults reported at Panzi Hospital decreased steadily between 2004 and 2008 (Figure 6).

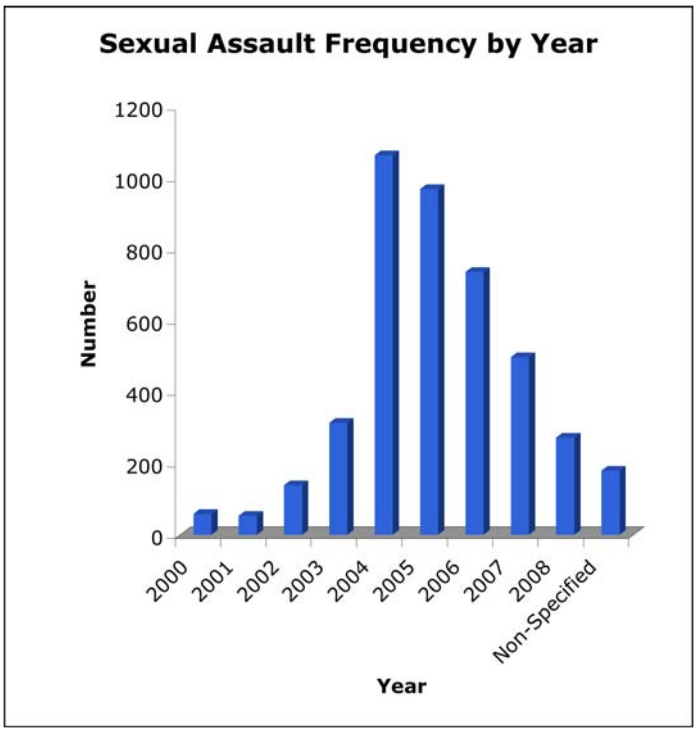

Figure 6. Year of sexual assault among sexual violence survivors presenting to Panzi Hospital. Approximately 1% of the reported sexual assaults occurred between 1994 and 1999 and are not shown graphically.

Analysis of the sexual assaults by type and year revealed that the proportion of reported rapes NOS has increased in recent years while the proportion of gang rapes appears to have decreased (Figure 7).

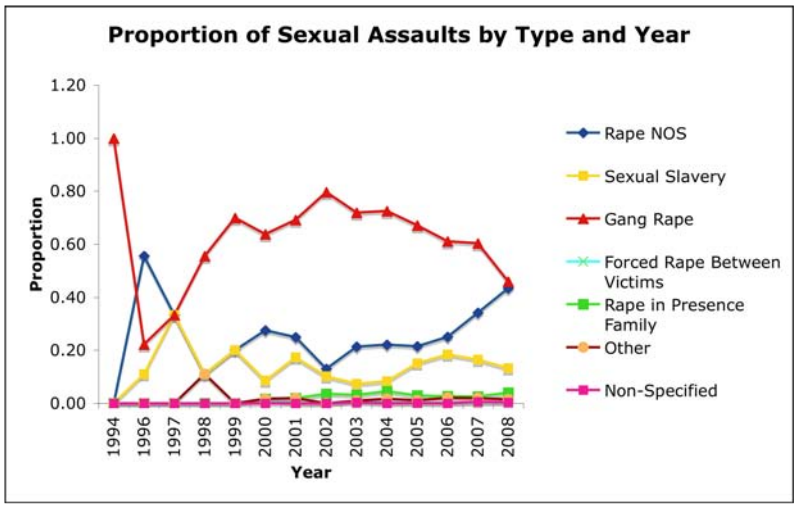

Figure 7. Proportion of sexual assaults by type of assault and by year.

A comparison of types of perpetrators in 2004 with types of perpetrators in 2008 revealed impressive differences. As illustrated in Figure 8, there was a remarkable 1733% or 17-fold increase in the reported number of civilian perpetrators between 2004 and 2008 (P-value < 0.0001). During the same time period, the number of reported rapes by armed combatants decreased by 77% (P-value = 0.086) and the number of rapes by non-specified perpetrators decreased by 92% (P-value < 0.0001). Despite the increase in civilian perpetrators over the four-year period, armed combatants were still the predominant perpetrators in 2008 (52% in 2004 vs. 46% in 2008). Of all rapes reported for 2004, fewer than 1% were perpetrated by civilians versus 38% of all rapes reported in 2008.

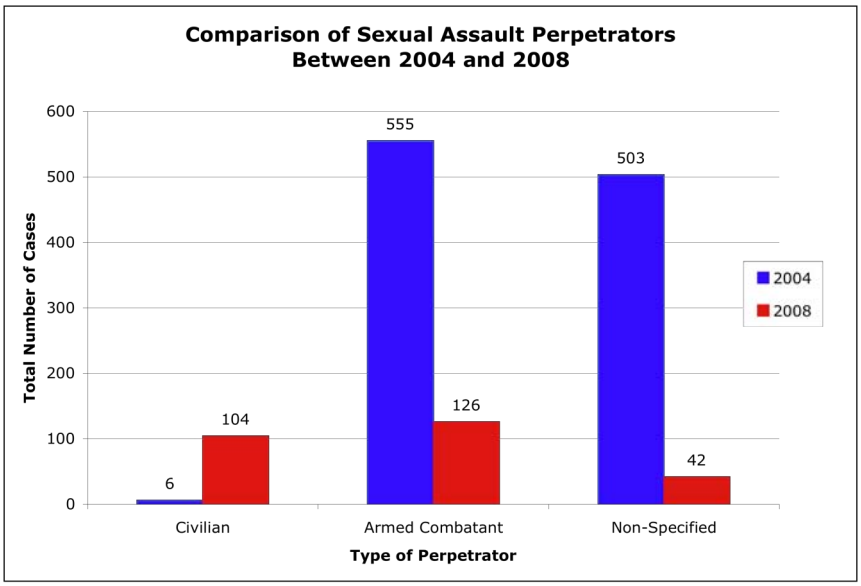

Figure 8. Comparison of sexual assault perpetrators between 2004 and 2008. Armed combatant refers to a combination of soldiers with a specific military affiliation and soldiers NOS without an identified military affiliation.

Figure 9 also demonstrates some important differences in the types of sexual assaults being committed in 2004 as compared with 2008. Within that time period, there was a 50% decrease in the total number of rapes NOS (P-value < 0.0001), a 60% decrease in the total number of sexual slaveries (P-value = 0.01) and an 84% decrease in the total number of gang rapes (P-value < 0.0001).

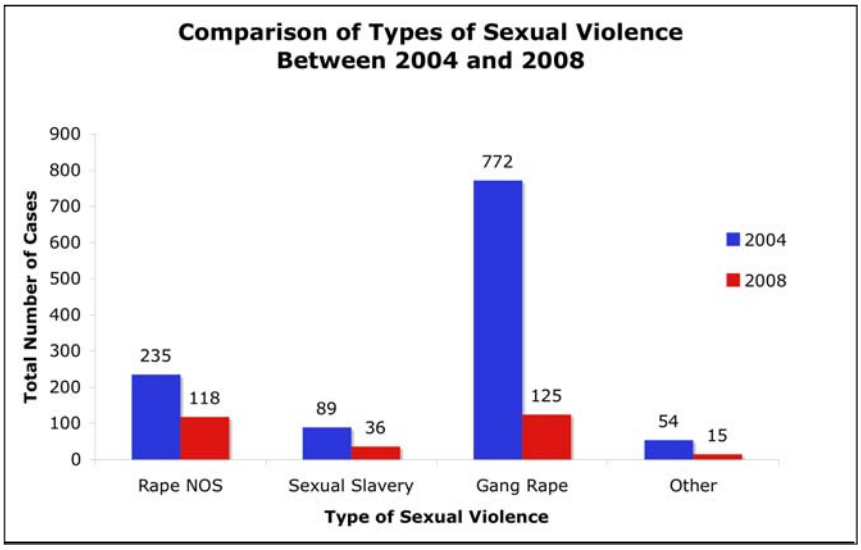

Figure 9. Comparison of types of sexual violence between 2004 and 2008. "Other" includes rape in the presence of family members, forced rape between victims, anal penetration, forced oral sex, sexual harassment, forced to undress, forced rape between victims and insertion of foreign objects into the vagina or anus as well as non-specified incidents of sexual violence.

QUALITATIVE ANALYSIS

THEME: ATTACKS ON INDIVIDUAL HOMES

In the Panzi Hospital dataset, 57% of women reported that they were attacked in their own homes, often while sleeping with their families. If present, the husband was often beaten, killed, or restrained while the woman was raped.

> *"It was about two o'clock in the morning and my husband and I were sleeping. All of a sudden the door was beaten down and the assailants entered the house. They tied up my husband, beat him and then killed him. They ordered me to have sex with them. Even though I resisted, I was eventually raped by two assailants."*

> *"My family and I were all sleeping when the soldiers arrived. They tied my husband's hands behind his back and then they took turns raping me. Afterwards they took my husband and me to the forest. When my husband resisted they shot and killed him. I spent three weeks in the forest until one night I was able to escape. When I arrived home, I discovered that my little child was dead."*

> *"I was sleeping when the five soldiers broke down the door and came into the house. They tied my husband to a tree. They removed my clothes and took me outside. They*

told my husband to be silent or they would kill him. Then they took their own clothes off and starting raping me. Some of the other soldiers were looting. When they finally left, I freed my husband and we looked for our children. Unfortunately, we only found two of them. I have come here for a consultation."

THEME: SEXUAL SLAVERY

Twelve percent of women reported that they were captured by the assailants and sexually assaulted over a period of at least 24 hours. In some instances, the women were taken as "wives" by a particular soldier, often a chief or commander. In other instances, the women were raped by many men over a period of time. Many women were eventually able to escape. Occasionally, family members paid money to the captors in exchange for the women's release.

"My husband, children and I were in the house when the soldiers arrived. They killed my husband because he was Tutsi. Then they took me to the forest where I became their 'femme' (wife) for four years. During this time, they raped me as routinely as one changes one's clothes."

"It was a night in 2007 and my family and I were sleeping in our home. There was a knock from outside; assailants ordered my husband to open the door. A group of six men in military uniform, four armed with guns and two unarmed, came into the house. They started to loot all our valuables. They took us outside and forced us to follow them to the forest. Once we arrived in the forest, they freed my husband but forced me to continue going deeper into the bush with them. A commander had chosen me to be his wife and he kept me in the forest for seven months, raping me anytime he wanted. Because he did not think I was capable of escaping, he allowed me to wander alone and this is when I escaped."

"I was staying at my older sister's house and we were already asleep. The soldiers came, tied us together and then took us to the forest. They demanded money - $150 for a man and $100 for a woman. The first time, ten of us were freed and then three days later when we were able to pay, we were freed as well. While in the forest, they used to rape us whenever we went to the river to get water. By the time it was over, four of them had raped me and I have not had my period since. We spent a week in the forest."

"We were at home with my parents when the soldiers arrived. They forced us to go to the forest where we spent five days. I was raped by four of them. We were freed when my parents paid the money – one thousand dollars for eleven people."

Group of women sharing a meal at Panzi Hospital
(Susan Bartels, HHI)

THEME: GANG RAPE

The majority of sexual assaults were described as gang rape, defined as rape by more than one perpetrator. Occasionally, there were so many assailants that the woman lost count or fell unconscious during the attack.

> *"Because our village was at risk of being attacked, my husband and I were sleeping in our hiding place. During the night in question, 30 well-armed assailants dressed in military uniform attacked us. They killed my husband. They tied me up and the child I was carrying on my back fell to the ground. A total of nineteen assailants took turns raping me."*

> *"I was walking on the road near my house when eight assailants approached. The eight men took turns raping me. There were three other women and they were also raped by the eight assailants. The men in our group were beaten almost to the point of death."*

> *"The assailants attacked me while I was working in my fields. They forced me to leave with them. One assailant separated my legs and tied them to small trees. Another held down my chest while the other raped me. After a while, they switched roles so they could take turns raping me."*

> *"We had already left our house in the village, so we were attacked in the forest. After looting everything we owned, twenty assailants raped me. I lost consciousness after being raped and it was some time before I began to see and hear again. Since the rape, I have had a sphincter problem and I now have fecal and urinary incontinence."*

Female inpatient ward at Panzi Hospital
(Susan Bartels, HHI)

THEME: RAPE IN THE PRESENCE OF FAMILY MEMBERS

In some instances, the victim's family members were forced to watch her being raped. These family members were most often the husband, the children or the mother/father-in-law. Many women who were raped in the presence of their family members specifically mentioned the additional shame of having had family members witness the attack.

> *"We were hiding among the banana trees. The soldiers found us there and raped me in the presence of my children. Since then, I feel ashamed when I am around my children."*

> *"It was February 2008. It was the middle of the night and we were sleeping when our house was attacked. They demanded that we open the door and when we did, six assailants entered, four well armed with guns and two others in training. They forced my husband to transport their things to the forest. One of my children was left behind but he followed us, bringing $30 so that we could be freed. The assailants cut my son's fingers causing him to loose a lot of blood. Six men raped me in front of my husband and they forced my husband to hold my legs while they raped me. Now I have lumbar pain and anorexia."*

> *"I was at home with my husband and children when we were attacked. The assailants took turns raping me in the presence of my family. My husband and children abandoned me because of the shame caused by this rape."*

"They arrived at our house and knocked on the door. After entering our home, they beat my husband. They called my mother- and father-in-law as well as my children and then they raped me in their presence. They left but later came back and looted all the livestock and cassava, taking it to the forest. They also took me to the forest and I spent two months there."

THEME: FORCED RAPE BETWEEN VICTIMS

Some sexual violence survivors describe forced rape between victims, often of incestuous nature. These descriptions included young men being forced to rape their mothers or sisters as well as fathers being forced to rape their daughters. Refusal on the part of the male to commit such acts of sexual violence often led to his death.

"My husband, children and I were at home when the soldiers arrived. The soldiers attempted to anally rape my son but he refused and they killed him. After this, eight men raped me in the presence of my husband. After raping me, they forced my husband to have sex with me in front of them."

"My husband and I were sleeping in our house. The children were sleeping in the house next door. The soldiers arrived and brought my daughter to our house where they raped her in the presence of my husband and me. Afterwards they demanded that my husband rape my daughter but he refused so they shot him. Then they went into the other house where they found my three sons. They killed all three of my boys. After killing them, two soldiers raped me one after the other."

"My family and our neighbors were all sleeping in the same house. There were five women in total and we were all raped. Three of the assailants raped me in front of my children. They also forced my son to have sex with the neighbor in our presence."

"I was in the house with my husband when two assailants arrived. They beat my husband very badly. They ordered my son to have sex with me, his mother. My son refused so they killed him with a knife. Next they took me out behind the house where they raped me. When they left, they took the two cows, which were our only means of living. When I returned to the house, I found the body of my son. Now, I live with misery and sickness each day."

THEME: RAPE OF PREGNANT WOMEN

Pregnant women, even those in the advanced stages of pregnancy, were in no way immune to sexual violence. Descriptions of miscarriages and stillbirths following rape were not infrequent.

"I was seven months pregnant when I was raped by six assailants. After the rape, I experienced abdominal pain and then I miscarried my baby. During the miscarriage I

was assisted by the midwives….Since the delivery of my stillborn baby, I have had an involuntary leaking of urine."

"My children and I were sleeping in our home and I was nine months pregnant at the time. I heard cries and knew that there were soldiers near the house. They came into the house and took my children outside. Then they took turns raping me. Afterwards they looted all the valuables that we owned. Two weeks later I had a normal delivery."

"I was going to work in the field when I saw two men in military uniform who asked me 'Who is with you?' I replied that I was alone and they asked me where I was going. I said that I was going to the fields. They made me take off my clothes and they took me by force and raped me. I was six months pregnant and I had a miscarriage the same day. Now I have pelvic and lumbar pain."

"I was leaving the market and I didn't know that they were in front of me. Five to ten minutes after I got home, they came into my house. They said 'Where is the woman who entered here? She must come here and give us money that she has from selling a cow yesterday.' They abused my husband until he finally gave them money. My husband died then and the two assailants took turns raping me. They kicked my pregnant belly and to this day I have a lot of pain in this area."

Elderly patient at Panzi Hospital
(Justin Ide, Harvard University News Office)

THEME: RAPE WHILE HIDING

Some women described leaving their homes to hide in the forest overnight in an attempt to keep their families safe. Unfortunately, this tactic was not always successful and many women came under attack by military forces while hiding in the bush.

> *"In our village, there was a lot of suffering because of the soldiers. For this reason, we were no longer sleeping in our houses; instead we were hiding in the bush. We were in our hiding place and I was sleeping. I saw five assailants coming. They were shameful enough to rape me. I am old - around 70 years of age. Since this day I have had pelvic pain and vaginal itching."*

> *"I was in the forest. The assailants arrived where my husband, children and I were hiding. They asked us to give them money but I told them that we didn't have any. They asked me if I prefer death, or to sleep with them. My husband said 'Instead of killing her, it is better have sex with her.' Three of the assailants slept with me and they took my husband to transport their baggage to the forest. Once there, they killed my husband. Before leaving with my husband, they raped me and they killed my two children."*

> *"The assailants arrived as I was preparing to leave with my family to go to the bush (in the evenings after eating, many families left to hide in the bush). They killed my husband and my son. One of them raped me and then they left."*

THEME: RAPE BY CIVILIAN PERPETRATORS

While the majority of sexual violence survivors described their assailants as being soldiers, as being in military uniform or directly identifying them as belonging to a specific military group, 6% of sexual assaults were reportedly committed by civilians. Sexual violence perpetrated by civilians most often involved young women and was more likely to happen in the perpetrator's home or while the victim was traveling to / from the market, school or a friend's house.

> *"I was walking along the road near the Kamaguana market when a boy from my neighborhood called out to me. I thought he wanted to tell me something since he was a brother of my community. I approached him and he immediately pushed me into the yard and closed the door behind me. There was a man behind the door and he beat me very badly. Then he raped me and since it was my first sexual encounter, he took my virginity. Since the rape, I have had irregular periods. I began to have my period in April between the 20 and 21st but I have not had it since then and now I am pregnant."*

> *"I was at home when a neighborhood boy asked me to have sex with him. I refused so he took me by force and raped me. Since then, I have had abdominal pain."*

> *"I was getting ready to go to the market in Muhanzi. A neighborhood boy called out to me saying that he wanted to buy bananas from me. I sold him the bananas but he made*

me take them to his house. Once in the house, he closed the door and started to intimidate me. He hit me and I fell to the floor. I fought him but he still raped me. After the rape I started to bleed and this is why I have come for a consultation here at Panzi Hospital. I needed sutures in my vagina because of a tear."

THEME: PREGNANCY RESULTING FROM RAPE

For some women, sexual violence resulted in pregnancy and this seemed to be particularly the case following sexual slavery, where women were raped repeatedly over a period of time. The sense of shame appeared to be heightened in women who became pregnant as a result of the rape and married women seemed more likely to be abandoned if the rape resulted in a pregnancy.

"When I was leaving school, I met four soldiers who took me to the forest and raped me. When I returned home I discovered that I was pregnant. I delivered a dead baby by C-section and several days later I found that I was involuntarily leaking urine."

"We were in our house. The soldiers captured us and immediately forced us to go to the forest. I spent four months there. When I finally returned home, I discovered I was pregnant. I gave birth to a boy at the hospital in Walungu."

"We were returning from the field when we met the assailants who took us as their 'femmes' for three weeks. We finally escaped but I discovered that I was pregnant. The pregnancy was aborted at the health center. It was four months…. Now I have an involuntary flow of urine and urinary incontinence."

"I was hospitalized at the health centre. I was receiving an IV infusion one night when the soldiers came to pillage. They pulled out the IV catheters and then they started to rape the patients, including myself. By July, I had not had my period for seven months. I gave birth to twins. As a result of this incident, my husband has abandoned me."

THEME: LOSS OF VIRGINITY

Some young women described losing their virginity through sexual violence. In some of these instances, there were particular concerns that the young woman might not be able to marry as a result of the rape.

"They arrived at my house and said that they were going to take me away. They forced me to go to the forest with them and they raped me. I was forced to stay with them in the forest and I became pregnant. I would rather have died than keep this pregnancy, because I was a woman of prayer in the village. How can God allow this kind of misfortune to fall upon me? It upset me to lose my virginity to an unknown person.

"I was at home preparing food in the kitchen when the three assailants entered the house. They forced me to go to another house where they were keeping cows. One man 'deflowered' me and then left me there. They all had guns and they were wearing military uniforms."

"I was in my house. Men in military uniform arrived, tortured everyone in the house and then forced me to go to the forest with them. Six men took turns raping me. They let me leave after one week. Now the whole village knows my story. Can I have a fiancé? Can I continue with my studies? I am in terrible despair."

THEME: LOSS OF FAMILY MEMBERS

In some instances women witnessed the torture and murder of family members. The emotional distress caused by losing a child, spouse or other family member was extraordinary, especially when people were forced to watch the violence and could do little to protect their loved ones.

"My husband and I were at home when the attackers broke down the door and entered the house. They tied up my husband and demanded money from him. Because he did not have any money, they put a knife to his face and turned it several times in his cheek. Then they stabbed him in the chest, at the level of the heart, and he died. They cut off my husband's sex and put it in his mouth even though he was already dead. They also cut my children. All of them died and I was left alone. Then the three assailants took turns raping me. I came to Panzi Hospital to receive care."

"I was already in bed when they came to pillage. After looting, they tied me up and took me to the forest with them. My young child was with me. I was raped by anyone who was able to rape and afterwards, I was undressed and tied to a tree and. When I started to cry, my child was killed on the spot. This is why I am so traumatized."

"It was around 9 o'clock at night and we were sleeping when we heard a knock on the door. They entered our home and demanded that we give them money. We did have $20 from selling charcoal. They looted our belongings and told us that they are going to kill us. They killed my husband in front of me, with a knife…cutting his bowels and his lungs. Then they burned the house with my husband's corpse and my living child. They were both burned".

"I was in my house when the soldiers arrived. They wanted me to have sex with them in front of my son who was 18 years old. I refused. They took my son and tied him up since he was trying to defend me. Two military men took him outside and killed him. I cried when I realized what had happened. After they killed my son, all four of them took turns raping me. It was two days before we could bury my son who died trying to protect his mother."

Woman visiting Panzi Hospital
(John Paul Doguin, ©2007)

THEME: LOSS OF PERSONAL BELONGINGS

Many women described looting of the family's valuables, including cash, livestock, food and clothing. Occasionally, the family home was destroyed in the attack. While loss of property and valuables would be devastating to any family, these losses were particularly severe blows in Eastern DRC, where poverty is both extreme and widespread.

> *"Five assailants arrived and three of them raped me. The other two looted the house. They took all the loot to the forest with them. They imprisoned my children and they burned the houses in the village before taking us to the forest. When they found other women, they brought these women to the forest and said that we were not beautiful. I escaped but I couldn't find anyone from my village because it had been burned. I don't even know if my children and husband are alive. I don't know where I will go since I have no house."*

> *"When the assailants attacked us I was pregnant with my husband's baby. They beat my husband and then three of them raped me. After that I continued to bleed and I had a stillbirth. They burnt my house and everything in it. Now I have nothing."*

> *"My husband and I were in bed. The soldiers arrived and started to rape me. My husband asked them why they were doing this and they killed him. Since then, I have not had a house because they burned it."*

> *"They came to pillage and they pillaged everything in my house, leaving with the livestock, the clothes and other valuables. Then two assailants raped me one after the other. Since that time I have a lot of discomfort all over my body. I hope that I am not infected."*

THEME: SPOUSAL ABANDONMENT

Spousal abandonment as a result of the sexual violence was not infrequent. Loss of one's husband was often very distressing to sexual violence survivors. Some women described hiding the sexual violence from family members because they feared abandonment.

> *"It was one night in March that the three assailants entered our house. Two assailants pillaged while the other one raped me. At this time my husband was on a trip to Burega. When he returned, my husband was told what happened. He abandoned me and returned to Burega, saying that he does not want a woman who has been raped. Unfortunately, after the rape, I was already pregnant".*

> *"I was sleeping when they arrived. The assailants raped me immediately and then they took me to the forest for many years. They would not let me leave. But, by divine grace, I finally managed to escape. However, this is what disturbs me: my husband said that he did not want to share my body. He left because of anger over these incidents and now he is married to another woman elsewhere."*

> *"The assailants arrived at my house, beat me, and threatened to sleep with me. They said if I did not agree, they would kill me. When I resisted, they took me to the forest where I became their 'femme.' After being taken to the forest, my husband abandoned me. I gave birth to a child who did not belong to my husband."*

> *"I was sleeping when the assailants arrived. My husband was on a trip. They broke down the door and entered our house. Three of them raped me and pillaged everything in the house. When he returned, my husband asked me what had happened and I explained. He abandoned me, taking another woman who had two children. Now I live alone with my four children and the village stigmatizes me because I am a woman of rape. This gives me terrible anxiety."*

Lab at Panzi Hospital
(Justin Ide, Harvard University News Office)

THEME: FEAR OF SEXUALLY TRANSMITTED INFECTIONS (STIS) OR HIV/AIDS

A common concern among sexual violence survivors was the contraction of STIs and HIV/AIDS and many women presented to hospital requesting HIV and STI testing. For some women, continuation of their marriages was contingent on negative HIV testing.

> *"I was sleeping when the assailants arrived. Four of them beat me and took turns raping me. I was ashamed to report this incident so I stayed home. However, the infection got worse and treatment became necessary. Now that I understand the infections, I realize that it is important to take care of myself."*

> *"I was farming the field when I saw soldiers approaching. They threatened to kill me and forced me to put down my hoe. They made me lie on the ground and I was raped. After the rape, they took me to the forest where I spent two days being raped by the same soldier. Now I have tested positive for HIV."*

> *"I was in the fields when the assailants arrived, claiming that they were going to have sex with me. They said that I would be killed if I resisted. So I was then raped by four soldiers who each took their turn with me. Since this time, I have had vaginal discharge and itching. I am afraid of STIs and HIV."*

> *"I was at home when four soldiers entered the house. They started to loot our belongings. One stayed in the house while the others went outside. He made all the children go outside. The same soldier raped me four times between nine pm and four am. My husband had been away but came home the next day. I explained to him what had happened but he said that we must separate until the results of all my tests came back."*

THEME: DESPAIR FOLLOWING RAPE

In the narrative descriptions of sexual assault, some women described how the rape had affected their emotional wellbeing. Sadness, misery, fear and shame were among the emotions most commonly described by sexual violence survivors. For some women, the will to live simply seemed to have been lost.

> *"I was in the house when they suddenly broke down the door. They started to loot our livestock and clothes. Then two of them took turns raping me. Since then, I have been unwell. I am not at peace and this is why I have come for treatment."*

> *"I was in the fields - the soldiers arrived and demanded cassava. I gave them some and they said 'Now that we have had your cassava, we must also have you - you will be our wife'. I refused but two of them raped me violently. Since then I have had a lot of discomfort and my husband has left. It has been miserable and I have been suffering with eight children."*

"I had just finished bathing and saw that military men had arrived at my house. They forced open the door and forced me into the main room. Then the rape started. I wanted to defend myself. I asked why this was happening to me. I was beat by one while the other raped me. My children cried. The soldiers forced us to be silent and threatened to kill us. I am ashamed and want to die but I also want to protect my children."

"We found them in our house. They pillaged everything. They put my husband on the bed and beat him. Then two of the soldiers raped me. This story is so tragic - I can't believe this happened to me. I prefer death instead of life. Now, the world is without me because of my situation."

DISCUSSION

THE MILITARIZATION OF RAPE IN SOUTH KIVU

MILITARY PERPETRATORS

Combining those perpetrators noted to have a specific military affiliation (28%) and those simply described as "soldier" or "man in military uniform" (24%), over half of all assailants were armed combatants. Another 42% of the sexual violence survivors simply described the perpetrator as "assailant" without any further identifying information. Within this latter group of non-specified assailants, there is most certainly some heterogeneity. However, the body of evidence presented here suggests that a large portion of this group is also comprised of armed combatants. For instance, the types of sexual violence perpetrated by non-specified assailants closely matched the types of sexual violence perpetrated by armed combatants (Figure 2). Similarly, the descriptions of attack locations demonstrate that like armed combatants, non-specified assailants were more likely to attack women in the forest or in the fields as compared with civilian assailants (Figure 3). Furthermore, in studying the patterns of attack, we found that the decrease in number of sexual assaults by non-specified assailants between 2004 and 2008 closely paralleled the decrease in number of sexual assaults by armed combatants in the same time period (Figure 9).

In reviewing the 4,311 narrative descriptions of sexual assaults, there were notable similarities between armed combatants and non-specified perpetrators, which were not captured in the quantitative analysis. For instance, like the armed combatants, the non-specified perpetrators were more often noted to pillage money, food, livestock, and clothing. Both non-specified perpetrators and armed combatants were also known to force the victim or her family members to physically carry the loot into the forest. Females forced to transport looted goods in this manner were often sexually assaulted by the non-specified perpetrators or armed combatants once they arrived in the forest. This pattern of pillaging the home and raping in the forest was not observed with civilian perpetrators. The non-specified assailants were also much more likely to attack in groups, as were the armed combatants. In contrast, civilian assailants almost always

attacked individually. Similar to armed combatants, non-specified assailants were often described as either encircling the family home or encircling victims in the forest or in the fields in order to corral them before attacking. And finally, as opposed to civilian perpetrators, non-specified perpetrators were much more likely to attack women who were in the company of their male family members, and this pattern was also observed with armed combatants. With both non-specified perpetrators and armed combatants, the male family members were often restrained, beaten, forced to watch the rape or killed.

To further investigate the relationship between South Kivu's rape epidemic and the region's militarization, we studied the number of sexual assaults by month and year. We compared this with documented military offensives for the area and found that several of the spikes in sexual assault numbers could be explained by a military strike or an intensification of military activity. For instance, Figure 5 illustrates a significant increase in the number of reported rapes for June 2004. In early June 2004, Laurent Nkunda and his troops seized control of Bukavu, claiming that they were protecting ethnic Congolese Tutsis from genocide.(48) During the attack on Bukavu, there was a significant increase in the number of sexual assaults in the region with some reports that as many as 16,000 women were raped in a single weekend.(49) This military advance is likely responsible for the dramatic increase in the number of sexual assaults reported to have occurred in June 2004. Similarly, there was an increase in the number of reported sexual assaults in April 2004 coinciding with a known clash between Congolese government troops and Rwandan Hutu rebels near Bukavu.(50) During this clash, rebels were reported to have attacked villagers as they retreated and we speculate that this may explain the increased number of reported rapes in April 2004.

Patients at Panzi Hospital begin the day with a short prayer service (Susan Bartels, HHI)

Trends over time suggest that the total number of women presenting to Panzi Hospital requesting post-rape care declined between 2004 and 2008 (Figure 6). This trend was also reported by Malteser, an NGO providing post-rape services in South Kivu.(46) The reduced number of reported sexual assaults between 2004 and 2008 may parallel a general decrease in the levels of military violence within the region during that time frame. However, given that there are significant delays between sexual assault and time to presentation, we expect that the numbers of reported cases for later years will continue to increase as women continue to access care up to several years following the actual rape. There is also more recent evidence that the number of sexual assaults has again increased in 2009 since the beginning of the joint Rwandan-Congolese military offensive against the FDLR.(51, 52)

Collectively, this data provides strong evidence that the armed combatants in South Kivu have been responsible for the majority of sexual assaults documented to have occurred there. To try to specify responsibility more precisely, however, is very difficult. There are and have been many armed groups operating within the region during the time frame covered by this study. At the height of the "Second Congo War", there were as many as 20 armed groups and it has previously been documented that "all warring parties" were known to rape civilian women.(42) Indeed, in the current study, women named a multitude of military groups as perpetrators. Specifically mentioned military affiliations included *Interahamwe,* Hutu soldiers, FARDC, *Mai Mai*, Nkunda soldiers, Congolese soldiers, Tutsi soldiers, *Soldats de 106*, Rwandan soldiers, FDD, RCD, *Mudundu 40*, *Mutebutsi*, and *Rastas.*

There are several problems with reporting the military identities of perpetrators in this context. First, we cannot comment on the military affiliations of 66% of the assailants (42% non-specified perpetrators and 24% "soldier or man in military uniform"). Because we cannot identify the military group for two thirds of the sexual assaults, we simply do not have enough data to draw conclusions about the relative roles of each of the military groups in perpetrating violence. Second, the ability of a sexual violence survivor to accurately identify her perpetrator as belonging to a specific military group is questionable. Women are often attacked at night in locations that are either dimly lit or without electricity altogether. Thus, many women are not able to clearly see the uniforms, insignia or other identifying characteristics that would allow them to confidently say that the perpetrator belonged to a particular armed group. Coupling this poor visibility with the fear and terror that must be experienced during a sexual assault and with the fear that must be experienced when your loved ones are in danger, we understand how easily identification errors might occur. Additionally, some women identified their perpetrators by the language the perpetrators spoke during the assault. Sometimes these were languages that the women did not speak or understand themselves. This too, is questionable as a means of identifying the perpetrator since the women may not have correctly identified the language and because speaking a particular language or dialect does not indicate a military allegiance. And finally, reporting the identities of military groups responsible for mass rape when those groups are still active, may place the women of South Kivu at risk of retaliatory attacks. For all of these reasons, we feel it most appropriate to report perpetrators as armed combatant, civilian, or not specified.

PATTERNS OF MILITARY RAPE

The predominance of military perpetration in the sexual violence epidemic of South Kivu has resulted in a characteristic pattern of rape. Women and girls of all ages, from toddlers to great-grandmothers, were brutally attacked. Single, married and widowed women were similarly targeted for sexual violence. All ethnicities were affected by the rape (the ethnicities presented here represent the local demographics in Bukavu and in South Kivu Province). Essentially, no one was spared. The majority of women were attacked in their own homes and most attacks happened during the evenings and nights. This pattern is in contrast to that found in other recent conflicts in Africa, where rape is reported primarily when women go out in search of water or firewood, when they are farming their fields or when their village is attacked.

One striking feature of rape in South Kivu is the high prevalence of gang rape, which was reported by almost 60% of all sexual violence survivors presenting to Panzi Hospital. Armed combatants were responsible for most of the gang rape with only 1% of such rapes reportedly committed by civilians (Figure 2). Overall the mean number of perpetrators was 2.5 with a maximum of greater than 20. A theme of gang rape also resonates from the qualitative analysis where descriptions of women being encircled by a group of men and then attacked are common. Some narratives provide detail about women being restrained by a group of men who each take turns assaulting the victim. More often, however, narratives simply state, "…. then they took turns raping me". This high prevalence of gang rape is significant since the odds of contracting STIs or HIV increase as the number of assailants increases. Similarly, the risk of serious physical injury likely increases with multiple assailants and women are probably at higher risk for genital trauma, fistulas and bodily injury as a result. Such a high proportion of gang rape may be used as a method of male bonding and speaks to the widespread acceptability of sexual violence among armed combatants in South Kivu.

Sexual slavery was reported in 12% of the attacks reported by survivors presenting to Panzi Hospital and like gang rape, was perpetrated largely by armed combatants. The amount of time spent in sexual slavery ranged from a day to several years. Young, single women were more likely to be taken as sex slaves.

The brutality of rape in South Kivu has been one of the conflict's defining characteristics and our results again speak to the horrific nature of the crimes. Women describe genital mutilation, instrumentation with sticks and weapons, forced rape between victims while held at gunpoint, and family members being forced to witness rape. In addition to the rape of young girls and elderly women, the atrocities also include rape of women in the advanced stages of pregnancy, rape of disabled women and rape of hospitalized patients recovering from recent surgery. But the brutality extends beyond the sexual violence. Within this dataset, women also describe forced cannibalism, being forced to drink bodily fluids such as urine, the slaughter of infants and young children in front of their mothers and the burning alive of family members. The ruthless nature of these attacks indicate that this is not rape for the sake of rape; instead these horrific acts are meant to terrorize and intimidate an entire population. The shame and humiliation inflicted by these crimes is intended to prohibit recovery and re-integration into society, and to thereby destroy the victims' families and communities.

Although the pattern of military rape in South Kivu was consistent within the data presented here, more recent trends indicate a potential shift in precipitating or motivating factors at work in the region. For example, evidence from beyond this dataset suggests increasing reports of male rape over the last several months. The targeting of men for sexual violence coincides with the joint DRC - Rwanda military offensive to disarm the FDLR.(53) Ten percent of the reported rape cases in Goma, North Kivu in June 2009 involved male victims and these reportedly occurred across a large geographic region. Although some men report being attacked by armed militias,(53) details of male rape are largely unknown including the identity of perpetrators, types of sexual violence, and consequences. While there have always been sporadic reports of male rape in Eastern DRC, these have been difficult to investigate since men have traditionally been even more reluctant than women to come forward after experiencing sexual violence. It is likely, given the contemporaneous nature of the reports, that this apparent willingness to come forward is linked to an actual increase in incidence. It is possible, however, that the recent trend of male rape results from decreased sexual violence stigma and therefore a new willingness on behalf of male victims to report it. Little has been documented about wartime rape targeting males and this is a topic requiring future study.

Patients awaiting medical care at Panzi Hospital
(Susan Bartels, HHI)

MILITARY MOTIVES

With a modern day shift from nation-state conflicts to intrastate civil wars, has come a fundamental change in sexual warfare. In ancient times, rape was offered to soldiers as a reward after victory. In DRC however, as in other contemporary conflicts, sexual violence is employed as a weapon of war because it is inexpensive and readily available, but still extremely effective. In Eastern DRC, militias operate with scant resources, low-tech weaponry and limited access to arms. In this setting, rape is an ideal weapon and one that is difficult to match. Additionally,

many armed combatants in Eastern DRC are unpaid and poorly supplied with food and clothing. As a result, they rely on pillaging of local villages to meet these material demands. This requisite pillaging is at least partially responsible for bringing the militias to directly confront civilians. As a manner of ensuring compliance and eliminating resistance, the militias terrorize and shame, using sexual violence as the primary means to this end. This trend of looting and rape was clearly noted in our qualitative analysis with many sexual assault narratives beginning "… they came to pillage...". Furthermore, there were reports of women being released from sexual slavery only after their families provided the cash ransom that was being demanded by the militias. In Eastern DRC, rape is also used as a weapon of war because commanders and combatants are poorly trained and have little exposure to or knowledge of international humanitarian law. This observation is not to imply that an awareness of the law would guarantee compliance, since the militias in question are notoriously undisciplined and much effort at the level of the command structure would need to be exerted to bring these forces into line with accepted standards of military behavior in war.

It is not only militia characteristics that propagate war-related sexual violence in Eastern DRC. Features of the conflict have also contributed to the success of rape as a military strategy. For instance, with the exception of the Mai Mai, armed military groups in Eastern DRC have been largely unopposed; community members have not taken up arms to defend themselves and efforts of the Congolese national army have been weak and scattered (furthermore, the Congolese army is itself implicated in the sexual violence). Due to the one-sided nature of the conflict, combatants have had the time and energy to rape civilians as they carry out military offensives. Although neither the local community nor the Congolese national army really caused much of a threat to the militias within Eastern DRC over the period studied, the militias do fight each other. Most of these battles have centered on control of the vast resources that lie within the soil and on control of key territories and major cities. Less commonly, military engagement between militias has occurred on the basis of ethnic tensions. In most of these inter-militia battles, civilians have been the undisputed victims, regardless of the intended military target. In many ways, the current war in Eastern DRC has been a proxy war with the armed militias directing their violence on civilian populations rather than on another military group. The most recent example of civilian targeting as a proxy for direct military engagement is the FDLR's violent retaliatory attacks on local communities since the DRC and Rwandan militaries joined forces in January 2009 in a combined operation to defeat and disarm the FDLR.(51)

PROTECTION

Protection of women and girls during conflict has become a priority within the international community, particularly since the United Nations (UN) Security Council passed Resolution 1820 in June 2008, which recognized that sexual violence is often deployed as a military tactic and called for a response to the problem.(54) Data on the location and circumstances of sexual assaults are critical for the development and implementation of successful protection programs. Knowing that the majority of attacks are on individual homes at night, aid organizations need to collaborate with local communities and devise new protection interventions specific for South Kivu. For instance, firewood patrols, which have been used to protect women from rape in other conflict settings, may have limited utility in decreasing rates of sexual violence in South Kivu,

where according to the data collected, most attacks occur on individual houses. By strategizing with local community members, the UN and other aid organizations need to identify new and innovative protection programs based on the patterns of attack that are most prevalent in the region.

To protect women in Eastern DRC, the environment of impunity must also end. At the national level, sexual violence laws need to be fully enforced and the process for seeking justice needs to be simplified and accessible for survivors. It will also be important to create the capacity to investigate and prosecute crimes against women within Eastern DRC, including the incorporation of trained female officers into investigation teams.

CIVILIAN ADOPTION OF RAPE

Overall, 6% of sexual violence survivors in this dataset described their assailants as being civilian (accounting for 1% of assaults in 2004 and 38% of assaults in 2008). Sexual assaults perpetrated by civilians had a pattern distinct from the military sexual assaults described above. For instance, sexual violence survivors reporting civilian perpetrators were more likely to report rape NOS as opposed to gang rape, sexual slavery or rape in the presence of family members. Additionally, civilian perpetrators were less likely to attack in the fields or in the forest and were more likely to attack in "other" locations including the perpetrators home, on the road, in the market or in a public building.

The data presented here provide strong evidence that the number of reported civilian rapes is on the rise in South Kivu (Figure 7 -9). With a 17-fold increase in reported cases of civilian rape and statistically significant declines in the types of rape known to be perpetrated almost exclusively by armed combatants (gang rape and sexual slavery), there appears to be a shift emerging in the nature of sexual violence within South Kivu during the period studied.

Collectively, these findings indicate a kind of "normalization" of sexual violence among the community as a result of widespread rape during the conflict. There is some prior recognition that the number of rapes committed by civilians in DRC is increasing(55, 56) and local community members in South Kivu also report increasing numbers of civilian perpetrated rape.(57) In focus groups, Congolese men acknowledged that rape had become a norm for young males who had grown up during the conflict in Eastern DRC.(57) Many of these men also carefully stress that sexual violence was not a Congolese problem until foreign militias introduced it during the conflict(57). Congolese women similarly report their experiences of increased numbers of rape by local community members since the beginning of the war.(57) Thus, after more than a decade of conflict in South Kivu, all constructive social and economic mechanisms that should be protecting civilians from sexual violence have been eroded, creating an environment where civilian rape is increasingly becoming a common feature of daily life.

Young boys playing a game at Panzi Hospital
(Justin Ide, Harvard University News Office)

Such civilian adoption of sexual violence is quite disturbing since it may well have long-term implications that will not be easily reversed. This rise in civilian rape speaks to the reversal of a society's norms and values and to the ongoing environment of impunity that exists within Eastern DRC. Further study is needed to determine the impact of the military rape epidemic on the valuation of women within Congolese culture. Have the years of rape by armed combatants exacerbated the low valuation of women within Congolese society?

To constrain the recent trend of civilian perpetrated sexual violence, the environment of impunity will have to be ended and the status of women as well as women's rights will have to be advanced. Furthermore, the mentality of entire communities will likely have to be reset to recognize that rape is an unacceptable and punishable crime and to accept women as equal members of society.

MEDICAL CONSIDERATIONS

DELAYS IN PRESENTATION

In this study, there were notable delays before women presented to medical attention and these delays, which were similarly documented by Malteser International(46), have important implications. Many women sought medical care only when their physical symptoms persisted or became very severe. In an ideal setting, post-sexual violence care is recommended within the first 72 hours such that HIV post-exposure prophylaxis (PEP), prophylactic antibiotics for sexually transmitted infections (STIs) and post-coital contraceptives can be given. During the time period studied here, Panzi Hospital only routinely offered prophylactic antibiotics. HIV PEP has since been introduced at Panzi Hospital but women present so late that it, along with post-coital contraceptives, are unlikely to be effective. There is an urgent need for village outreach

campaigns to educate local communities about the importance of early post-rape care. Sexual violence survivors need to be aware that HIV PEP and post-coital contraceptives are most effective if given within the first 72 hours and that beyond this period, they are unlikely to be beneficial. Successfully encouraging women to seek early post-sexual violence care will also require that the stigma surrounding sexual violence be reduced and this will also require education and awareness raising at the community level.

REFERRAL MECHANISMS

A large portion of the women in this study reported that they had received care from an NGO or community based organization prior to coming to Panzi Hospital and in 86% of these cases, the service received was transfer to Panzi Hospital. This finding indicates that local referral mechanisms are functioning, at least to some degree. However, the majority of women presenting to Panzi Hospital are thought to come from Bukavu or other large towns and villages within easy commuting distance to Bukavu. We speculate that the number of women presenting for care represents a small fraction of those who have been directly affected by sexual violence. We further speculate that women who live in remote villages are less often seeking post-sexual violence services. Therefore, in terms of improving access to care, the area with the greatest potential for significant impact is the establishment of satellite clinics and referral mechanisms that target survivors living in rural villages. With properly trained staff, satellite clinics can provide much of the routine care for post-rape survivors. For those survivors requiring surgery or a higher level of care, the satellite clinic can facilitate referral to a larger facility such as Panzi Hospital. The high number of referrals to Panzi Hospital also has important implications for it as a medical facility. It illustrates that Panzi Hospital has emerged as a regional referral center for sexual violence survivors. To meet these demands as a referral center, Panzi Hospital will require additional trained medical professionals, updated equipment and a reliable source of medical supplies including antibiotics, anti-retrovirals and post-coital contraceptives. Furthermore, the center will require secured and sustained funding if it is to continue supporting the hundreds of sexual violence survivors who present there each year.

PATIENT SYMPTOMS

In their narrative descriptions of sexual violence, many women reported physical symptoms with pelvic, lumbar and abdominal pain being the most common. Vaginal discharge, vaginal itching and menstrual abnormalities were other commonly reported complaints. Urinary symptoms including incontinence and reproductive abnormalities such as infertility, premature labor / delivery, and miscarriages were also reported by sexual violence survivors. In this study, sexual violence survivors were not directly questioned regarding physical symptoms following the assault. Failure to mention a symptom in the narrative does not imply that the symptom was absent. Therefore, we are unable to quantify specific complaints in the current study.

The psychological consequences of sexual violence were also severe for many women. In their narrative descriptions of the violence, women described sadness, anger, fear, anxiety, shame and misery as a result of the sexual assault. In many instances, these emotions appeared to be

augmented by pregnancy resulting from rape and by spousal abandonment following the sexual assault. Because this study did not directly inquire about psychological outcomes following sexual violence, we are unable to quantify specific psychological complaints.

PREGNANCY

Some women reported that they became pregnant as a result of the sexual violence. Management of pregnancy resulting from rape is always challenging even in western countries with advanced health care systems. However, in DRC pregnancy, labor and delivery can be most detrimental to a women's health. Some experts estimate the maternal mortality ratio (MMR) in Eastern DRC to be 3,000 deaths per 100,000 live births,(58) more than three times the MMR for Sub-Saharan Africa overall (920 deaths per 100,000 live births).(59) Although the risks of childbirth are real for any Congolese woman, they are significantly higher for young girls whose bodies are not mature enough for labor and delivery and for women who have serious pelvic injuries and scarring from the physical damage often caused by gang rape.

While some women die during childbirth, many other women suffer non-lethal complications. As illustrated in the qualitative results, many women develop involuntary leakage of urine or feces as a result of fistulas. Fistulas are a well-recognized complication of prolonged or obstructed labor and are particularly common in Sub-Saharan Africa where women begin childbearing at an earlier age, where malnutrition is common and where access to skilled birth attendants is greatly lacking.(60, 61)

In DRC, abortion is illegal except in the rare instances where a physician determines that it would be detrimental to the mother's health to continue with the pregnancy. Congolese law makes no provision for women who become pregnant after rape. Thus, women who decide to terminate a pregnancy are usually forced to do so illegally and often with the help of traditional healers. Staff at Panzi Hospital report caring for women who suffer complications of illegal abortions, with post-procedure infections being some of the most common complications (personal communication from physicians at Panzi Hospital). Further study is needed to investigate the outcomes of rape-related pregnancy within this context.

A baby being delivered by Cesarean section at Panzi Hospital
(Justin Ide, Harvard University News Office)

HIV TRANSMISSION

Many sexual violence survivors were concerned about STIs in general and about HIV in particular. Estimates for the prevalence of HIV/AIDS in DRC vary considerably. The World Health Organization (WHO) estimates HIV prevalence in DRC to be 6% among military, soldiers and police.(62) Amnesty International estimates the HIV prevalence to be 20 – 30% among those presenting to medical services in Eastern DRC (based on reports from several health care facilities).(39) Regardless of the true prevalence of HIV/AIDS, the risk of transmission is a legitimate concern during any unprotected sexual encounter. The risk of HIV transmission is further increased in the setting of wartime rape because gang rape is common, and because vaginal tears and lacerations, which often result from the violent nature of wartime rape, further increase the risk of HIV transmission.(63)

It is reasonable to expect that HIV transmission might be accelerated in the context of sexual violence in South Kivu and certainly an individual survivor's concerns about contracting HIV are well justified. On a population level, however, existing evidence does not support an increased HIV prevalence in South Kivu. In a 2007 systematic review, Spiegel et al reported that there were no apparent differences between HIV prevalence in Eastern DRC and Kinshasa and that the HIV prevalence in Eastern DRC was lower than the prevalence at sentinel sites in Burundi and similar to the prevalence at sentinel sites in Rwanda. Furthermore, the HIV prevalence at Panzi Hospital is reported to be 4.5%.(64) Thus, there is a discrepancy between what one might expect (based on the amount of sexual violence in Eastern DRC and based on the violent and traumatic nature of the rapes) and what the existing evidence shows. This discrepancy calls for further study to understand HIV transmission among sexual violence perpetrators and survivors in South Kivu. A better understanding of these patterns will enable HIV/AIDS resources to be allocated appropriately within the context of the war, including

instituting HIV testing facilities, offering HIV prophylaxis and treating active HIV/AIDS infections.

SOCIAL BURDEN OF SEXUAL VIOLENCE

LOSSES

Material losses were extremely common in this study and most often involved cash, food, clothing or livestock. Occasionally women reported that the family home was lost during the attack, most often when it was burned to the ground. The loss of personal valuables or the family home would be devastating in any circumstance. However, this is especially true in Eastern DRC where the subsistence of most families is precarious at best. Link these material losses to the potential for lost income after rape-related injury or the potential loss of the male head of household, and the magnitude of the resource extraction is further amplified. In fact, some families likely never recover from the financial hardships that result from these attacks.

Many women reported the deaths of children and / or husbands at the time they were sexually assaulted. The emotional distress caused by losing a child or spouse was immense, especially when survivors were forced to watch their family members being tortured and killed. Some women expressed enormous guilt about not being able to protect their loved ones, especially young children, from an untimely death. There was also considerable remorse about the inhumane manner in which family members were sometimes killed. For survivors, mourning the loss of family members was compounded by the physical injuries and emotional distress arising from their own experiences of sexual violence.

Sexual violence survivors were also devastated by spousal abandonment. Even if not completely abandoned, many survivors seemed to have lost the support of their husbands. This observation is upheld by the finding that fewer than 1% of women were accompanied to medical care by their spouses. Loss of spousal support was also evident from the qualitative analysis where women sometimes mentioned marital discord followed sexual violence. For other women, continuation of their marriages was contingent on having a negative HIV test. Regardless of the reason for abandonment or marital discord, without the economic support and protection traditionally provided by men in DRC, women become exceptionally vulnerable. Congolese policy and socio-cultural customs continue to discriminate against women, effectively preventing their economic advancement and independence. Sexual violence programs must therefore focus on the family as a whole and must include support services for the spouses of women who have been raped.

LIVELIHOODS

Almost 74% of sexual violence survivors in this study reported agriculture as their source of livelihood. It has been estimated that in DRC generally women “account for 73% of those economically active in agriculture and produce more than 80% of the food crops.”(65) In South

Kivu more specifically, women are responsible for such a large share of the agriculture, that they are described as being the primary driving force behind the whole subsistence economy.(2)

How then, does this epidemic of sexual violence affect the livelihoods of women in South Kivu? First, women who suffer bodily injuries may be unable to return to the heavy physical labor required to cultivate the fields. Other women may be in a position to return, but may only be able to work in a reduced capacity, thus reducing their income and limiting the ability to support their families. Some sexual violence survivors are displaced from their homes and their communities either because the family home was lost in the attack, because their marriages dissolve, because they can no longer feel secure in their homes, because they are ostracized by the community or because they move to a larger town to access the services they require. Regardless of the etiology behind the displacement, these women are all forced to desert their fields and to at least temporarily abandon their source of livelihood. Because many of these women move to larger towns, such as Bukavu, this displacement has resulted in an accelerated rate of conflict-induced urbanization. Although not specifically documented for Bukavu, other under-developed countries have described high rates of prostitution among young, uneducated women who move to larger cities without a means of supporting themselves.(66) We therefore speculate that sexual violence survivors who are displaced to larger towns and cities in Eastern DRC may be at a similarly high risk of turning to prostitution to support themselves and their families.

Given the significant impact of sexual violence on livelihoods, what is the overall impact of sexual violence on the economy in South Kivu? With the predominance of women in all aspects of agricultural production and the relative importance of agriculture to the local economy, the sexual violence epidemic has the potential for wide ranging economic impacts. Most women directly affected by rape in South Kivu (the mean age was 35 in this study) are strong and healthy individuals who are in their prime in terms of economic productivity. It is worth exploring further how the extensive sexual violence reported in this region may affect the overall work force and the relative role of agriculture in the economy. The impact can only be negative, particularly in the agricultural sector, and Eastern DRC already has very high levels of unemployment and extensive poverty.

IMPACT ON CHILDREN

Many children are affected by the sexual violence in South Kivu. First, there are children who are themselves survivors of rape (in the current study approximately 6% of survivors were under the age of 16). Second, there are children who have experienced sexual violence secondhand by witnessing the rape of their mothers and / or other family members. While this study could not quantify the number of children who had witnessed sexual violence, the qualitative analysis suggests that it may be a significant number, particularly since many of the assaults happened in the family home at night when children would have likely been present. Third, there are children who were conceived and born out of rape. Given that abortion is illegal in DRC and that adoption is rare, many of the women who become pregnant as a result of sexual assault are likely forced to bear these children. Children born out of rape are often highly stigmatized by the community because they are viewed as offspring of the enemy. In some instances, these children

are abandoned because they were conceived from rape (little is known about infanticide in South Kivu). Fourth, there are children who have endured the separation of their families most often because their mothers were abandoned following sexual violence. And finally, there are children who have lost parents or other family members as a result of the sexual violence in South Kivu. In the worst of these cases, children may have even witnessed the horrific murder of their loved ones.

Additionally, many children are displaced from their homes as a result of sexual violence and some of these children live at Panzi Hospital for extended periods of time while their mothers receive care for rape-related injuries. Enrolling these children in school, while being extremely important from an educational standpoint, would also be beneficial in helping re-integrate them into society. These issues of re-integration are complex and very pressing in Eastern DRC.

Children affected by the sexual violence epidemic in Eastern DRC have unique needs. Those who have been directly affected by rape require recovery programs that are designed and implemented specifically for young children. Those who have witnessed crimes of sexual violence and murder require psychological support that is age-appropriate. Those children with families that have been divided by the sexual violence and those who have experienced forced displacement require assistance to understand their changing worlds. And finally, those children conceived through rape require particular care to help them overcome the stigma and low self-esteem so commonly described in these circumstances. Care for children conceived of rape must also include support for the mothers to help them accept and love their children and children who have already been abandoned should be reunited with their families if feasible or adopted into appropriate homes.

Through the brutal sexual assaults that have been committed over the past decade, the armed militias in Eastern DRC have affected not only the current generation but also the next generation. On the scale of need, the work required to support the well being of children affected by rape in Eastern DRC has barely begun. Yet the literature suggests that without sustained attention now, these children will grow to become another generation battered and imprinted by trauma.

LIMITATIONS

This study has several limitations. First, because it was retrospective in nature, the original information could not be verified and missing or inconsistent data could not be corrected. It was not feasible to contact women to validate the data collected at the time of interview. Because of the retrospective nature, it was also not possible to confirm that the data were collected in standardized manner. For instance, one of the survey questions asked about the level of psychological trauma. Some women with horrific stories of rape, torture and loss were surprisingly rated as having “No psychological trauma” or “Mild psychological trauma”. Questioning of staff revealed that some interviewers were reporting their own subjective opinion on the woman’s level of psychological trauma rather than actually asking the woman to rate her level of psychological trauma and recording the response. Because of the manner in which this particular question was answered, the responses were not felt to be meaningful and therefore the

data from this question were not analyzed.

The retrospective nature of this study also introduces documentation inconsistencies and data gaps. For example, the questionnaire asked each woman to state the name of her home village. Some women provided the name of their village while others provided the name of their district or the name of their neighborhood. Because of these inconsistencies, we were unable at the time of data analysis to map the home villages of women who had presented to Panzi Hospital requesting post-rape care. Such mapping would have allowed an interesting analysis of geographic patterns of sexual violence as well as correlation with known locations of military offensives over the past decade. Also, there were some frustratingly high rates of missing data that cannot now, years later, be rectified. For instance, in 34% of the interviews, the month that the sexual assault occurred was not recorded. And finally, due to the constraints of the questionnaire and lack of follow-up questions, it is impossible now to make some simple casual connections. For example, a sexual violence victim with documented symptoms of STIs may have had those symptoms before the sexual violence. Similarly, a woman who reported a pregnancy immediately after being raped may have actually been pregnant from a pre-existing sexual relationship.

Second, this study was limited by its sampling methodology. Because the data are representative only of those sexual violence survivors presenting to Panzi Hospital for post-rape care, there is an inherent selection bias. These cases of sexual assault may have been more violent, thus causing women to seek medical assistance. The sexual violence survivors may also have differed from the general population of raped women in that they had the means to access services. On the other hand, those who did not come to the hospital for services may have been more disabled, more oppressed, more fearful, or more vulnerable in other ways. Women who died before seeking care are obviously not included in this database, which introduces a survivor bias of uncertain dimension. An estimate from local health centers in South Kivu suggests that 3% of women who are raped die as a result(67). Because of these sampling biases, the results cannot be generalized to sexual violence survivors throughout Eastern DRC.

The sampling within Panzi Hospital was also a limitation of the study. The *Victims of Sexual Violence Program* was sporadically understaffed, meaning that at times there were an insufficient number of in-take officers to conduct all the necessary interviews. During these times of understaffing, the existing in-take officers chose for interview those women whom they believed to have suffered the most traumatic violence, based on interactions during the initial registration process. Because of this sampling, only 4,311 of the possible 9,709 sexual violence survivors actually registered as presenting to Panzi Hospital between 2004 and 2008 were interviewed. Although it is possible that these registration gaps represented important sampling biases, we did not detect any patterns in the data registry gaps at Panzi Hospital. Rather, the gaps appeared to have arisen sporadically as a result of insufficient staffing.

Nonetheless, the hospital registry did not record an intake interview for half of the sexual assault cases that presented to and were treated by Panzi Hospital during this period. As a result, this study is, by force of circumstance, based on a subset of all hospital patients. It is possible that the 4,311 sexual violence survivors presented here do in fact represent the more extreme cases on the spectrum of violence, since they were apparently selected on that basis for interview by the in-

take officers. However, we believe that it would be challenging to determine at first glance during the registration process which women had suffered the most severe trauma. In fact, a small number of women presumed to have undergone brutal sexual assaults and consequently chosen for interview later admitted in the interview that they had not actually been raped (some women initially claimed that they were sexual violence survivors believing that this would ensure their eligibility for services at Panzi Hospital).

This unsystematic but selective intake approach may also have had some effect on skewing the age distribution of women who were interviewed and whose cases were thus included in this analysis. In other reports, as many as one third of sexual violence survivors were children or adolescents.(68) Only 6% were found to be under the age of 16 in the current study. If it was impossible to interview all survivors presenting on any given day, it is possible that younger girls were not selected for interview because it is often more difficult for children to articulate their stories. Furthermore, there may have been additional concerns that recounting the violence would be more traumatizing for children and therefore children may have been less often selected for interview.

Third, this study was limited by the open, self-reporting format and by a failure to ask follow-up questions. This limitation led to some variables frequently being coded as "Non-Specified". As an example, 42% of all interviewees identified the perpetrator as "assailant" only and no further identifying information could be gathered from the record. Forty-two percent represents a high proportion of the sample and it would have been extremely useful to have collected more specific information. As a result, we were only able to study the patterns of attack according to types of perpetrators and speculate, based on cross tabulation of data, that the "Non-Specified" perpetrators as a group showed several important similarities to the armed combatants. The self-reporting nature of the survey also meant that outcomes such as physical, psychological and social problems could not be adequately quantified. Failure to volunteer a specific symptom or outcome does not imply its absence. While there were a number of women who self-reported symptoms of STIs, pregnancy resulting from rape, mental health symptoms and losses including spousal abandonment and death of family members, these numbers are most certainly underestimates. To have analyzed these data and reported them here would have served only to understate the physical, psychological and social consequences experienced by rape survivors.

Finally, several translations were required before the analysis of these data. Most women in South Kivu Province speak Kiswahili or Mashi and the majority of them would have described their sexual violence to the in-take officer using one of these two languages. The in-take officer then translated the responses to French and recorded the data in French. To complete the analysis, all data were then translated into English by one of the investigators. As with all translation, these steps introduce the potential for error. However, the in-take officers were fluent in Kiswahili, Mashi and French and the study investigators were comfortable translating from French to English and were aided in their translations by the Panzi Hospital translator. Additionally, cultural differences have the potential to introduce error into the analysis. To limit this potential source of error, the results were discussed with local staff at Panzi Hospital who provided cultural background and context.

Mealtime at Panzi Hospital
(Susan Bartels, HHI)

STRENGTHS

There are a number of notable strengths to this study. First, the study represents the only time that data from Panzi Hospital, in the heart of the conflict region, have been analyzed. As an established regional referral center for sexual violence, Panzi Hospital has the advantage of being able to collect a large quantity of data, in a consistent manner and over long periods of time. Second, the project was able to build a five-year registry of sexual violence data by overcoming the intensely laborious and time-consuming process of data extraction and entry. To do so required the effort of six data enterers working intermittently over an 18-month period. Third, the large sample size and multi-year data allow for robust statistical power, as well as a unique examination of trends over time. These data have significant power to reveal important trends in violence against women for policy makers and programmatic organizations. And finally, the narrative format of the questionnaire revealed qualitative insights into patterns of sexual violence. This qualitative analysis was instrumental in supplementing and supporting the quantitative results.

The study findings themselves are extremely valuable. Data on the location and time of attack have significant implications for the protection of women. Also, evidence documenting the militarization of rape and the brutal pattern of rape is important for documenting atrocities committed against civilians. Additionally, the insight gained from studying sexual violence patterns over time underscores what has been reported only anecdotally until now: that the epidemic of rape in South Kivu has seeped into civilian life and that there has been a normalization of sexual violence within the community. To the best of our knowledge, this study represents the first time that civilian adoption of rape has been documented in a quantitative manner.

The information reported here has also been presented to Panzi hospital staff to aid them in understanding sexual violence trends and the implications of those trends for patient care. Interim reports on the data were also translated into French for hospital personnel.

FUTURE WORK

This study provides a unique view into the nature and scope of sexual violence in South Kivu and also a unique position from which to view a number of important unanswered questions.

PROSPECTIVE REGISTRY OF SEXUAL VIOLENCE DATA AT PANZI HOSPITAL

Next steps include the implementation of a prospective sexual violence registry at Panzi Hospital using a revised questionnaire with specific questions on the location, time and circumstances of the attack as well as the number and identification of perpetrators and the type of sexual violence. Information on location of attack will be detailed enough to permit a unique Geographic Information System (GIS) analysis of the patterns of attack. The questionnaire will also include inquiries into the medical and social consequences of sexual violence, and psychological symptoms will be examined using validated instruments. The sexual violence survivor's initial interview will be linked to her hospital chart using a unique identifier. This will allow investigators to document outcomes such as pregnancy, STIs and HIV/AIDS as well as physical injuries and gynecological pathology such as fistulas. The prevalence of STIs, HIV, fistulas, and psychological symptoms will be compared to women presenting to Panzi Hospital for reasons other than post-rape services. All women who present to Panzi Hospital requesting post-sexual violence care will be invited to participate in the survey and all interviewers will receive rigorous training on how to use the survey instrument in a standardized fashion and how to properly document data.

ANALYSIS OF SEXUAL VIOLENCE DATA FOR NORTH KIVU

Sexual atrocities have also been widely documented in North Kivu, particularly in a succession of periods of conflict and violence against civilians since 2007.(43) North Kivu also has a regional referral center for sexual violence survivors; the HEAL Africa Hospital in Goma. Further retrospective and prospective research in North Kivu will allow a more accurate depiction of militia activities and will provide indications of targeted strategies for civilian protection. These studies will also allow a comparison of the patterns of military rape between North and South Kivu, which will provide greater insight into the motives that drive various armed militias to commit sexual violence. And finally, examination of sexual violence trends in North Kivu will foster a greater understanding of how wartime rape affects the attitudes of local community members towards sexual violence.

Young woman in Bukavu
(John Paul Doguin, ©2007)

PERPETRATOR STUDY TO UNDERSTAND MILITARY MOTIVES AND BEHAVIORS

Another important area of research centers on understanding the motives that drive perpetrators to commit such brutal acts of violence in a systematic manner. In particular, it will be important to compare the experiences and attitudes of multiple militias in order to better understand how behaviors around sexual violence vary amongst groups. Other important areas of research include learning more about female combatants and women living with militias, understanding how the patterns of violence differ depending on which armed militia controls the region, and examining the effectiveness of the demobilization process within DRC. Better understanding the role of armed combatants in sexual violence can lead to an assessment of the implications for interventions and improved demobilization strategies with armed groups.

EVALUATION OF HYPER-VULNERABLE POPULATIONS IN MINING COMMUNITIES

The coltan and gold mines of North and South Kivu have long been hotbeds of militia activity, child labor and sexual exploitation of the surrounding population. We speculate that local mining communities have been predisposed to rape as a weapon of war by virtue of their close proximity to the mines and the armed military groups operating in the surrounding areas. Little is known, however, about the relationship between sexual violence and the struggle to control these rich natural resources. Further research in these areas can shed light on the predatory behaviors of militias and promote strategies for the protection of women and girls in local mining communities.

INVESTIGATION OF HIV TRANSMISSION PATTERNS IN EASTERN DRC

Although it seems plausible that HIV transmission might be accelerated in the context of sexual violence in South Kivu, population level data do not support this hypothesis. A 2007 systematic review found no apparent differences between HIV prevalence in Eastern and Western DRC and reported that the HIV prevalence in Eastern DRC was similar to or lower than the prevalence at sentinel sites in Rwanda and Burundi.(69) Furthermore, Panzi Hospital reports an HIV prevalence of 4.5%.(64) Thus, there is a discrepancy between what one might expect (based on the extent of rape in South Kivu and the violent nature of the assaults) and what the existing data indicate. This discrepancy calls for further study to investigate HIV transmission patterns between sexual violence perpetrators and survivors. A better understanding of transmission patterns will facilitate the allocation HIV/AIDS resources within the context of the war, including instituting HIV testing, offering HIV prophylaxis and treating HIV/AIDS infections.

FAMILY PLANNING

We are also interested in understanding the outcomes of pregnancies that arise from sexual violence given that abortion in illegal in DRC, given that adoption is uncommon in Congolese culture and given that Panzi Hospital staff report treating complications of illegal abortions. Based on preliminary results of a qualitative pilot study at Panzi Hospital, the number of pregnancies resulting from sexual violence is high. These unintended pregnancies impact women, children, and their communities, because of the morbidity related to unsafe abortion and the stigmatization that occurs from delivering a child as a result of rape. There is a clear need for further research to more clearly quantify the number of unintended pregnancies occurring due to rape, to describe the nature and degree of unsafe abortions occurring in the community, and to explore the means to provide preventive care through increasing provision and utilization of contraception and emergency contraception. In addition, through GIS mapping we hope to identify where women obtain illegal abortions and where they present for family planning services. These future studies will be instrumental in creating interventions and shaping policies to protect and assist survivors of sexual violence.

Patients at Panzi Hospital making crafts to sell in the local market
(Justin Ide, Harvard University News Office)

RECOMMENDATIONS

1. The Congolese government and its international partners must ensure that quality care is available for women in all areas, in order to save lives and preserve quality of life.
Of sexual violence survivors seeking medical care at Panzi Hospital, only 12% received treatment within a month of the assault. The number of survivors who reach medical care in time to receive HIV/AIDS PEP is even lower. While no comprehensive overview of existing services is currently available, community consultations confirm that women in rural areas largely lack access to even basic medical care in the aftermath of rape, while more specialized care for post-rape complications is available in only a handful of health centers such as Panzi Hospital. This situation reflects a wider problem of insufficient funding and support for health services in rural areas, which impacts critically on the provision of basic care to preserve life and quality of life for rape survivors. The Government of the DRC must increase access to survivor support services, particularly medical care and particularly in remote and rural areas, by:

- *Massively increasing provision of medical care for survivors of sexual violence.* The comprehensive mapping of existing services provided in the UN's Comprehensive Strategy for Combating Sexual Violence should urgently be resourced and completed, and should form the basis for rapidly expanding basic survivor support, including PEP provision, into all health posts and centers across the country. This includes regular training for staff and regular supplies of medicine to ensure that each and every basic health facility has the capacity to provide post-rape treatment. Meanwhile, specialist care should be made more widely available by increasing the number of referral centers like Panzi Hospital. Training programs and quality checks on existing services are needed to ensure that survivors receive the full range of support needed, including effective psychosocial services and some form of livelihoods assistance during recovery.

- *Investing in the resourcing and coordination of referral systems.* Less than 1% of rape survivors reporting to Panzi were accompanied by their husbands and nine times as many had been abandoned by their spouse. Stigma and its social and familial consequences remain significant barriers to accessing timely care following sexual violence. The easier it is for survivors to access assistance locally, the greater the likelihood that they will be able to manage the risk of others finding out about the sexual violence (i.e. their absence will be for a far shorter period). It is therefore imperative that comprehensive and updated information on existing services be made widely available at the community level, including to non-literate and marginalized groups. This will require coordinated efforts bringing together service providers, local authorities and other Congolese and international protection actors, with effective UN backing under the Comprehensive Strategy for Combating Sexual Violence.

2. The Congolese government and its international allies should work to reduce sexual violence linked to military action.
The data reviewed in this report corroborate other observations indicating that the incidence of sexual violence spikes at times of active military engagement. The number of women seeking treatment at Panzi Hospital spiked at the time of armed clashes between government forces and

rebel groups in the Bukavu area. This finding is consistent with other sources, which point to the increased risk of reprisal attacks against civilians by belligerents at times of conflict and the dangers inherent in the concentration of armed forces among the civilian population and in the deployment of known human rights abusers within the various belligerent groups. The finding also reflects the increased vulnerability of women and girls during wartime, when they may be forced from their homes and separated from family and support networks. The Congolese government and its international allies should work to reduce sexual violence linked to military action, by:

- *Promoting non-military means of addressing security threats wherever possible.* The devastating fallout from ongoing military offensives for civilians is further indication that alternative strategies are urgently needed. The FARDC, lacking the basics of training and welfare provision for its troops and their dependants and facing constant security threats across a vast geographical area, has proved largely incapable of protecting civilians, and has been responsible for widespread violence against them, particularly sexual violence. In these circumstances, priority must be given to non-military means of disarming rebel groups, both in the government's own policies and in international support to them.

- *Systematically and specifically including the mitigation of civilian impact in the planning and implementation of all military operations.* Where military action is taken, every effort must be made, in accordance with international humanitarian law, to mitigate the impact of operations on civilians. In the current circumstances, that implies that any military operations should be jointly planned with MONUC and executed with independent oversight and reporting, to ensure specific and systematic provision is made for vulnerable groups. Ensuring this mitigation should be consistently prioritized in MONUC's mandate over supporting the disarmament of rebel groups. Protecting civilians from sexual and other forms of violence must become central to the planning and conduct of all military operations (for instance by anticipating reprisal attacks by rebel forces against the population) and may imply favoring strategies of containment over more offensive approaches. In the medium term, training of FARDC officers and soldiers in such mitigation must be a core part of defense reform.

3. The Congolese security services and MONUC must ensure that their protective deployments are tailored to local realities.

Analysis of the Panzi Hospital dataset suggests that the majority of sexual assaults take place away from the radius of most deterrent action by national and international protection actors – in homes, at night, in fields and in the bush, and on minor roads. Such threats are impossible to guard against entirely, yet in view of the scale of the violence it is essential that protection actors use every means at their disposal to respond. The Congolese security services and MONUC should improve the responsiveness of existing civilian protection measures to known threats, by:

- *Stepping up direct interaction with communities through increased MONUC deployment of civilian protection specialists, including outside major towns.* Enhanced communication with communities on their protection needs is essential for determining where and how protective action can be most effective, yet UN peacekeepers very often maintain little or no contact with the people they are intended to protect. This is largely

due to a lack of understanding of the context and of the protection role among MONUC troops on the ground. Under-resourcing means joint protection teams (JPTs) carry out short-term missions, leaving little opportunity for the follow-up that is required for sustained impact and the majority of civilian staff remain based in Kinshasa or larger towns, not at field level. The UN should urgently deploy more civilian specialists to the substantive sections of MONUC in field locations in order to ensure the sustained presence of civilian expertise alongside military contingents. This deployment should occur in conjunction with a monitoring and reporting system in which civilian recommendations are systematically taken on board within the military command. These additional specialists should be deployed to extend the coverage and duration of JPT support to contingents, and specifically to work with communities to devise strategies to protect civilians.

- *Expanding early warning systems.* In Kiwanja and Nyanzale, MONUC has established a system of regular communication with community leaders to increase responsiveness to security threats. In other areas, various units have provided communities with emergency response phone numbers, civilian staff (including JPTs) have facilitated security meetings with communities to discuss protection needs and feasibility, and contingents have increased foot patrols at night or in areas off the main road. These pockets of good practice should be expanded across the mission, with support from increased numbers of civilian specialists and interpreters.

4. The Congolese government and its international partners should build on the legal/justice initiatives taken to date, particularly the law on sexual violence and the government's announcement of "zero tolerance" for crimes against civilians by its armed forces.

Although DRC boasts one of the most progressive laws on sexual violence in sub-Saharan Africa, low rates of criminal prosecution and a culture of impunity within the armed forces have helped to make rape horrifyingly commonplace across the country. The Congolese government and its international partners should reverse the prevailing impunity for crimes of sexual violence by:

- *Investigating and prosecuting high-level commanders within the FARDC and other armed groups who have allegedly condoned incidents of sexual violence perpetrated by their troops and/or perpetrated incidents themselves.* The lack of accountability within the command and control structures of the FARDC allows combatants to continue to carry out grievous human rights abuses including sexual assault on civilian populations with few or no repercussions.
    - High-level commanders of all armed groups must be prosecuted, both for crimes they personally have committed and crimes for which they bear command responsibility, to end the present culture of impunity surrounding sexual violence and secure some measure of justice for the survivors. This will require a combination of necessary structural reforms to the military justice system and greater political will to combat impunity at high levels.
    - Complaints mechanisms must be put in place to enable civilians to safely report rape and other crimes committed by FARDC troops.

  - Security Sector Reform efforts in the DRC should focus on developing stronger justice and accountability institutions.

- *Improving access to justice for civilian crimes of sexual violence.* Those responsible for upholding the law on sexual violence in DRC, such as the police, magistrates and lawyers, are few in number, poorly paid and poorly trained, and in addition are overwhelmingly male. For instance, South Kivu has only two female judges and six female police personnel in an area at the size of Rwanda and Burundi combined. Ignorance of the law on sexual violence, and even outright rejection of sections of law, by the judiciary is well documented. As long as application of the law continues to be the exception rather than the rule, it has little deterrent effect. Informal settlements are common, with rape survivors being forced to marry their assailants in exchange for payment of damages to the survivor's family. Only a government-led drive on a massive scale – and with commensurate international support – to convey the message that the law will and must be upheld can hope to produce a clear impact, and must be a focus of lobby efforts. Additionally, the government must tackle negative attitudes within the law enforcement agencies and improve provision for practical implementation. Measures should include systematic training of officials, mass dissemination of the law and coordinated information campaigns across communities in conjunction with a range of opinion-leaders.

CONCLUSIONS

In South Kivu, women are extremely vulnerable to sexual violence, regardless of their age, ethnicity or marital status. They cannot feel safe while they cultivate their fields, collect firewood or sleep with their families in their own homes. The brutality of the sexual violence has become one of the defining characteristics of the war in South Kivu. The gang rape, sexual slavery, genital mutilation, forced rape between victims and rape in the presence of family members speak to the horrific nature of these crimes. Tragically, rape survivors are also often subjected to witnessing the torture and murder of their own family members. These are strategic acts of violence intended to intimidate, terrorize and control an entire population.

Rape in South Kivu is perpetrated predominantly by armed combatants and this militarized sexual violence has a characteristic pattern. It is primarily gang rape and sexual slavery, usually associated with pillaging, and often involving the beating or killing of family members. These attacks often occur on individual homes at night but also occur in the forest and in the fields.

There has been an overall decrease in the total number of reported rapes at Panzi Hospital between 2004 and 2008. While this decrease is promising, a more detailed analysis of these trends demonstrates a disturbing shift in perpetrators and patterns of attack. Between 2004 and 2008, there was an astounding increase in the number of civilian rapes in conjunction with a significant reduction in the number of rapes committed by armed combatants. This shift suggests a civilian adoption of sexual violence and the normalization of rape within a society that has been exposed to brutal militarized rape over the last decade.

To curb the sexual violence epidemic in South Kivu, we can no longer accept rape as "collateral damage" of armed conflict. Because sexual assaults are often carried out on individual homes and in very remote areas, humanitarian organizations need to collaborate with local communities to identify new and innovative protection programs based on the patterns of attack that we know to be most prevalent in the region. Peacekeeping mandates need to be amended to more explicitly protect civilians from sexual violence and peacekeeping forces will need to have sufficient resources to effectively meet those mandates.

Civilian adoption of rape is now becoming recognized as an emerging problem in South Kivu and is one that requires urgent attention. To address civilian rape, the environment of impunity must end and sexual violence legislation must be enforced to the fullest extent. Furthermore, the mindset of an entire society will have to be reset to recognize rape as a morally unacceptable and criminal act.

Meanwhile, immediate assistance is required for all sexual violence survivors including medical services, psychological counseling and social support. Men must be actively involved in all stages of survivor care such that families can recover as a unit and learn how to move forward together. The needs of all children affected by rape must be recognized, including child survivors, those who have witnessed sexual violence, those who have lost family members, those who have been displaced and those born out of rape. With age-appropriate, comprehensive interventions, we can limit the trauma and suffering that the rape epidemic causes to the next generation in South Kivu.

ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
CI	Confidence Interval
CNDP	*Congrès National Pour la Défense du Peuple*
DRC	Democratic Republic of Congo
FARDC	*Forces Armées de la République Démocratique du Congo*
FDD	*Forces pour la Défense de la Démocratie*
FDLR	*Forces Démocratiques de Libération du Rwanda*
FARDC	*Forces de la République Démocratique du Congo*
GIS	Geographic Information System
HIV	Human Immunodeficiency Virus
ICC	International Criminal Court
JPT	Joint Protection Team
MMR	Maternal Mortality Ratio
MONUC	*Mission de l'Organisation des Nations Unies en RD Congo*
NOS	Not Otherwise Specified
OR	Odds Ratio
PEP	Post Exposure Prophylaxis
PTSD	Post-Traumatic Stress Disorder
RCD	*Rassemblement Congolais pour la Démocratie*
RFDA	*Réseau des Femmes pour un Développement Associatif*
RFDP	*Réseau des Femmes Pour la Défense des Droits et la Paix*
STI	Sexually Transmitted Infection
UN	United Nations
WHO	World Health Organization

GLOSSARY

CNDP	Congolese Tutsi rebel group led by General Laurent Nkunda. In January 2009, the CNDP split and Nkunda was arrested.
Confidence Interval	Range of values used to indicate the precision of a statistic with a narrower interval indicating higher precision.
Convenience Sample	A sample in which the subjects are selected, in part or in whole, at the convenience of the researcher with little or no attempt to ensure that the sample is an accurate representation of some larger group or population.
Forced marriages	Refers to sexual slavery.
FARDC	National Congolese army consisting of forces from the former Kabila government and several rebel movements who were signatories to the 2002 Pretoria Agreement.
FDD	Formerly the largest Burundian Hutu rebel group, led by Pierre Nkurunziza. They signed a ceasefire with the Burundian government in December 2002 and registered as a political party in Burundi in 2005. During the Congo war, the FDD had bases in Congo, and was supported by Kinshasa.
FDLR	Largest rebel group in Eastern DRC comprised of the *Interahamwe*, Hutu members of the former Rwandan army, and a mix of displaced Rwandan Hutus. Since the beginning of 2009, there has been a joint DRC - Rwanda military offensive to disarm FDLR.
Gang Rape	Incident of sexual violence committed by two or more assailants.
Genital Mutilation	Mutilation of the female genitalia resulting from rape.
HIV Serology	Blood test used to identify infection with HIV.
Instrumentation	Rape in which an inanimate object or any part of the human body, not amounting to sexual intercourse, is used to penetrate the vagina or anus.
Interahamwe	Meaning "those who fight together", the *Interahamwe* refers to Hutu paramilitaries who were responsible for the 1994 Rwandan genocide. Many *Interahamwe* fled to DRC after the genocide and have continued to operate there primarily in the eastern region.
Mai Mai	Loosely connected Congolese militia groups without central command. The term originally applied to numerous groups defending their local communities against foreign invaders. Mai Mai groups have allied in

	various short-term arrangements with Hutu rebel groups, the Congolese government and RDC.
MONUC	Active United Nations peacekeeping force in DRC established in 1999 and currently the world's largest peacekeeping mission.
Mudundu 40	Mai-Mai rebel group backed by the government of Rwanda and known for recruiting child soldiers.
Nkunda Soldiers	Soldiers in the Congolese Tutsi rebel group CNDP under the authority of General Laurent Nkunda.
Odds Ratio	Statistic used to assess the risk of a particular outcome if a certain exposure is present. The odds ratio is a relative measure of risk, indicating how much more likely it is that someone who is exposed to the factor will develop the outcome as compared to someone who is not exposed.
P-Value	Probability of obtaining a result at least as extreme as the one that was actually observed, assuming that the null hypothesis is true. The lower the P-value, the less likely the result, and therefore the more significant the finding. For this project, statistical significance was defined as a P-value of ≤ 0.05.
Rape NOS	Sexual violence committed by a single assailant and not involving sexual slavery. Also used to describe sexual violence in which the survivor simply stated she was raped without providing further details.
Rasta	Group of fugitives who live in the forest, and are notorious for their brutality. Rastas are thought to have split from the *Interahamwe.*
RCD	Encompasses both RDC Goma and RDC Kisangani Liberation Movement (RDC-ML). RDC Goma was the original Rwandan-backed rebel group and RCD usually refers to the Rwandan RCD Goma. RCD-ML broke away in 1999. RDC formed the main group fighting to overthrow president Kabila.
Retrospective study	A research study based on examination of existing data to study events that have already occurred.
RFDA	Women's rights NGO operating in DRC working collectively with other organizations.
RFDP	A women's rights NGO operating in DRC working collectively with other organizations.

Soldats de 106	Fighters in the Mai-Mai 106th brigade under Commander Nyakabila or "Colonel 106".
Sexual Slavery	Being held in captivity by assailants for more than 24 hours for the purposes of sexual assault.

REFERENCES

1. International Rescue Committee, Burnet Institute. Mortality in the Democratic Republic of Congo: An ongoing crisis. [cited 2008 Dec 5]; Available from: http://www.theirc.org/resources/2007/2006-7_congomortalitysurvey.pdf
2. Reseau des Femmes pour un Developpement Associatif, Reseau des Femmes pour la Defense des Droit et la Paix, International Alert. Women's bodies as a battleground: sexual violence against women and girls during the war in the Democratic Republic of Congo. 2005 [cited January 3, 2007]; Available from: http://www.international-alert.org/publications/getdata.php?doctype=Pdf&id=32
3. Mealer B. All things must fight to live: stories of war and deliverane in Congo. New York: Bloomsbury USA; 2008.
4. Prunier G. Africa's World War: Congo, the Rwandan genocide, and the making of a continental catastrophe. Oxford: Oxford University Press; 2009.
5. Clark JF. The African stakes in the Congo War. New York: Palgrave McMillian; 2002.
6. British Broadcasting Corporation. Rwandan soldiers enter DR Congo. 2009 [cited 2009 July 23]; Available from: http://news.bbc.co.uk/2/hi/africa/7839510.stm
7. International Crisis Group. Afria Report No 133. Congo: bringing peace to North Kivu. 2007 [cited 2009 August 29]; Available from: http://www.crisisgroup.org/library/documents/africa/central_africa/133_congo___bringing_peace_to_north_kivu.pdf
8. Maigua P. Fresh displacements caused by fighting in eastern DRC. United Nations Radio, 2009 [cited 2009 July 25]; Available from: http://www.unmultimedia.org/radio/english/detail/78791.html
9. Gingerich T, Leaning J. The use of rape as a weapon of war in the conflict in Darfur, Sudan. 2004 [cited January 3, 2007]; Available from: http://www.physiciansforhumanrights.org/library/documents/reports/the-use-of-rape-as-a-weapon.pdf
10. Rumble L, Mehta SB. Assisting children born of sexual exploitation and abuse. Forced Migration Review. 2007(27):20-21.
11. Thomas K. Sexual violence: weapon of war. Forced Migration Review. 2007(27):15-16.
12. Leaning J, Bartels S, Mowai H. Sexual violence during war and forced migration. In: Martin S, Tirman J, editors. "Women, migration and conflict: breaking a deadly cycle". New York: Springer; 2009 - In press.
13. Brownmiller S. Against our will: men, women, rape. New York, NY: Simon and Schuster; 1975.
14. Chang I. The rape of Nanking: the forgotten holocaust of World War II. New York: Basic Books; 1997.
15. Physicians for Human Rights. War-related sexual violence in Sierra Leone: a population based assessemnt. 2002 [cited January 13, 2007]; Available from: http://www.physiciansforhumanrights.org/library/documents/reports/sexual-violence-sierra-leone.pdf
16. Amnesty International. Sierra Leone: Rape and other forms of sexul violence against girls and women. 2000 [cited January 14, 2007]; Available from: http://web.amnesty.org/library/pdf/AFR510352000ENGLISH/$File/AFR5103500.pdf

17. Amowitz L, Reis C, Hare Lyons K, Vann B, Mansaray B, Akinsulure-Smith A, et al. Prevalence of war-related sexual violence and other human rights abuses among internally displaced persons in Sierra Leone. JAMA. 2002;287:513.
18. de Jong K, Mulhem M, Ford N, Van der Kam S, Kleber R. The trauma of war in Sierra Leone. Lancet. 2000;355(9220):2067.
19. Human Rights Watch. Sexual violence within the Sierra Leone conflict. 2001 [cited January 14, 2007]; Available from: http://www.hrw.org/backgrounder/africa/sl-bck0226.htm
20. Human Rights Watch. We'll kill you if you cry: sexual violence in the Sierra Leone conflict. 2003 [cited January 14, 2007]; Available from: http://hrw.org/reports/2003/sierraleone/sierleon0103.pdf
21. International criminal tribunal for Rwanda, *Prosecutor v. Akayesu: Judgement* (September 2, 1998), ICTR-96-4-T, para. 688 and 731.
22. Agbakwa S. Genocidal politics and racialization of intervention: from Rwanda to Darfur and beyond. German Law Journal 2005 [cited January 3, 2007]; Available from: http://www.germanlawjournal.com/article.php?id=573
23. Amnesty International. "Marked for death", rape survivors living with HIV/AIDS in Rwanda. 2004 [cited January 14, 2007]; Available from: http://web.amnesty.org/library/pdf/AFR470072004ENGLISH/$File/AFR4700704.pdf
24. Human Rights Watch. Struggling to survive: barriers to justice for rape victims in Rwanda. Human Rights Watch. 2004;16(10(A)).
25. Human Rights Watch. Shattered lives: sexual violence during the Rwandan genocide and its aftermath. 1996 [cited January 14, 2007]; Available from: http://www.hrw.org/backgrounder/eca/kos0510.htm
26. Swiss S, Jennings P, Aryee G, Brown G, Jappah-Samukai R, Kamara M, et al. Violence against women during the Liberian civil conflict. JAMA. 1998;279:625.
27. Swiss S. Liberia: Anguish in a divided land. Boston, MA: Physicians for Human Rights; 1992.
28. Swiss S. Liberia: Women and children gravely mistreated. Boston, MA: Physicians for Human Rights; 1991.
29. Thomas DQ, Ralph RE, Ramet SP. Rape in war: the case of Bosnia. In: Anonymous, editor. Gender Politics in the Western Balkans. University Park, PA: Pennsylvania University Press; 1999. p. 63.
30. Human Rights Watch. Bosnia: Landmark verdicts for rape, torture, and sexual violence enslavement. 2001 [cited January 3, 2007]; Available from: http://hrw.org/english/docs/2001/02/22/bosher256_txt.htm
31. Human Rights Watch. Hopes betrayed: Trafficking of women and girls to post-conflict Bosnia and Herzegovina for forced prostitution. 2002 [cited January 14, 2007]; Available from: http://hrw.org/reports/2002/bosnia/Bosnia1102.pdf
32. Giller J, Bracken P, Kabaganda S. Uganda: War, women and rape. Lancet. 1991;337:604.
33. Amnesty International. Sudan, Darfur: Rape as a weapon of war - sexual violence and its consequences. 2004 [cited January 3, 2007]; Available from: http://web.amnesty.org/library/pdf/AFR540762004ENGLISH/$File/AFR5407604.pdf
34. Depoortere E, Checchi F, Broillet F, Gerstl S, Minetti A, Gayraud O, et al. Violence and mortality in West Darfur, Sudan (2003 - 2004): epidemiological evidence from four surveys. Lancet. 2004;364(9442):1290.

35. Medecins Sans Frontieres. The crushing burden of rape - sexual violence in Darfur. 2005 [cited January 3, 2007]; Available from: http://www.doctorswithoutborders.org/publications/reports/2005/sudan03.pdf
36. Sudan: Sexual violence spikes around South Darfur camp. Integrated Regional Information Networks (IRIN) News 2006 [cited January 3, 2007]; Available from: http://www.irinnews.org/report.asp?ReportID=55263
37. Physicians for Human Rights, Harvard Humanitarian Initiative. Nowhere to turn: failure to protect, support and assure justice for Darfuri women. 2009 [cited 2009 June 9]; Available from: http://physiciansforhumanrights.org/sudan/news/nowhere-to-turn.pdf
38. Human Rights Watch. Seeking justice: the prosecution of sexual violence in Congo war. 2005 [cited January 13, 2007; Available from: http://hrw.org/reports/2004/rwanda0904/rwanda0904.pdf
39. Amnesty International. Democratic Republic of Congo. Mass rape: time for remedies. 2004 [cited February 23, 2007]; Available from: http://web.amnesty.org/library/pdf/AFR620182004ENGLISH/$File/AFR6201804.pdf
40. Gettleman J. Rape epidemic raises trauma of Congo war. (cover story). New York Times. 2007 10/07;157(54090):1-11.
41. Human Rights Watch. Democratic Republic of the Congo: Confronting impunity. 2004 [cited 2008 Dec 20]; Available from: http://www.hrw.org/legacy/english/docs/2004/02/02/congo7230_txt.htm
42. Medecins Sans Frontieres. "I have no joy, no peace of mind" - Medical, psychological and socio-economic consequences of sexual violence in Eastern DRC. 2004 [cited January 3, 2007]; Available from: http://www.doctorswithoutborders.org/publications/reports/2004/sexualviolence_2004.pdf
43. Amnesty International. Democratic Republic of Congo; North Kivu: No end to war on women and children. 2008 [cited 1008 Dec 20]; Available from: http://www.amnesty.org/en/library/asset/AFR62/005/2008/en/bbe6934a-9f60-11dd-9e51-afa0a8282a50/afr620052008en.pdf
44. Wakabi W. Sexual violence increasing in the Democratic Republic of Congo. The Lancet. 2008;371(January 5).
45. Human Rights Watch. The war within the war - sexual violence against women and girls in Eastern Congo. 2002 [cited January 8, 2007]; Available from: http://www.hrw.org/reports/2002/drc/Congo0602.pdf
46. Steiner B, Benner MT, Sondorp E, Schimitz KP, Mesmer U, Rosenberger S. Sexual violence in the protracted conflict of DRC programming for rape survivors in South Kivu. Conflict and Health. 2009;3(3).
47. Goodwin J. Silence = rape. The Nation 2004 March 8 [cited January 8, 2007]; Available from: http://www.thenation.com/doc/20040308/goodwin
48. Integrated Regional Information Networks (IRIN). DRC: Interview with rebel general Laurant Nkunda. 2004 [cited 2009 August 24]; Available from: http://www.irinnews.org/Report.aspx?ReportId=51228
49. Scwabe A. Berserker von Bukavu torpediert die Wahlen. Spiegel Online 2006 [cited 2009 August 29]; Available from: http://www.spiegel.de/politik/ausland/0,1518,415601,00.html

50. Integrated Regional Information Networks (IRIN). DRC-Rwanda: army kills 39 Rwandan Hutu rebels in east. Humanitarian News and Analysis 2004 [cited 2009 September 8, 2009]; Available from: http://www.irinnews.org/Report.aspx?ReportId=49672
51. Oxfam America. Waking the devil: the impact of forced disarmanment on civilians in the Kivus. 2009 [cited 2009 August 17]; Available from: http://www.oxfamamerica.org/files/waking-the-devil.pdf
52. International Crisis Group. Congo: five priorities for a peacebuilding strategy. 2009 [cited 2009 August 31]; Available from: http://www.crisisgroup.org/home/index.cfm?id=6095&l=1
53. Gettleman J. Symbol of unhealed Congo: male rape victims. New York Times 2009 [cited 2009 August 5]; Available from: http://www.nytimes.com/2009/08/05/world/africa/05congo.html?_r=2&hp
54. United Nations Security Council. Resolution 1820 (2008). [cited 2009 June 8]; Available from: http://daccessdds.un.org/doc/UNDOC/GEN/N08/391/44/PDF/N0839144.pdf?OpenElement
55. Human Rights Watch. Soldiers who rape, commanders who condone: sexual violence and military reform in the Democratic Republic of Congo. 2009 [cited 2009 August 24]; Available from: http://www.hrw.org/en/reports/2009/07/16/soldiers-who-rape-commanders-who-condone-0
56. UN Human Rights Council. Report of the special rapporteur on violence against women, its causes and consequences. 2008 [cited 2009 August 27]; Available from: http://www2.ohchr.org/english/bodies/hrcouncil/docs/7session/A.HRC.7.6.Add.4.doc
57. Harvard Humanitarian Initiative. Characterizing sexual violence in the Democratic Republic of Congo: profiles of violence, community responses and implication for the protection of women; 2009 August.
58. World Health Organization. Strengthening disease and nutritional surveillance in eastern DRC. 2005 [cited 2008 Dec 5]; Available from: http://www.who.int/hac/crises/cod/sgbv/Surveillance_in_DRC_July05.pdf
59. UNICEF. Progress for children: a world fit for children statistical review. [cited 2009 January 16]; Available from: http://www.unicef.org/progressforchildren/2007n6/index_41814.htm?q=printme
60. Onsrud M, Sjoveian S, Luhirir R, Mukwege D. Sexual violence-related fistulas in the Democratic Republic of Congo. International Journal of Gynecology and Obstretics. 2008(103):265-269.
61. Wall LL. Obstetric vesicovaginal fistula as an international public-health problem. Lancet. 2006(368):1201-1209.
62. World Health Organization. Epidemiological fact sheet on HIV/AIDS: Democratic Republic of Congo. 2008 [cited 2008 Dec 7]; Available from: http://www.who.int/globalatlas/predefinedReports/EFS2008/full/EFS2008_CD.pdf
63. Klot J, DeLargy P. Sexual violence and HIV/AIDS transmission. Forced Migration Review. 2007;27:23-24.
64. Mukwege D, Nangini C. Rape with extreme violence: the new pathology in South Kivu, Democratic Republic of Congo. PLoS Medicine. 2009;6(12).

65. Food and Agriculture Organization of the United Nations. Women, agriculture and rural development: a synthesis report of Africa. 2003 [cited 2009 September 1]; Available from: http://www.fao.org/docrep/X0250E/x0250e03.htm#TopOfPage
66. United Nations Habitat. Gender, culture and urbanization. World Urban Forum 2004 [cited 2009 September 9]; Available from: http://www.unhabitat.org/downloads/docs/3081_20354_K0471981%20WUF2-11.pdf
67. Rodriguez C. Sexual violence in South Kivu, Congo. Forced Migration Review. 2007(27):45-46.
68. Editor - LA Times. Rape: it's a war crime. LA Times, 2009 [cited 2009 August 31]; Available from: http://www.latimes.com/news/opinion/la-ed-rape13-2009aug13,0,4833486.story
69. Spiegel PB, Bennedsen AR, Claass J, Burns L, Patterson N, Yiwenza D, et al. Prevalence of HIV infection in conflict-affected and displaced people in seven sub-Saharan African countires: a systematic review. Lancet. 2007;369:2187-2195.