Infected justice : the impact of HIV/AIDS on the police in Anglo-phone Sub-Saharan Africa

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Infected Justice: The Impact of HIV/AIDS on the Police in Anglo-phone Sub-Saharan Africa

by

Nathan Meehan

A Dissertation

Submitted to the University of Albany, State University of New York

In Partial Fulfillment of

The Requirements for the Degree of

Doctor of Philosophy

School of Criminal Justice

2009
ABSTRACT

Sub-Saharan Africa is an epicenter of the HIV/AIDS epidemic. This disease is affecting nearly every aspect of society in this region. This disease destroys individuals, strains family structures, weakens economies, burdens health systems, and can destabilize entire countries. The police are also being affected by HIV/AIDS. The way in which this disease impacts police organizations in sub-Saharan Africa is understudied. This project sought to estimate the HIV/AIDS impacts on police organizations in Anglophone sub-Sahara by utilizing the available literature on how HIV/AIDS affects military, civil service, healthcare, and education organizations in these same countries. It also attempts to identify the extent that it is possible to learn about the police by studying other organizations. This project found that HIV/AIDS impacts an organization due to personnel infected with the disease and changes in its operating environment. Organizations have different internal structures and operate in different environments. These differences mediate the way in which an organization is affected by HIV/AIDS. HIV/AIDS is likely to impact police personnel and operations in a number of ways which will combine to result in a reduced ability to provide services to the public. This project was able to estimate some ways in which HIV/AIDS impacts police organizations. It also determined that it is possible to learn about the police through the study of other organizations. However, the findings of this project are speculative and both research and fieldwork are needed to measure the impact of HIV/AIDS on police personnel, police operations, and police work.
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Introduction

Sub-Saharan Africa is one of the epicenters of the HIV/AIDS epidemic, with more persons infected than any other region in the world (UNAIDS, 2008). Millions have died of AIDS and millions more are currently infected with HIV, the virus that causes AIDS (UNAIDS, 2008). This disease destroys individuals, strains family structures, weakens economies, burdens health systems, and can destabilize entire countries. Many organizations, including the police, will respond to and are affected by HIV/AIDS.

The impact of this disease on the police in sub-Saharan Africa is likely to be substantial. Some research indicates police personnel are more likely to be infected with HIV than persons in the general population (Pharoah, 2005; Bakari, et al., 2000; Akinnawo, 1995). Illness and death due to HIV/AIDS may lead to increased absenteeism and decreased productivity, reducing the ability of the police to provide services. HIV/AIDS increases poverty and the size of the orphan population, which could result in heightened crime and an increase in demand for police services (Pharoah, 2005; Schonteich, 1998). Healthcare costs are likely to increase, straining already limited government finances (Price-Smith and Daly, 2004). Police personnel will also undergo the psychological and emotional strain of seeing their co-workers, family, and friends sicken and die of AIDS. It creates a double-bind upon society. Precisely when society is strained by the disease and needs the police, the police themselves are suffering its effects. Despite its importance, research exploring the impact of HIV/AIDS on police personnel, the police as an organization, and service delivery is limited.
Studying the impact of HIV/AIDS on the police can occur in a number of ways. First, it is possible to study the impact HIV/AIDS is likely to have upon police personnel who are infected with the disease. Infected personnel who are not adequately treated will be sick, be absent from work, have lower productivity, and will be incurring the psychological effects of being infected with a chronic illness. Second, it is also possible to study the impact of HIV/AIDS on the police through social problems caused or worsened by HIV/AIDS, which have the potential to make the work of the police more difficult by increasing their workload. Third, it is possible to study how police organizations are likely to be impacted as a whole by the dual challenge of large numbers of infected police personnel and a worsened working environment caused by HIV/AIDS. Fourth, it is possible to study the impact of a police organization weakened by HIV/AIDS upon the rest of society when its ability to respond to crime and maintain order is reduced.

This project will only focus on how police organizations themselves are impacted by HIV/AIDS. HIV/AIDS is likely to impact any one police organization in a myriad of ways. These impacts will combine and are likely to result in a reduced ability for a police organization to deliver services.

This project will identify plausible explanations of how HIV/AIDS might impact Anglo-phone sub-Saharan African national police organizations. To identify these plausible impacts on the police, I will study HIV/AIDS impacts in the military, the civil service, healthcare, and education, in the following countries: South Africa, Lesotho, Swaziland, Botswana, Zambia, Zimbabwe, Malawi, Kenya, Tanzania, and Uganda. This project seeks to identify what can be learned from these four comparison organizations in
these ten countries, to understand how HIV/AIDS may impact their national police organizations, and to facilitate future research.

This project will use a two-part methodological approach to learn from the comparison organizations. The first part will identify what can be learned of relevance to the police from a face value review of the literature on the comparison organizations. This face value review will assume the way HIV/AIDS impacts the comparison organizations is of automatic relevance to the police, independent of any organizational or environmental variation. The second part of this methodological approach will be to identify common trends of the impact of HIV/AIDS on the comparison organizations. Based on these trends, this project will try to understand the way organizational structure influences the impact of HIV/AIDS in the comparison organizations. From this understanding, it may be possible to better estimate the impact of HIV/AIDS on the police.

This paper is divided into twelve chapters. The first three chapters will provide background information on the HIV virus and AIDS, policing in sub-Saharan Africa, and the state of the literature on the impact of HIV/AIDS on the police. Chapter Four will describe the theoretical basis for applying information related to the impact of HIV/AIDS on the comparison organizations to the police. Chapter Five, Six, and Seven will review the literature on the known HIV/AIDS impacts on the comparison organizations and describe their relevance to the police. Chapter Eight will assess the extent it is possible to learn information of relevance to the police from a review of the literature. Chapter Nine and Ten will describe how it may be possible to identify plausible HIV/AIDS impacts on the police by studying the organizational environment and structure of the comparison
organizations. Chapter 10 will describe those impacts identified in the comparison
organizations which are relevant to the police based on organizational similarities and
differences. Chapter 11 will assess this project’s methodological approach overall.
Chapter 11 will briefly discuss the findings of this project and describe directions for
future research.
Chapter 1 – The HIV Virus, the AIDS Epidemic, and the Project Sample

The effect of HIV/AIDS on the police cannot be understood without first understanding the nature of the disease and the HIV epidemic. This chapter is divided into four sections. Section one describes the biology of the HIV/AIDS virus, its symptoms, and the progression of the disease in an individual who is infected. Section two describes the nature of the epidemic across the globe. The third describes the reasons for the high levels of infection within sub-Saharan Africa. The fourth section describes the countries selected for the project sample and the epidemic in these ten countries.

The HIV/AIDS Virus

The Human Immunodeficiency Virus (HIV) is believed to have originated in non-human primates in sub-Saharan Africa. During the 20th century, the disease jumped species to humans (Essig, 2007). The virus gradually spread out of sub-Saharan Africa. The HIV/AIDS epidemic officially began in 1981 (Essig, 2007). There are two types of HIV viruses, HIV-1 and HIV-2. HIV-2, a less pervasive strain, has lower levels of transmittability and primarily occurs in Western Africa (Essig, 2007). HIV-1 is more severe and is more easily transmitted than HIV-2 (Essig, 2007). The sample countries in sub-Saharan Africa, and the world more generally, are primarily impacted by the HIV-1 virus (Essig, 2007). For the purposes of this paper, any further reference to HIV relates to the HIV-1 strain of the virus.

HIV is a retro-virus which gradually destroys the immune system of infected individuals. HIV infects and destroys the CD+ T cells (T-cells) which are an essential part of the body’s immune system (Essig, 2007). A healthy person has an average of
800-1200 T-cells per cubic millimeter (mm3) of blood. After a person is infected with HIV, the disease gradually destroys the body’s T-cells, leaving the infected individual increasingly at risk of becoming ill.

The person’s T-cell count, combined with any diagnoses of specific opportunistic infections, defines the stage of an individual’s HIV/AIDS infection. The US Center for Disease Control (CDC) and the World Health Organization (WHO) have different stages describing HIV infection. Both will be described below.

Both the CDC and WHO define the Stage 1 HIV infection as when a person tests positive for HIV, has a T-cell count above 500, and does not have any AIDS defining conditions. (Schneider, et al., 2008: 4). Persons in this state do not have a significant suppression of their immune system (WHO, 2005A). A CDC Stage 2 HIV infection is when person tests positive for HIV, has a T-cell count between 200 and 499, and does not have any AIDS defining conditions (Schneider, et al., 2008: 8).

The World Health Organization (WHO) has two distinct stages for persons with a T-cell count below 500, but who haveot been clinically diagnosed with AIDS. A WHO Stage 2 Infection is when a person is infected with HIV and has a t-cell count between 350 and 400 (CDC, 2008:1). A WHO Stage 3 infection is when a person has a T-cell count between 200 and 349 (CDC, 2008: 1). WHO (2005) indicates a Stage 3 person’s immune system is highly suppressed.

The CDC Stage 3 and WHO Stage 4 are also similar. In both, the infection occurs when a person is infected with HIV and his or her T-cell count falls below 200 (Schneider, et al., 2008: 9). At this stage of infection, a person meets the clinical definition of having AIDS. The diagnosis of AIDS can also occur when a person has an
HIV infection and one of 26 AIDS defining conditions (Schneider, et al., 2009: 9). These AIDS-defining conditions include diseases which would not be present in a person with a healthy immune system. Individuals with AIDS have a severely suppressed immune system (WHO, 2005A).

A person with AIDS is at risk of opportunistic infections, which are infections which would not occur in a person with a healthy immune system (Essig, 2007). These opportunistic infections may result in the death of the patient. If untreated, the average length of time from infection to the development of AIDS symptoms is 10 to 12 years (Essig, 2007), but can be shorter in the developing world (Rosen, et al., 2000).

There is no known cure for the disease, but treatments exist (known as anti-retroviral therapy) which can substantially lengthen the amount of time an individual can be symptom-free and lead a relatively normal life. WHO (2005) indicates the stage of the HIV infection determines whether or not a person should be receiving treatment. WHO (2005) indicates a person should be treated when they are in Stage 3 or Stage 4 of the disease. This is when a person has AIDS or his or her T-cell count falls below 349 (WHO, 2005A).

HIV can be transmitted in a number of ways. The disease is most commonly spread through sexual intercourse with an infected partner (Essig, 2007). It can also be spread through contact with infected blood, commonly through the sharing of needles (Essig, 2007). Infection can occur due to non-sterile medical equipment or through blood transfusions (Essig, 2007). It can also be transmitted from an infected mother to her child during childbirth. However, this mother-to-child transmission can be reduced
significantly with the use of specific medications (Wade, et al., 2004; Taha, et al., 2004). Nursing mothers may also transmit the virus to their children.

At initial infection, HIV spreads and replicates rapidly. Approximately 70% of infected individuals experience flu–like symptoms similar to an acute infection 2-4 weeks after exposure (Essig, 2007). The body’s immune system reacts to the virus and is able to destroy most, but not all, of it. Destruction of the virus is incomplete because HIV mutates rapidly during the process of replication. There can be many variants of HIV in an infected individual, and strains of HIV in a person can recombine to produce new strains (Essig, 2007). These mutations make it difficult for the body’s immune system to fight the virus.

In the early stages of infection, during and after the initial immune response and suppression of the disease, HIV is retained in various organs and in the lymph nodes, gaining strength and gradually reducing the strength of the immune system. A person with a weakened immune system, but who has not developed full-blown AIDS, can experience a number of symptoms. These symptoms can include a lack of energy, frequent fevers and sweats, persistent or frequent yeast infections, persistent skin rashes or flaky skin, short term memory loss, and mouth, genital, or anal sores from herpes infections (Essig, 2007). Prior to having full-blown AIDS, many are relatively symptom-free and can carry on a normal life. Without testing, people often do not know they are infected.

Without treatment, an individual’s immune system will eventually be weakened to the point where he or she has full blown AIDS. This weakened immune system can leave an individual at risk of infection from tuberculosis (a contagious bacterial infection
of the lungs), cytomegalovirus (a herpes virus that can lead to blindness), toxoplasmosis infection of the brain (a parasitic infection of the nervous system which can lead to blindness and brain defects), and mycobacterium avium complex infection (a bacterial infection related to tuberculosis which can lead to severe infections in one area or throughout the body) (WebMD, 2008; Essig, 2007). Persons with HIV are also at increased risk of getting certain cancers, including Kaposi Sarcoma, a cancer where lesions grow under the skin, in the linings of the nose, mouth and throat and in other organs (WebMD, 2007); cervical cancer; and lymphoma, a cancer of the lymphatic/immune system (WebMD, 2008). Kaposi Sarcoma is an AIDS-defining infection, meaning that a person with HIV who has this disease is defined as having AIDS (CDC, 2008). Symptoms of persons with HIV can include coughing and shortness of breath, seizures and lack of coordination, difficult or painful swallowing, mental symptoms such as confusion or forgetfulness, severe and persistent diarrhea, fever, vision loss, weight loss and extreme fatigue, severe headaches with neck stiffness, and coma (Essig, 2007). A weakened immune system and opportunistic infections eventually lead to death.

HIV is a lentivirus, or slow virus (Essig, 2007), which involves a long onset between the initial infection and the onset of serious illness. During much of the incubation period an individual remains in reasonable health and can function normally (Barnett, 2006). During this period an infected individual can work, reproduce, and continue to infect others. Unlike many epidemics which strike the young, the old or the weak, HIV is being contracted by members of the adult population who are at the prime
of their lives and in the middle of working and raising a family. People who are infected but not symptomatic can infect others with the virus.

The Global Epidemic

There were 33.2 million people living with HIV and AIDS in 2007 (UNAIDS, 2007: 3). An estimated 6,800 persons become infected and 5,700 persons die of the disease every day (UNAIDS, 2007: 4). At the global level, HIV prevalence is stable (UNAIDS, 2007). There has been a reduction in the number of AIDS deaths due to better healthcare and a reduction in the number of new infections globally. In 2007, there was a revision of the global HIV estimate showing a 16% reduction from 2006 levels (UNAIDS, 2007:3). This revision was not due to any real reduction in the prevalence and spread of HIV, but rather methodological improvements and better data collection. Special efforts were made to get a better idea of the HIV epidemic in India, resulting in a significant downward revision of the number of infected persons. In addition, methodologies were improved by enhancing the monitoring of prevalence rates in more sites in relevant countries, and adjusting the mathematical models to reflect a better understanding of the progression of untreated HIV infection (UNAIDS, 2007).

There are two important trends in the global HIV/AIDS epidemic. The first is the existence of a generalized epidemic in sub-Saharan Africa (UNAIDS, 2007). An HIV epidemic is considered generalized if the national prevalence rate in pregnant women exceeds 1% in a country (Buve, et al., 2002: 2011). The second trend is that the epidemic in the rest of the world generally resides in at-risk populations. These at-risk populations
include sex workers, men who have sex with men, and injection drug users (UNAIDS, 2007).

Sub-Saharan Africa is the region that is the most severely affected by the HIV virus with 22.5 million people, or 68% of all persons infected globally, living in the region (UNAIDS, 2007). The second most affected region is South and South-East Asia with 4 million infected people (UNAIDS, 2007). The remaining infection is spread throughout the rest of the world. Figure 1.1 depicts the global extent of the HIV epidemic.

**Figure 1.1: Global HIV Prevalence**

(UNAIDS, 2007: 33)

HIV/AIDS is having a substantial impact throughout the world. Nations on almost every continent are facing this epidemic and attempting to provide treatment and care.

*Understanding HIV/AIDS in sub-Saharan Africa*

Sub-Saharan Africa is an epicenter of the HIV/AIDS epidemic. Within Africa, the epidemic is more severe in Southern and Eastern Africa than Northern and Western
Africa. These regional differences could be due to sexual behavior, the availability of healthcare, extent of non-HIV related sexually transmitted diseases within the population, variations between HIV-1 and HIV-2, and circumcision practices (Buve, et al., 2002).

The primary method of HIV transmission in sub-Saharan Africa is through heterosexual contact, although recent evidence indicates that the epidemic in some nations may be exacerbated by drug use and men having sex with men. Ndeiti, et al., (2004: 41) found that sharing needles among injecting drug users was common, and 68-88% of injecting drug users were infected with HIV (UNAIDS, 2008: 14). A recent study in Kenya found a large number of men in Mombassa selling sex to other men (Geibel, et al., 2007); HIV prevalence among this population is higher than in the general population (Sanders, et al., 2007). Drug use is also an important factor in the epidemics in Tanzania, Kenya, and South Africa (UNAIDS, 2008; McCurdy, et al., 2005).

The social and cultural position of women in sub-Saharan Africa puts them at an increased risk of contracting HIV, contributing to the epidemic. Evidence indicates a disproportionate percentage of women are infected with the disease: upwards of 60% of persons infected in some countries are female (UNAIDS, 2007: 16). Women in sub-Saharan Africa have a sexually subordinate position in society (Buve, et al., 2002). They often have no control over their sex lives and wives are not able to refuse sex due to their dependence on their significant others (Buve, et al., 2002).

Traditional practices leave women dependent upon men economically and socially. In some cultures they are not allowed to own land, inherit property, or enter into a contract (State Dept., 2008A). Some ethnic groups practice wife-inheritance, where the brother (or another male relative) of a woman’s deceased husband will become the
widow’s new husband (State Dept., 2008I). Others practice sexual cleansing, where a
widowed woman has sex with her deceased husband’s relatives (State Dept., 2008I).
Ehiri, et al. (2005) indicates that women are disproportionately blamed by community
members for the spread of HIV, further exacerbating the impact of the disease upon
women.

A lack of economic resources throughout sub-Saharan Africa contributes to the
HIV/AIDS epidemic. Many African nations implemented structural readjustment
policies during the 1980s and early 1990s for the purpose of liberalizing their economies
and reducing debt dependency (UNAIDS, 2007). These policies resulted in the shrinking
of state bureaucracies, the main employer and provider of social services; this led to both
a sizeable loss of jobs and a reduction in the ability of the state to provide social services.
Increased poverty, coinciding with reduced social services (including healthcare),
heightened the risk of HIV infection.

Economics are associated with HIV infection in a number of ways. Without
economic opportunities, people are less likely to be concerned with the long term
implications of HIV, such as illness and death (Buve, et al., 2002). The decline of social
services resulted in a reduction in the ability of persons to obtain medical treatment for
other sexually transmitted infections, which increases the likelihood of an individual
becoming infected with HIV (Kaplan, et al., 1996). Limited access to healthcare may
also cause a person’s HIV infection to go undiagnosed and the untreated.

Throughout Africa, like the rest of the world, people are flocking to urban areas
for increased opportunities and the promise of a better life. Sub-Saharan Africa is
experiencing a sizable migration of young unmarried adults to urban areas, where there
are more opportunities for sex (Buve, et al., 2002). Levels of HIV infection are generally higher in urban areas (UNAIDS, 2007). Increasing urbanization and modernization enhance opportunities for infection.

Throughout the sub-Saharan African region, internal and interstate conflicts have resulted in massive migrations of people away from conflict areas. Many of these refugee populations have yet to return to these conflict areas for fear of their safety. There are some reports that HIV/AIDS has been used by infected soldiers through rape as a means of infecting a rival population (Singer, 2002), but the danger comes largely from the exodus of non-combatants from conflict areas to refugee camps in neighboring countries. Conflict and resulting migration leaves women and children at heightened risk of becoming infected due to victimization and economic disadvantage (Buve, et al., 2002). More generally, among these large refugee populations, poverty and disease contribute to the spread of HIV.

Stigma and a lack of understanding of HIV/AIDS are common throughout sub-Saharan Africa. HIV/AIDS stigma results in loss of employment, loss of customers, divorce, denial of succession rights, infected children denied admission to school, death threats, isolation by community and family, and violence (Ehiri, et al., 2005). Overall, stigma exacerbates the HIV/AIDS epidemic because it reduces the likelihood that a person will get tested, which results in reduced treatment options and a continued likelihood of passing the disease on to someone who is uninfected. In Zambia, researchers found 66% of infected women receiving treatment had not notified their husbands for fear of divorce or abandonment (Zulu, 2005: 1). Treatment can reduce the risk of transmission by reducing the amount of HIV in a persons blood (WHO, 2005A),
but this lack of notification described above indicates serious stigma. Misinformation about HIV is also common; in many countries, large percentages of the population cannot accurately identify methods of preventing HIV infection (UNAIDS, 2007).

These factors combine to create high levels of infection among the general population in sub-Saharan Africa. More persons in sub-Saharan Africa are infected with HIV than anywhere else on the planet, creating levels of prevalence not seen in any countries outside of this region.

The Project Sample and HIV

Africa is a diverse continent, with many countries, languages, cultures, traditions, and colonial heritages; this creates many unique environments in which police organizations operate. This project will select a group of ten countries, with similarities that might facilitate learning about the police from the four comparison organizations (military, healthcare, civil service, education). This section is divided into two parts. The first part will describe the rationale for the selection of the ten countries in the sample. The second will describe the HIV/AIDS epidemic within these nations.

Sample Countries

This project is specifically concerned with studying the impact of HIV/AIDS on the police in Anglo-phone sub-Saharan African countries. These countries are South Africa, Lesotho, Swaziland, Botswana, Zambia, Zimbabwe, Malawi, Uganda, Kenya, and Tanzania. These countries are depicted in Figure 1.2 below.
The project will only study those countries in Eastern and Southern sub-Saharan Africa. The countries of Ghana, Nigeria, and Sudan were purposely excluded for a number of reasons. These three countries are geographically separated from the other Anglo-phone sub-Saharan African countries. Sudan was not included in the sample due to its different cultural background, low levels of HIV/AIDS, and long-standing internal conflict. Western Africa, which includes Ghana and Nigeria, is affected by HIV-2 (Essig, 2007). HIV-2 is less virulent and is not as easily transmitted as HIV-1 (Essig, 2007). This different strain of HIV may change the nature of the impacts on an
organization. Because HIV-1 is the primary type of HIV present in sub-Saharan Africa, studying only those countries affected by HIV-1 was felt to be the most appropriate. Studying those countries affected by HIV-2 is necessary and important, but beyond the scope of this project.

These ten countries have an English colonial heritage. They include those countries in which the British established colonies during the original colonization of Africa, and those which came under their administration after World War I. These countries have also adopted English as one of their common languages, which will provide easy access to government documents and reports. This will also facilitate future field work because language barriers will be less of a problem. This sample does create at least one limitation: because this sample is limited to Anglo-phone colonies, it limits the generalizability of the project’s findings to non-Anglophone countries and police organizations.

These ten sample countries vary in their economic, social, and political character, despite their common Anglo-phone colonial heritage. Some basic social, political, and economic indicators describing this variation are included in Table 1.1.

Table 1.1: Selected Indicators for Sample Nations

<table>
<thead>
<tr>
<th>Country</th>
<th>Freedom House Rating</th>
<th>Population (in millions)</th>
<th>Infant Mortality Rate**</th>
<th>Literacy</th>
<th>GDP/Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesotho</td>
<td>Free</td>
<td>2,125,262</td>
<td>79.85</td>
<td>84.4%</td>
<td>$1500</td>
</tr>
<tr>
<td>South Africa</td>
<td>Free</td>
<td>47,849,800</td>
<td>59.44</td>
<td>86.4%</td>
<td>$10600</td>
</tr>
<tr>
<td>Botswana</td>
<td>Free</td>
<td>1,842,323</td>
<td>43.97</td>
<td>81%</td>
<td>$14700</td>
</tr>
<tr>
<td>Swaziland</td>
<td>Not Free</td>
<td>1,815,508</td>
<td>70.66</td>
<td>81.6%</td>
<td>$4800</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>Not Free</td>
<td>12,311,143</td>
<td>51.12</td>
<td>90%</td>
<td>$500</td>
</tr>
<tr>
<td>Zambia</td>
<td>Partly Free</td>
<td>11,669,534</td>
<td>100.71</td>
<td>80.6%</td>
<td>$1400</td>
</tr>
<tr>
<td>Malawi</td>
<td>Partly Free</td>
<td>13,603,181</td>
<td>92.1</td>
<td>62.7%</td>
<td>$800</td>
</tr>
<tr>
<td>Tanzania</td>
<td>Partly Free</td>
<td>39,384,223</td>
<td>71.69</td>
<td>69.4%</td>
<td>$1100</td>
</tr>
<tr>
<td>Uganda</td>
<td>Partly Free</td>
<td>30,262,610</td>
<td>67.2</td>
<td>67%</td>
<td>$1100</td>
</tr>
<tr>
<td>Kenya</td>
<td>Partly Free</td>
<td>36,913,721</td>
<td>57.44</td>
<td>85%</td>
<td>$1600</td>
</tr>
</tbody>
</table>

* CIA World Factbook, 2007
**Deaths/1,000 live births
As Table 1.1 indicates, these countries vary in socially and economically indicators. They also range in their levels of democracy, which is represented by their Freedom House Rating\(^1\). Lesotho, South Africa, and Botswana are the most literate and have a higher per capita GDP (CIA, 2008). Zambia, Malawi, Tanzania, Kenya, and Uganda generally have the lowest literacy levels, and lower gross domestic product per capita (CIA, 2008). Zimbabwe has a low GDP per capita and higher rate of literacy, but it has been essentially ruled by a dictatorship headed by Robert Mugabe and is only now in the midst of political change (CIA, 2008). Swaziland is an absolute monarchy, with a high mortality rate, a reasonably high GDP per capita, and has only recently made efforts towards democratization (CIA, 2008).

\textit{HIV/AIDS in the Sample}

The ten countries in the sample vary in the seriousness of their epidemic, whether or not their epidemic is worsening or stable, and the national response. The prevalence rates in the sample countries from 2005, the most recent data available from UNAIDS, are described in Table 1.2. National HIV prevalence data are estimates, as they are based either upon testing pregnant women at specific clinics, or nationally representative samples of the population (UNAIDS, 2007). Also included in Table 1.2 is the percentage of the population who died due to HIV/AIDS in 2002 and the percentage of the population infected who are receiving treatment. These national data are based on modeling and testing at sites throughout the various countries; actual rates may be higher or lower.

\(^1\) Freedom House measures the extent of civil and political rights in all countries throughout the world. Political rights include such things as the right to vote, the right to compete for public office, and to elect representatives (Freedom House, 2004). Civil liberties include the freedom to “develop opinions, institutions, and personal autonomy without interference from the state” (Freedom House, 2004: 1).
Table 1.2: HIV/AIDS in Sample Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>HIV Prevalence Rate**</th>
<th>% AIDS Mortality in 2002***</th>
<th>Change in HIV Prevalence</th>
<th>% Treated with ART</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swaziland</td>
<td>33.4</td>
<td>0.88</td>
<td>Unknown</td>
<td>31%</td>
</tr>
<tr>
<td>Botswana</td>
<td>24.1</td>
<td>2.23</td>
<td>Declining</td>
<td>85%</td>
</tr>
<tr>
<td>Lesotho</td>
<td>23.2</td>
<td>1.36</td>
<td>Stable</td>
<td>14%</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>20.1</td>
<td>1.46</td>
<td>Declining</td>
<td>8%</td>
</tr>
<tr>
<td>South Africa</td>
<td>18.8</td>
<td>0.74</td>
<td>Stable</td>
<td>21%</td>
</tr>
<tr>
<td>Zambia</td>
<td>17.0</td>
<td>0.82</td>
<td>Stable</td>
<td>27%</td>
</tr>
<tr>
<td>Malawi</td>
<td>14.1</td>
<td>0.63</td>
<td>Stable</td>
<td>20%</td>
</tr>
<tr>
<td>Uganda</td>
<td>6.7</td>
<td>0.31</td>
<td>Stable</td>
<td>56%</td>
</tr>
<tr>
<td>Tanzania</td>
<td>6.5</td>
<td>0.42</td>
<td>Stable</td>
<td>Unknown</td>
</tr>
<tr>
<td>Kenya</td>
<td>6.1</td>
<td>0.39</td>
<td>Declining</td>
<td>19.7%</td>
</tr>
</tbody>
</table>

* UNAIDS, 2007: 11  
** Adults Age 15-49  
*** WHO, 2005B

As Table 1.2 indicates, the seriousness of the HIV epidemic varies considerably between the sample countries, ranging from a high of 33.4% in Swaziland to 6.1% in Kenya. The sample includes severely affected countries such as Botswana, Lesotho, South Africa, Swaziland, Malawi, Zimbabwe, and Zambia, and less affected countries such as Kenya, Uganda and Tanzania. In comparison to the countries in the sample, the United States and most of Western Europe have prevalence rates of less than 1% (UNAIDS, 2008). To be clear, all of the countries in the sample have a generalized HIV/AIDS epidemic of serious proportions.

2002 AIDS mortality data also indicates the severity of the HIV/AIDS epidemic. Botswana, Lesotho, and Zimbabwe are all experiencing a large number of deaths due to HIV/AIDS. The highest in the sample is Botswana. Swaziland, South Africa, and Botswana are losing a little less than 1% of their population each year due to AIDS. Malawi, Uganda, Tanzania, and Kenya appear to be incurring lower levels of population loss. This represents a high degree of mortality caused by HIV and AIDS.

The extent that each country’s epidemic is worsening or improving also varies throughout the sample. As Table 1.2 indicates, the countries in the sample have either a
declining or a stable HIV prevalence rate. Countries experiencing a declining epidemic have a lower percentage of their population who are HIV positive than previous years. For example, Zimbabwe’s prevalence rate was approximately 26% in 2002 and decreased to 18% in 2006 (UNAIDS, 2008: 2). This finding is independent of the downward revision in world prevalence rates in 2006 (UNAIDS, 2008). According to UNAIDS (2008), none of these countries are experiencing an increasing prevalence rate with the exception of Swaziland where data are unavailable. Those countries which have a stable HIV epidemic are experiencing the same percentage of people infected in their population. An example of a stable infection level is Uganda which has had a prevalence rate of between 6% and 7% since 2000.

Within those countries which have experienced stable prevalence rates, there are a number of noticeable trends which serve to highlight country-level variation. In Uganda, the prevalence rate has remained stable while the population has increased, meaning the total number of persons infected with HIV is increasing (UNAIDS, 2008). There is also evidence of more risky sexual behaviors, including greater numbers of both men and women who have sex with non-regular partners (UNAIDS, 2008). In Tanzania, there has also been an increase in risky behavior and a decrease in condom use, but a reduction in the number of women having sex with older men (UNAIDS, 2008). High levels of knowledge in Swaziland about HIV are not translating into condom usage among the population (UNAIDS, 2008). Knowledge of HIV/AIDS varies, with 40-50% of adult population knowledgeable about ways to prevent infection in Tanzania, Zimbabwe, Kenya, and Botswana (UNAIDS, 2008). Lower levels of knowledge were exhibited in Lesotho, Zambia, and Malawi.
In some countries, treatment efforts appear to be reaching the population. In Botswana and Uganda, high percentages, 85% and 56% respectively, of the infected population are receiving anti-retroviral treatment (UNAIDS, 2008). In Malawi, there was a significant increase in the number of infected pregnant women who received treatment to prevent mother-to-child transmission (UNAIDS, 2008: 8), but in other countries the percentage of those receiving treatment is much lower. In many cases, only 20-30% of the infected population receives treatment.

These ten countries represent some of the most HIV affected countries on the planet. The extent of the HIV/AIDS epidemic varies throughout the sample; some have levels of 6-7% while others have prevalence rates above 20%. Even in sample countries with relatively low HIV prevalence, large numbers of persons are sick and dying of AIDS. Any organization in these countries, even the police, will be affected by this disease.
Chapter 2 - Policing in Anglo-phone sub-Saharan Africa

The police in Anglo-phone sub-Saharan Africa have a structure, function, and organization that reflect their unique colonial and post-colonial development. At present, these police organizations face a unique set of obstacles and organizational problems independent of the HIV/AIDS virus. This chapter seeks to provide a general overview of policing within Anglo-phone sub-Saharan Africa, as well as describe the similarities in the evolution and current state of policing within the sample. Individual police organizations will not be described separately.

This chapter consists of three sections. The first section describes colonial policing until the 1950s and 1960s. The second section describes policing in Anglo-phone sub-Saharan Africa from colonial independence in the 1960s to the early 1990s when both Apartheid rule in South Africa and the cold war ended. The combination of colonial policing and the history of some forty years of civil wars, dictatorships, Apartheid South African interference, and a general lack of resources, create the basis for contemporary African policing. The third section describes what is known about contemporary policing in the ten sample countries.

There are gaps in our current understanding of policing within the sample nations. Policing in Africa has been subject to limited study (Hills, 2007; Hills, 2000; Merenin, 1982). Policing is often considered a national security issue and many countries are not willing to discuss their police forces (Hills, 1996). There has been a substantial amount of research on the police in South Africa and less literature is available on the police in the other sample nations.
Colonial Policing

The British Empire created the police organizations within Anglo-phone sub-Saharan Africa, including the police organizations in the sample. The English had a distinctive colonial approach, one that emphasized indirect rule through the native population (Deflam, 1994). Policing in colonial Africa had the primary goal of maintaining order. The intent behind this order maintenance function was to foster trade and maintain colonial hegemony rather than prevent crime and maintain personal security (Hills, 2000; Brogden, 1987). Police in the British colonies were created initially to collect taxes (Deflam, 1994; Clayton and Killingray, 1989). As the presence of the British in the colonies grew, and the necessity of controlling crime and civil unrest increased, the police organizations gradually grew to the status of national police forces (Clayton and Killingray, 1989; Deflam, 1994; Wasikhongo, 1976). Colonial police personnel generally consisted of white command staff and black police officers. The British did not want ethnic groups policing themselves (CHRI, 2006; Deflam, 1994; Clayton and Killingray, 1989; Brodgen, 1987). The general rule was that no more than 10% of personnel could be from the ethnic group being policed (Clayton and Killingray, 1989: 89). It was also common for the colonial authorities to recruit police from ethnic groups deemed more politically reliable and thought to make better police personnel (Clayton and Killingray, 1989).

The British purposefully implemented a system patterned after the Royal Irish Constabulary (RIC) in their sub-Saharan colonies. The RIC received military training, their personnel lived in barracks, they were organized along militaristic lines, and their officers were generally former military personnel (Deflam, 1994). This system was
different from the unarmed constabulary of the London Metropolitan Police, which had the goal of protecting the community and the rights of individuals (Clayton and Killingray, 1989). The British implemented the RIC model when creating the colonial police forces in sub-Saharan Africa because they believed it would be the most effective in maintaining colonial control (Deflam, 1994).

Police organizations were under the direct control of the civil/administrative apparatus of the colonies (Brogden, 1987). Colonial police were housed separately from the population and isolated from the population they policed (Brogden, 1987). Decision-making was generally hierarchical, ignoring the input of the rank and file (Opolot, 2002). Colonial police organizations were highly bureaucratic and considered inflexible and unresponsive to the needs of the general population (Opolot, 2002).

Prior to World War II, police training focused upon physical fitness, uniform appearance, first aid, drill, weapons training, and basic police work (Igbonivia, 1981). The British understood that it would be necessary for these police forces to be responsible for border patrol and they would likely be involved in military-style conflicts (Clayton and Killingray, 1989). The goal was to eventually shift the police away from the RIC system to less militaristic and more crime prevention-oriented organizations (Clayton and Killingray, 1989).

The duties of the colonial police were two-pronged. Their primary goal was to maintain colonial control. This goal involved conquering and pacifying other lands, controlling cities, and forcing people into wage labor (Merenin, 1982). The police were responsible for quelling disorder such as protests, riots, and demonstrations (Clayton and Killingray, 1989; Brogden 1987). They were often involved in counterinsurgency
campaigns and arresting leaders of independence movements (Clayton and Killingray, 1989). In Kenya, the police were actively involved in suppressing the Mau Mau Revolution which sought to overthrow British rule in the 1950s (Clayton and Killingray, 1989). The colonial police were a tool of colonial hegemony and power.

The secondary goal of the police was to prevent crime and maintain order. This resulted in them carrying out many conventional law enforcement functions. They were involved in investigating crimes, patrolling farming areas, addressing traffic violations, dealing with lions, addressing inter-clan cattle raiding, and fighting fires (Clayton and Killingray, 1989). These basic law enforcement functions were geared towards protecting the property of the white colonists (Burton, 2003; Deflam, 1994). They did not have a specific role of preventing crime and maintaining order for all citizens.

As the colonies moved towards independence, colonial police became more involved in common policing activities (Clayton and Killingray, 1989). The British generally sought to prepare the police for independence and created a force which was depoliticized and professional. To maintain continuity in the police force and to maintain the structural and professional changes the British put in place, black personnel were gradually trained and promoted into the command staff; this process was generally known as ‘Africanization’ (Burton, 2003; Clayton and Killingray, 1989). Many black African police administrators received training in police administration and planning in England (Clayton and Killingray, 1989). General police training evolved to place a greater emphasis on professional competence, knowledge, self control, and working in adverse conditions (Clayton and Killingray, 1989). During this time period the police also became more specialized, developing motorized patrols, dog patrols, and air wings
Clayton and Killingray (1989) indicate that at independence many of the police forces were relatively professional and independent of political control.

Post-Independence Policing in Sub-Saharan Africa

Independence was a tumultuous time for many of these new countries. At independence during the 1960s, many of the sample countries experienced internal conflict and civil war in which the police played an immediate role in either fighting internal insurgents or external aggressors (Sharp and Fisher, 2005; Tshabalala, et al., 2005; Clayton and Killingray, 1989). Many of these governments were actively involved in either working for or against the South African Apartheid government, which was attempting to destabilize many newly independent black ruled nations (Rupiya, 2005). Many of the inherited borders were porous, making it difficult to address incursions from armed groups and address the flow of refugees from conflict areas (Potholm, 1969). Within these countries there were also ethnic and geographic rivalries which were directly related to the distribution of power (Rupiya, 2005). Rebellions and changes in government were common (Rupiya, 2005). The police were not generally responsible for initiating coups; it was typically the military who were involved in attempted or successful coups (Hills, 2007; Hills, 1996; Enloe, 1976). The police were an organization which survived many of the trials and tribulations of this period, but did not emerge unscathed.

The police continued their function of maintaining control over the population after independence, but control was on behalf of domestic, rather than imperial, leaders.
Political control of the police came to be a hallmark of sub-Saharan African policing during this period. Political control refers to the police actively supporting specific political parties and working to further their agendas or protect those in power. In many post-independence African states, the country came to be controlled by a politically strong figure, and the police adapted to this political control (Hills, 2000). Many leaders sought rapid africanization of their police and the ending of white participation in their command structure (Clayton and Killingray, 1989). Some leaders would rapidly promote unqualified officers to gain and maintain control, and this created reliance upon European subordinates who were more experienced (Raleigh, et al., 1998). These new personnel did not have the same level of experience, which further heightened political control of the police. The police became distinctly partial. They developed intelligence systems which supported the ruling elite, and it was expected that they would bend the rules for this elite (Hills, 2000). In some cases, these ruling elites maintained a policy of deliberately under-resourcing the police so they would not become too powerful and challenge their power (Hills, 2000; Raleigh, et al., 1998).

The police in post-independence sub-Saharan Africa were national organizations which maintained many of the structures developed during the colonial period (Igbonivia, 1981; Enloe, 1976; Potholm, 1969). Post independence policing had a number of trends. There was a move towards centralization of police decision-making and unification of control (Merenin, 1982; Igbovinia, 1981). Centralization offered a number of benefits to newly independent nations. Centralized police forces were easier to control, more efficient, offered the ability to recruit from across the country, could ensure the training was uniform, and could maintain accountability at the national level (Wasikhongo, 1976).
The police were generally highly disciplined and militaristic with strict procedural rules and regulations (Igbovinia, 1981). Police organizations adopted minimum standards for education and literacy (Opolot, 2002; Merenin, 1982). It was also during this time period that many African countries developed their own police training colleges and officer training schools (Clayton and Killingray, 1989).

The police during this period were under staffed, under equipped, and spent a disproportionate amount of their budget providing housing for their troops (Hills, 1996; Merenin, 1982). The police continued to be housed and trained separately from the population they were policing (Wasikhongo, 1976). Wasikhongo (1976) indicates they attempted to become professional police organizations by adopting training standards, educational requirements, and uniforms. Separate housing, training, and this professional ethos contributed to the isolation of the police from the general population (Wasikhongo, 1976).

Igbinovia (1981) describes typical policing duties as maintaining law and order and deterring crime. There was a general emphasis on foot patrol, due to the high costs of transportation (Igbinovia, 1981). Individual police officers largely decided where they would patrol and typical shifts were eight hours long (Igbinovia, 1981: 138). Most patrolmen did have contact with headquarters through radios, however (Igbinovia, 1981).

In the early 1990s, the political conditions changed within sub-Saharan Africa. This change was caused by two important occurrences. The first was the end of the Cold War. Leaders in Africa could no longer receive financial and material support by choosing a side in the Cold War. The second was the loss of power of the Apartheid government in South Africa. The South African government was no longer involved in
funding insurgencies and attempting to destabilize black-led African nations. African
countries no longer had to specifically work towards protecting themselves from external
South African threats to security. Many sub-Saharan African Anglophone states had
been led by autocratic regimes since independence and now began to democratize and
hold independent elections.

_Contemporary Policing in Anglo-phone sub-Saharan Africa_

Contemporary policing in sub-Saharan Africa maintains those structures
developed through the colonial and post-independence periods. They continue to be a
paramilitary organization. They are often under political control and work to further the
interest of those in power. Levels of violent crime in many areas throughout sub-Saharan
Africa are high and many of these countries are grappling with an overabundance of
firearms. The police are under-resourced and often prone to violating human rights.

The main structural components of these national police organizations tend to
include criminal investigation, accounts, intelligence, administration, and
communications (Hills, 1996). The police often have special units which are responsible
for regulating public gatherings. They have a militaristic rank, discipline mechanism,
and grade structure. They wear special uniforms and continue to be housed in barracks
(Hills, 1996).

It is difficult to understand the day-to-day activities of the national police
organizations within the sample. There appear to be some indications that the primary
role of the police is that of maintaining order (Hills, 2004; Hills, 1996). Police continue
to investigate crimes and respond to criminal incidents (Baker, 2005; Steinburg, 2004).
Much of the work of the police appears to be responding to more serious crimes (Baker, 2005). Some police have vehicles, but others must either patrol on foot or use bicycles (Abrahamson and Williams, 2005; Raleigh, et al., 1998; Igbinovia, 1981).

The remainder of this section on contemporary policing is divided into seven areas. The first three areas describe the problematic status of the sample police organizations in terms of their relationship to politics, the violation of human rights, and corruption. The next two areas describe the problematic working environment of these same ten police organizations in terms of their funding and resources and the crime problems they face. The final two areas describe public perceptions of the police and the usage of alternative law enforcement mechanisms by the civilian population.

**Relationships to Politics**

Almost all the countries in sub-Saharan Africa have laws that require the impartiality of the police (Amnesty Intl., 2002). Police impartiality in law does not necessarily translate into impartiality in practice, however. Police politicization refers to both the police controlling opposition political parties and interference in police investigations by politicians. In both Botswana and South Africa, the police appear to be much less politicized than their counterparts in other nations (State Dept., 2008A State Dept., 2008E). In the remaining eight countries of the sample, police appear to be more politicized (State Dept., 2008B-D; State Depart., 2008F-J; Amnesty Intl. 2002). Zimbabwe, Swaziland, and Malawi have laws which criminalize non-violent political activity, which the police can use to limit opposition parties (Amnesty Intl., 2002). Harassment of the media on behalf of the government also occurs in Malawi, Swaziland, Zambia, and Zimbabwe (Amnesty Intl, 2002). In Lesotho, the police have mutinied
against the government and were suppressed by military (Makoa, 1998). The Malawian Police are routinely criticized for partiality in the dispersal of political demonstrations (State Dept., 2008D). The police in Tanzania routinely deny permits for gatherings to opposition political parties (CHRI, 2006).

**Human Rights**

The police in many sub-Saharan African countries are corrupt, brutal, and repressive (State Dept., 2008A-J; Mattes, 2006; Amnesty Intl., 2002; Hills, 2000). The actions of the police include using excessive and lethal force, causing the death of detainees through torture, and charging a fee to investigate crimes. U.S. State Department Human Rights Reports (2008A-J) indicates a range of human rights abuses by the police in the sample in 2007, and they are described in Table 2.1.

**Table 2.1: U.S. State Department Reports on Human Rights Practices in 2007**

<table>
<thead>
<tr>
<th>Country</th>
<th>Politically Motivated Killings</th>
<th>Unlawful Killings by Police</th>
<th>Torture</th>
<th>Arbitrary Arrest and Detention</th>
<th>Corruption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesotho</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>South Africa</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Botswana</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Swaziland</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Zambia</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Malawi</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Tanzania</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Uganda</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Kenya</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 2.1 identifies reports of human rights abuses, but does not identify the magnitude of these activities by the police and security forces. Human rights violations appear to be pervasive. Zimbabwe appears to be, by far, the worst. In Zimbabwe, non-governmental organizations indicate there were 1,600 unlawful arrests in 2007 (State Dept., 2008J: 1). The army and police provided logistical support to those perpetrating political violence (State Dept., 2008J). The rape of detainees is also common, with 15% of detained
Zimbabwean women, in one study, reporting rapes by the military, police, and members of the Zanu-PF political party (State Dept., 2008J). In Zambia and Malawi, the police put pressure on suspects to surrender by arresting their relatives and illegally detaining them until the suspect turns him/herself in (Amnesty Intl., 2002). In Lesotho, Swaziland, and Zambia, torture and ill-treatment are an accepted method of interrogation (Amnesty Intl., 2002). In South Africa, there were 698 deaths in police custody between April 2006 and March 2007 (State Dept., 2008E). In all countries in the sample, the police have used excessive force to break up demonstrations by unarmed and peaceful demonstrators (Amnesty Intl., 2002).

These abuses may be contrary to international law, but the legal environment in many of the sample nations perpetuates this behavior. Police often have discretion in their power of arrest and detention. In Lesotho, Zambia, and Swaziland, any police officer above the rank of inspector can search a residence without a warrant (State Dept., 2008B; State Dept., 2008G; Mwalimu, 1991). There are no laws prohibiting the use of torture to extract confessions in Tanzania (CHRI, 2006). The police often have the authority to use deadly force in many situations (Amnesty Intl., 2002). The police have the lawful ability to kill a suspect while committing a lawful arrest or to prevent the escape of a lawfully detained person in Botswana, Lesotho, Zambia, and Zimbabwe (Amnesty Intl., 2002). In South Africa and Zimbabwe, the police can use lethal force against a fleeing suspect for some non-violent offenses (Amnesty Intl., 2002).

The police in many of the sample countries have worked to improve their human rights training. However, many of these countries have only been offering human rights training for the past ten years (Amnesty Intl., 2002). South Africa has one of the best
human rights training packages in sub-Saharan Africa (Amnesty Intl., 2002). Victim support units have also been established in some countries, including Zambia, South Africa, Malawi, and Botswana (Amnesty Intl., 2002). The Malawian Police have developed a lay visitors scheme, which allows members of the local community to observe conditions of detention and comment and report on them (Lumina, 2006).

**Corruption**

Police corruption is a substantial problem throughout the sample. Corruption is not only an issue in these police organizations, but in the governments more generally (State Dept., 2008A-J). Police corruption can include taking bribes to provide services they otherwise are supposed to provide, taking bribes to protect criminals, or even falsely arresting people to elicit bribes (CHRI, 2006). Corruption is often driven by the low pay of the police (Stavro and O’Riordan, 2004; Raleigh, et al., 1998).

Some studies have measured the pervasiveness of police corruption in the sample nations. The Afro-Barometer study is useful for understanding police behavior in sub-Saharan Africa. The Afro-Barometer interviewed a representative sample of individuals in 22 countries throughout sub-Saharan Africa (Mattes, 2006). This survey asks questions on a range of topics, including trust in the police, perceived levels of corruption, and difficulties in obtaining police services. Swaziland is not a participant in the survey. The perceptions of police corruption in the sample are displayed in Table 2.2 below.
Table 2.2: Perceptions of Police Corruption in the Sample

<table>
<thead>
<tr>
<th>Country</th>
<th>Perceived Corruption</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malawi</td>
<td>27.83%</td>
</tr>
<tr>
<td>Botswana</td>
<td>29.50%</td>
</tr>
<tr>
<td>Tanzania</td>
<td>33.30%</td>
</tr>
<tr>
<td>Lesotho</td>
<td>34.70%</td>
</tr>
<tr>
<td>South Africa</td>
<td>46.90%</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>61.90%</td>
</tr>
<tr>
<td>Kenya</td>
<td>64.20%</td>
</tr>
<tr>
<td>Uganda</td>
<td>66.90%</td>
</tr>
<tr>
<td>Zambia</td>
<td>69.60%</td>
</tr>
<tr>
<td>Swaziland</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

Levels of perceived corruption vary within the sample. Less than half of respondents in Malawi, Tanzania, Botswana and Lesotho perceive their police as corrupt. Perceptions of corruption among the police are higher in Zambia, Kenya, Zimbabwe, and Uganda. In South Africa, perceptions of police corruption are more moderate, but in all of the sample nations a large percentage of the population perceive police corruption.

Victimization surveys in Malawi and Tanzania also provide a useful tool for measuring police corruption. In Tanzania, Stavrou and O’Riordan (2004: 56) found that 4.4% of respondents had paid a bribe to the police during the past year. Those who refused to pay bribes are commonly met with threats or denied assistance (Stavrou and O’Riordan, 2004). In Tanzania, research in five regions found that 60% of those interviewed knew of police corruption and 18% had experienced corruption among traffic police (CHRI, 2006: 15). In Malawi, 4.5% of respondents had been asked by a government official for money in return for a service the official was supposed to provide (Pelser, et al., 2004: 45).

The high levels of corruption and violations of human rights by the police in the sample indicate limited accountability mechanisms. South Africa has the most advanced accountability mechanisms of all ten nations; it has an independent complaints
department which investigates allegation of police abuse, and has other methods of internal monitoring (Amnesty Intl., 2002). Many of the countries have mechanisms which have been designed to hold the police accountable, but have limited power or do not actively conduct investigations into misconduct (Amnesty Intl., 2002). In some of these countries, the police are held somewhat accountable through the court system (Amnesty Intl., 2002; Mwalimu, 1991). Overall, accountability mechanisms for the police in the sample nations are limited and levels of police corruption are high.

Funding and Resources

African policing organizations are typically under-manned and under-funded. In Tanzania between 1993 and 2003, the money budgeted to the police force by the government was less than half the funds requested in the police budget (CHRI, 2006: 44). Limited budget allocations cause problems for the police including: 1) limiting their ability to discharge legislative duties; 2) limited numbers of personnel; 3) poor equipment; 4) human rights abuses due to inadequate places of detention and the use of torture to expedite cases; 5) inadequate training; 6) poor living and working conditions; and 7) corruption due to low wages (CHRI, 2006; Amnesty Intl., 2002).

Table 2.3 below describes the ratio of police to population for the various police organizations in the sample. The recommended United Nations ratio of police to population is one police officer for every 450 people in the population (CHRI, 2006).
Table 2.3: Police Personnel in Sample

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of Police</th>
<th>Source</th>
<th>Population*</th>
<th>Police to Population Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botswana</td>
<td>6,497</td>
<td><a href="http://www.aprn.org.za">www.aprn.org.za</a></td>
<td>1,842,323</td>
<td>1:283</td>
</tr>
<tr>
<td>South Africa</td>
<td>137,175</td>
<td><a href="http://www.saps.gov.za">www.saps.gov.za</a></td>
<td>47,849,800</td>
<td>1:348</td>
</tr>
<tr>
<td>Swaziland</td>
<td>2,997</td>
<td><a href="http://www.gov.sz">www.gov.sz</a></td>
<td>1,815,508</td>
<td>1:605</td>
</tr>
<tr>
<td>Lesotho</td>
<td>3000-4000</td>
<td><a href="http://www.state.gov">www.state.gov</a></td>
<td>2,125,262</td>
<td>1:607</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>***</td>
<td>Kurian, 1989</td>
<td>12,311,143</td>
<td>1:750</td>
</tr>
<tr>
<td>Malawi</td>
<td>9,700</td>
<td>State Dept., 2008D</td>
<td>13,603,181</td>
<td>1:1,402</td>
</tr>
<tr>
<td>Uganda</td>
<td>16,000</td>
<td>Davis, et al., 2003</td>
<td>30,262,610</td>
<td>1:1,891</td>
</tr>
<tr>
<td>Zambia</td>
<td>15,000</td>
<td>State Dept., 2008I</td>
<td>11,669,534</td>
<td>1:2,625</td>
</tr>
</tbody>
</table>

* CIA Factbook, 2008  
*** Missing

The police to population ratio are within the United Nations recommended ratio in South Africa and Botswana. In Swaziland and Lesotho, and Zimbabwe the police to population ratio is somewhat above the UN recommended level. Zambia, Tanzania, Kenya, and Uganda do not appear to have an adequate numbers of police. The Zimbabwe and Kenya information is dated.

Throughout the sample, housing and pay for the police are poor and inadequate (CHRI, 2006; Raleigh, et al., 1998; State Dept., 2008C-D; State Dept., 2008F-J). Only in Botswana and South Africa, and to a lesser extent Lesotho, is there no mention of police being under funded (U.S. State Dept. 2008A; 2008E; 2008B). Tanzanian police equipment is poor; they have non-working weapons or weapons for which they were not trained (CHRI, 2006). The Ugandan police are routinely not able to pay officers (Raleigh, et al., 1998). The limited number of available police and inefficiency creates significant backlogs of cases for police investigation in Lesotho (DFID, ND).

This lack of funding leads not only to inefficiency in the investigation of crimes and corruption, but also leads to poor morale (State Dept., 2008A-J., Raleigh, et al., 1998). The population of some of these countries lives predominantly in rural areas, and
limited police resources make it difficult for the police to patrol and respond speedily to crimes (Raleigh, et al., 1998). Limited resources also result in lower levels of training, especially for investigative skills (Amnesty Intl., 2002). This contributes to the use of harsh interrogation techniques and torture to extract confessions. In Tanzania, the police in urban areas do not have access to fingerprinting or ballistics (CHRI, 2006), which can lead to clearance of crimes without interrogation.

Overall, there is a clear consensus among governments, non-government entities, the police, and the civilian population that the police are underfunded and underpaid. This lack of funding and training leads to human rights abuses, inefficiency, and an inability to address crime.

Crime

It is difficult to quantify levels of crime within the sample. National crime statistics are limited. The only country that routinely collects and disseminates its crime data is South Africa. Data submitted to international organizations, such as the United Nations and Interpol, are also sporadic. Interpol data after 2001 are unavailable.

Interpol data, described in Table 2.4 below, provide a snap-shot of the homicide rates in the sample nations between 1994 and 2000. Homicide rates are the number of homicides per 100,000 of the population and are often used as an indicator of overall levels of violent crime when more specific statistics are unavailable (Altbeker, 2005). It must also be noted, at the time of the writing of this paper, these data are dated and they may or may not reflect current conditions.
As Table 2.4 indicates, there are considerable variations in crime rates throughout the sample nations. The highest level of violent crime in the sample, by far, is in South Africa, which for the eight years described in Table 2.4 generally had a homicide rate above 100 per 100,000 persons, making it one of the most violent countries on the planet (Altbeker, 2005). In comparison, the United State has a homicide rate of 5.6 homicides per 100,000 in 2001 (Pastore and McGuire, 2009). Levels of violent crime vary throughout the sample, with higher homicide rates in Lesotho and Swaziland. Lower rates of violent crime occur in Zimbabwe, Malawi, Kenya, and Tanzania, compared to the rest of the sample, but this may be due to under-reporting (Altbeker, 2005).

The Afro-Barometer survey, combined with victimization surveys in Malawi and Tanzania, provide further information on levels of crime. The results of the Afro-Barometer survey are described in Table 2.5 below. There are three questions in this study about crime, including fear of crime, theft from a person’s home, and being physically attacked. There were no data available for these questions from Swaziland or Zimbabwe. These data are useful for making comparisons between countries in the sample regarding perceived levels of crime. These data are not available over time.

### Table 2.4: Homicide Rates from Interpol

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lesotho</td>
<td>--</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>50.4</td>
<td>-</td>
<td>-</td>
<td>50.4</td>
</tr>
<tr>
<td>South Africa</td>
<td>-</td>
<td>54.1</td>
<td>128.6</td>
<td>121.7</td>
<td>128.9</td>
<td>121.9</td>
<td>-</td>
<td>114.8</td>
<td>111.0</td>
</tr>
<tr>
<td>Botswana</td>
<td>12.7</td>
<td>15.6</td>
<td>12.9</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>13.7</td>
</tr>
<tr>
<td>Swaziland</td>
<td>-</td>
<td>15.4</td>
<td>18.9</td>
<td>17.6</td>
<td>18.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>17.5</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>4.9</td>
<td>6.9</td>
<td>10.7</td>
<td>7.6</td>
<td>9.0</td>
<td>8.9</td>
<td>7.7</td>
<td>10.2</td>
<td>7.9</td>
</tr>
<tr>
<td>Zambia</td>
<td>9.8</td>
<td>10.9</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>10.3</td>
</tr>
<tr>
<td>Malawi</td>
<td>3.05</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3.1</td>
</tr>
<tr>
<td>Tanzania</td>
<td>-</td>
<td>7.6</td>
<td>7.9</td>
<td>6.2</td>
<td>7.7</td>
<td>7.9</td>
<td>-</td>
<td>-</td>
<td>7.5</td>
</tr>
<tr>
<td>Uganda</td>
<td>-</td>
<td>8.6</td>
<td>9.1</td>
<td>14.8</td>
<td>8.9</td>
<td>9.9</td>
<td>-</td>
<td>-</td>
<td>10.3</td>
</tr>
<tr>
<td>Kenya</td>
<td>6.8</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>6.8</td>
</tr>
</tbody>
</table>

(Interpol, 2004)
Table 2.5: Perceptions of Crime in the Sample

<table>
<thead>
<tr>
<th>Country</th>
<th>Never Feared Crime in Home</th>
<th>Never had Something Stolen From House</th>
<th>Never Physically Attacked</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botswana</td>
<td>64.3%</td>
<td>69.1%</td>
<td>85.5%</td>
</tr>
<tr>
<td>Kenya</td>
<td>40.8%</td>
<td>64.2%</td>
<td>81.5%</td>
</tr>
<tr>
<td>Lesotho</td>
<td>53.7%</td>
<td>73.7%</td>
<td>91.1%</td>
</tr>
<tr>
<td>Malawi</td>
<td>79.5%</td>
<td>71.8%</td>
<td>94.5%</td>
</tr>
<tr>
<td>South Africa</td>
<td>51.3%</td>
<td>69.5%</td>
<td>83.5%</td>
</tr>
<tr>
<td>Tanzania</td>
<td>66.5%</td>
<td>78.5%</td>
<td>93.4%</td>
</tr>
<tr>
<td>Uganda</td>
<td>63.8%</td>
<td>59.7%</td>
<td>81.9%</td>
</tr>
<tr>
<td>Zambia</td>
<td>41.9%</td>
<td>53.6%</td>
<td>84.8%</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Swaziland</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

Table 2.5 indicates the Malawian people tend to fear crime the least. Fear of crime is the highest in Kenya and Zambia, and at intermediate levels in South Africa and Lesotho. Fear of crime is lower in Tanzania, Botswana, and Uganda. Zambians and Ugandans were the most likely to report that something had been stolen from their home. Lesothans, Malawians, and Tanzanians were the least likely to have ever had something stolen from their home. Higher levels of victimization occurred in Lesotho, Malawi, and Tanzania and lower levels in the remaining countries.

The victimization surveys in Tanzania and Malawi provide further information regarding crime in the sample nations. The Tanzanian survey used a representative sample of people in both rural and urban areas (Stavrou and O’Riordan, 2004). This study found that people feared burglary the most, followed by robbery and crop theft (Stavrou and O’Riordan, 2004). Approximately 60% of Tanzanians felt unsafe walking at night, but 80% felt safe walking during the day (Stavrou and O’Riordan, 2004). This survey found that property crimes were the most prevalent with 12.1% reporting being the victim of a burglary. Seven percent (7.1%) of all respondents had been robbed, indicating a high victimization rate (Stravou and O’Riordan, 2004: 59). Pelser et al (2004) found that 43.5% of respondents in Malawi had been victimized in the past year; indicating very
high levels of criminal victimization. The most common crimes were crop theft, livestock theft, and corruption (Pelser, et al., 2004). The prevalence of this type of victimization is largely because Malawi is a rural nation. Less than one third of Malawians felt safe walking at night and there was a general fear of conducting activities in open spaces (Pelser, et al., 2004).

Less than half of all crimes in Tanzania were reported to the police (Stavrou and O’Riordan, 2004). The most common reasons for not reporting crimes were that police help was inaccessible or would not be valuable. Many victims did not believe the crime was important enough to call the police (Stavrou and O’riordan, 2004). In Malawi and Uganda, only the more serious crimes were likely to be reported to the police (Baker, 2005; Pelser, et al., 2004).

The proliferation of firearms throughout sub-Saharan Africa creates considerable problems for the police. Malawi is one of the safest countries according to both levels of violent crime and victimization studies, but even there, firearms are a sizeable problem. Firearms in Malawi comes from four sources: 1) AK-47 assault rifles which are left over from wars in Mozambique or imported through Tanzania and Zambia from the wars in the Congo and the Great Lakes; 2) 9mm pistols made in South Africa; 3) government issued weapons leaking into illegal use; and 4) hunting and home-made guns (Wood, 2000). Wood (2000) reports an increase in the number of armed robberies in Malawi. The laws and the police in Malawi are unable to address this weapons problem (Wood, 2000). A similar trend of increasing weapon use and violent crime appear to be occurring throughout the sample (State Dept., 2008; Stavrou and O’Riordan, 2004; Baker, 2004; Pokhariyal and Mathuri, 2003).
Perceptions of the Police

Corruption and rampant abuse of human rights should mean the police are widely feared and mistrusted by the population, and do not provide any service to the community. This does not appear to be the case. Many people in the sample countries with high rates of corruption and abuse have a supportive view of their police. Table 2.6 below describes the perceptions of the police and police services in the sample.

Table 2.6: Perceptions of the Police and Police Services

<table>
<thead>
<tr>
<th>Country</th>
<th>Trust the Police</th>
<th>Difficult or Very Difficult to Obtain Help from the Police</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zambia</td>
<td>31.3%</td>
<td>59.8%</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>39.3%</td>
<td>52.9%</td>
</tr>
<tr>
<td>South Africa</td>
<td>47.4%</td>
<td>48.3%</td>
</tr>
<tr>
<td>Kenya</td>
<td>53.7%</td>
<td>66.0%</td>
</tr>
<tr>
<td>Uganda</td>
<td>62.9%</td>
<td>46.8%</td>
</tr>
<tr>
<td>Botswana</td>
<td>64.3%</td>
<td>40.7%</td>
</tr>
<tr>
<td>Lesotho</td>
<td>67.3%</td>
<td>44.6%</td>
</tr>
<tr>
<td>Malawi</td>
<td>78.7%</td>
<td>22.0%</td>
</tr>
<tr>
<td>Tanzania</td>
<td>84.2%</td>
<td>59.1%</td>
</tr>
<tr>
<td>Swaziland</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

As Table 2.6 indicates, perceptions of the police vary widely throughout the sample. In many of these countries, people have a higher opinion of the police than we would expect considering the levels of corruption and the seriousness of human rights violations indicated by the 2008 U.S. State Dept. Human Rights Reports. In Botswana, Malawi, Lesotho, Tanzania, and Uganda more than 60% of the population trust the police a lot or somewhat. Zambians and Zimbabweans have the worst perception of their police. South Africans, who have one of the most modernized and well-funded police organizations in the sample, have a mixed view of the police.

Other research also indicates support for the police. In Malawi, 70.3% of respondents in their first national victimization survey believed the police were doing a good job (Pelser, et al., 2004: 74). A similar positive perception of the police was found
in Tanzania in a recent national victimization survey (Stavrou and O’Riordan, 2004). Ugandan citizens perceive the police as friendly, approachable, and respectful (Baker, 2005). In Tanzania, persons interviewed were supportive of the role of the police and citizens accepted that certain levels of corruption were necessary because the police were paid so little by the government (CHRI, 2006).

Table 2.6 also indicates difficulty in obtaining police assistance. The people in the rural nation of Malawi perceived lower levels of difficulty accessing the police than the rest of the sample. Botswana had the second best perception of access to the police. Close to half or more of the respondents in the rest of the countries indicated it was difficult to obtain help from the police. In Malawi, a very rural country, 95.5% of the respondents knew where the police station was and most were within an hour’s walk (Pelser, et al., 2004: 73). In Tanzania, approximately 85% of people were within an hour’s walk of the police station (Stavrou and O’Riordan, 2004: 48). Difficulty in obtaining assistance from the police could be due to a variety of factors including poor lines of communication, limited transportation for both the police and the population, distance from police stations in rural areas, or lack of police manpower and resources.

In Tanzania and Malawi, people who received police services were generally satisfied. More than half of Malawians indicated that after visiting with the police, they had an improved opinion of them (Pelser, et al., 2004). This was also found in a victimization survey of Tanzanian citizens: 75% of Tanzanian victims were satisfied with the police response (Stavrou and O’Riordan, 2003).
Multi-Choice Policing

The lack of police resources and high crime rates in many of the sample nations indicate that police do not have the ability to address crime. In these circumstances, citizens utilize alternatives to obtain services that should be provided by the police (Baker, 2005). Baker (2005) coined the term multi-choice policing, which refers to the idea that there are numerous structures and organizations which play a role in preventing crime and policing when the police do not fully provide services. These organizations are often directly sanctioned and developed by the state (Baker, 2005).

Baker (2005) studied this phenomenon in Uganda, but it is occurring in some form or another and to various degrees throughout the sample (Abrahamson and Williams, 2005; Baker, 2004). In Uganda, there are three types of structures involved in providing policing. These include the state structures, the state approved structures, and the non-state approved or illegal structures (Baker, 2005).

State structures include the Ugandan Police, the local councils (LCs), and a military unit known as the Violent Crime Crack Unit (VCC) (Baker, 2005). The LCs are locally elected government organizations which have powers of local law and order and lower level court functions (Baker, 2005). They are generally involved in responding to and adjudicating lower level disputes within communities, while criminal cases are generally brought to the attention of the police and the court system. The VCC is a military unit which is independent of the police and mainly works to target organized crime, such as heavily armed groups committing armed robberies (Baker, 2005).

The state approved groups include crime prevention panels (CPPs), traders’ associations, and commercial security (Baker, 2005). The CPPs are citizen groups
established by the police to prevent crime through community policing (Baker, 2005). They have the goal of both preventing crime and providing intelligence to the police (Baker, 2005). The CPPs work to report unlawful activity and make recommendations on curbing crime. CPPs are more common in urban areas (Baker, 2005). The traders’ associations are groups of businesses, which have banded together, and with the approval of the police, have become involved in regulating activity under their purview.

Commercial security groups have taken over many of the guarding and escort duties formerly done by the police (Baker, 2005).

Private security is the fastest growing economic sector in South Africa and Kenya (Abrahamson and Williams, 2005). It has expanded throughout sub-Saharan Africa (Abrahamson and Williams, 2005; Baker, 2005; Amnesty Intl., 2002). Researchers indicate increased levels of private security in Botswana (Roth, 2007), Malawi (Woods, 2000), Tanzania, Kenya, and Uganda (Abrahamson and Williams, 2005).

The last structure of multi-choice policing is mob justice. Mob justice is a phenomenon which occurs throughout sub-Saharan Africa (State Dept., 2008C; State Dept., 2008F; State Dept., 2008G; Baker, 2004; Wood, 2000). It is a response to perceived criminality which results in groups of people apprehending and punishing people suspected of committing crimes. In Uganda, mobs are generally comprised of young males that attack people accused of such crimes as murder, theft, personal injury, rape, or witchcraft (Baker, 2006). This can result in the death of the person being apprehended.

Multi-choice policing is occurring throughout Anglo-phone sub-Saharan Africa (Baker, 2004). Some countries have given the community duties which had previously
been performed by the police (Brogden, 2004). In Swaziland, Lesotho, and Zambia, civilians have taken upon themselves policing duties by patrolling their neighborhoods (Brogden, 2004; Amnesty Intl., 2002). These civilians are linked to the police through crime prevention officers and have been known to treat suspects with brutality (Amnesty Intl., 2002). Governments, police, citizen groups and private companies are becoming increasingly involved in policing duties throughout the sample.

Summary

It is clear that the police operate within a difficult environment and are burdened by substantial organizational problems. Resource issues, corruption, and political control cause significant human rights abuses and inefficiency in providing police services. Crime throughout the sample nations is high and violent crime is exacerbated by the availability of firearms. Nevertheless, the police have the trust of a considerable percentage of the population and provide a service to the community which people want. The police are not able to address the high levels of crime; different mechanisms have been developed, often with the support of the police, to reduce insecurity within Anglophone sub-Saharan Africa.
Chapter 3: Known HIV/AIDS Impacts on the Police

The police hold an important position in any society. They are one of the entities responsible for maintaining the rule of law. They seek to ensure equality before the law, to ensure the law is upheld and obeyed by the community, and to protect citizens from being negatively affected by others (Baker, 2003). They also hold a powerful and pivotal role in maintaining social, economic, and political order. If one of the primary jobs of the police is to maintain order and enforce the law, it will be difficult for them to do so if a large number of the police are sick or dying.

Currently, there is not a clear picture of how this disease will impact police personnel, police organization, or police work. Only limited research on this problem within national police organizations in sub-Saharan Africa exists. This chapter describes the current state of knowledge regarding the impact of HIV/AIDS on the police.

This chapter is comprised of four sections. The first provides available HIV prevalence data on the police personnel in the sample. Section two describes what is known about the impact of HIV/AIDS on crime. The third section describes what is known about the impact of HIV/AIDS on sub-Saharan African police organizations and personnel. Section four describes those possible impacts which have been posited by researchers in the field, but not tested empirically. Combined, this information represents the current state of the literature.

HIV Prevalence in African Police Personnel

Available information on prevalence rates among the police within the ten sample countries is limited. Available data are presented in Table 3.1 below. The two columns
on the right of Table 3.1 describe the percentage of adults between the age of 15 and 49 years old infected with HIV. It is also important to note that national HIV prevalence data are estimates, based upon testing of pregnant women at specific clinics or nationally representative samples (UNAIDS, 2007A). Actual rates may be higher or lower.

Table 3.1: HIV Police Prevalence Research

<table>
<thead>
<tr>
<th>Country</th>
<th>Source</th>
<th>Method of Measurement</th>
<th>Year of Data Collection</th>
<th>Police Death Rate</th>
<th>Police HIV Prevalence Rate</th>
<th>Adult HIV Prevalence*</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malawi</td>
<td>Pharoah, 2005</td>
<td>Available Police Records</td>
<td>2003</td>
<td>3% per Year</td>
<td>UA*</td>
<td>14.2%</td>
<td>2003</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>Pharoah, ND</td>
<td>Unknown</td>
<td>2001</td>
<td>31/month</td>
<td>12%</td>
<td>33.7%</td>
<td>2001</td>
</tr>
<tr>
<td>Zambia</td>
<td>Pharoah, ND</td>
<td>Unknown</td>
<td>2001</td>
<td>21/month</td>
<td>UA</td>
<td>21.5%</td>
<td>2001</td>
</tr>
<tr>
<td>South Africa</td>
<td>Schonteich, 2003</td>
<td>Police Study</td>
<td>2000</td>
<td>UA</td>
<td>8-10%</td>
<td>20.1%</td>
<td>2001</td>
</tr>
<tr>
<td>Kenya</td>
<td>Amyunza-Nyamongo, 2001</td>
<td>Anecdotal</td>
<td>1988</td>
<td>520/year (not necessarily due to AIDS)</td>
<td>UA</td>
<td>15.1%</td>
<td>2001</td>
</tr>
<tr>
<td>Uganda</td>
<td>Curran &amp; Munywoki, 2002</td>
<td>Survey</td>
<td>2001</td>
<td>UA</td>
<td>4-8%</td>
<td>5.0%</td>
<td>2003</td>
</tr>
</tbody>
</table>

*Adult Prevalence Data gathered from UNAIDS, 2007
** UA = Unavailable

Table 3.1 indicates police personnel in one country are at a higher risk than the general population for contracting HIV infection (Curran and Munywoki, 2002; Bakari, et al., 2000). Research in other countries does not support this conclusion (Schonteich, 2003; Curran and Munywoki, 2002). The strongest piece of research in this area is Bakari, et al’s (2000) testing of 2,733 police officers in Dar es Salaam, Tanzania. Tanzania had a national HIV prevalence rate of 7.8% in 2001 (UNAIDS, 2007B). Bakari
et al. (2000: 317) found female police personnel had an HIV prevalence rate of 18% and males 13.3%, with an average of 13.8% among the sample (Bakari, et al., 2000: 315). This same project also found that an additional 2% were HIV positive one and a half years after initial testing (Bakari, et al., 2000: 317). High risk behavior such as alcohol use, multiple sexual partners, and low condom use were higher among those police who were infected than police who were not (Bakari, et al., 2000). However, it is difficult to generalize the findings from this study to all police in Tanzania or sub-Saharan Africa because only police in the capital city of Tanzania were sampled.

Based on limited and some contradictory evidence, some researchers have hypothesized that the police are at higher risk of becoming infected with HIV for a number of different reasons (Pharoah, 2005; UNAIDS, 2003; Curran and Munywoki, 2002; Akkinawo, 1995). Police personnel generally consist of males who are young and sexually active (Pharoah, 2005; UNAIDS, 2003; Curran and Munywoki, 2002; Akkinawo, 1995). The police services in many African countries are a national level organization, which means police personnel are often deployed away from their homes and spouses for long periods of time (Pharoah, 2005; UNAIDS, 2003; Curran and Munywoki, 2002; Akkinawo, 1995). Policing requires personnel who are more inclined to put themselves in harm’s way and take risks than the general population: these same personality traits are also likely to increase their involvement in high risk sexual behavior (Pharoah, 2005; UNAIDS, 2003; Curran and Munywoki, 2002; Akkinawo, 1995). The police are also likely to experience periods of high stress (e.g. involved in a high speed chase or pursuing an armed criminal) interspersed with long periods of boredom, where drug use and casual sex may occur (Pharoah, 2005; UNAIDS, 2003; Curran and
Munywoki, 2002; Akkinawo, 1995). When the police are on leave, they are less subject to social controls due to their status as police officers and may be more likely to engage in risky behavior (Pharoah, 2005; UNAIDS, 2003; Curran and Munywoki, 2002; Akkinawo, 1995). Police are often deployed into areas where drugs are easily available, increasing the likelihood they will engage in risky behavior including sex with multiple partners or with sex workers (Pharoah, 2005; UNAIDS, 2003; Curran and Munywoki, 2002; Akkinawo, 1995). In many countries in sub-Saharan Africa, poverty levels and unemployment rates are high. Furthermore, police personnel in some countries often occupy a position of affluence and power in comparison to the general population (Pharoah, 2005). This increases their access to sexual partners and increases their likelihood of contracting HIV.

It is possible that not all police personnel are at higher risk of infection than the general population. They may be at equal risk of contracting HIV as other members of the population. The level of risk may be dependent upon a number of factors including age, gender, rank structure, and deployment patterns (Pearce, 2008). Regardless, rates of HIV infection in the general population of the sample countries are relatively high. Even if the police are not more at risk than the general population, they are still threatened by this disease. For example, in Malawi the adult prevalence rate in 2005 was 14.1% (UNAIDS, 2007: 399). With a rate of this magnitude, a sizeable percentage of the police are likely to be infected with HIV.

This lack of information regarding mortality and HIV prevalence levels indicate a need for greater efforts to identify the presence of this disease among police personnel. Without these data, it will be difficult for human resources and strategic planners within
these organizations, or researchers studying the impact of this disease on the police, to accurately assess the extent HIV/AIDS is impacting an organization.

_HIV/AIDS and Crime_

Independent of the impact of this disease on the police, HIV/AIDS contributes to social factors related to crime. Researchers predict that HIV/AIDS will increase crime through three mechanisms: (1) reduced life expectancy of those with AIDS, reducing the perceived costs (punishment) of committing crime (Naidoo, ND); (2) increase in the number of orphans and unmonitored juveniles (Pharoah, 2005; Fourie and Schonteich, 2001); and (3) societal changes such as reduced education and broken families likely to increase poverty and subsequently increase crime.

Naidoo (ND) hypothesized HIV will increase crime by changing an offender’s cost-benefit calculation for committing crime. Some researchers believe that offenders weigh the costs and benefits of committing crime before they act (Naidoo, ND). If the rewards outweigh the perceived punishment an offender will commit a crime (Naidoo, ND). If an offender is infected with HIV and knows that he or she has only a limited lifespan, they will discount some of the perceived costs of committing crimes (Naidoo, ND). Naidoo (ND) indicates the threat of incarceration to someone dying of HIV/AIDS means less than the same punishment to a person who is not HIV positive. The costs of being punished are reduced, potentially increasing the likelihood of criminality (Naidoo, ND).

By increasing the number of orphans throughout Africa, HIV/AIDS may also cause an increase in crime (Pharoah, 2005; Fourie and Schonteich, 2001). This increase
in crime could be caused by (1) a decreased ability to monitor juveniles (Schonteich, 1998), (2) the poverty of orphanhood which would drive orphans into crime (Pharoah, 2005), (3) orphans being recruited by extremist groups (Pharoah, 2005), and (4) the psychological trauma of children and juveniles seeing their parents die, leading to violent behavior (Schonteich, 1998). It is also possible that the large number of orphans will increase the demand for police to respond to abused and exploited children.

HIV/AIDS is having a substantial impact on social conditions such as the economy, education, and poverty, which contribute to crime (Naidoo, ND). The disease reduces the size of the labor force, shifts economic investments out of Africa, and strains the national budgets of affected countries (ICG, 2001). Economic modeling indicates that when infection rates pass 5% economic growth slows, at 10% economic growth stops, and over 20% the Gross Domestic Product decreases by 1% per year (Schneider and Moodie, 2002: 6). This disease also causes the deaths of a significant number of teachers, reducing the ability to provide education (ICG, 2001). The long-term benefits of getting an education will also decrease because people will die at a younger age (Vass, 2002). Children are also forced to leave school to care for ill family members and must work to support their families (De Waal, 2003). Fourie and Schonteich (2002) indicate HIV/AIDS is causing a shift from cash cropping to subsistence agriculture. As adult farmers sicken and die, the knowledge, skills, and energy to grow cash crops are lost. Also, families will deplete assets, such as farming equipment or animals, to pay for medical care (De Waal, 2003). A lack of food and a reduction in the growth of cash crops will cause an increase in poverty. HIV/AIDS is likely to reduce economic growth and investment, reduce the ability to provide and receive benefits from an education,
reduce government expenditures on non-HIV related social services, and reduce the ability of a substantial percentage of the population to maintain economic stability. All of these worsening socio-economic conditions are related to increases in crime (Lochner and Morretti, 2004; Lee, 2001; Avison and Loring, 1986; Conklin and Simpson, 1985).

Research studying the impact of HIV/AIDS on crime is limited. Naidoo (ND)\(^2\) conducted one of the few in-depth studies available on the impact of HIV/AIDS prevalence rates upon crime in South Africa in the nine provinces of South Africa over a ten-year period. Naidoo (ND) identified the impact of HIV/AIDS prevalence on crime, while controlling for income, education, law enforcement expenditures, government expenditures on health, population density, urbanization, age structure of the population, and unemployment. HIV/AIDS caused an 18.67% increase in common robbery and a 66.4% increase in burglary between 1994 and 2003 (Naidoo, ND: 23). Crime was actually decreasing during this time period in South Africa. The crime reduction experienced by South Africa would have been larger without the increase in crime caused by HIV/AIDS. In Botswana, anecdotal reports indicate an increase in demand for police services due to a large number of orphans (Kinghorn, et al., 2002). It has yet to be ascertained if the increase in the number of orphans is increasing the crime rate or demand for police services more generally.

There is a logical relationship between the social issues exacerbated by HIV and crime. An increase in crime, in turn, would put increased pressure on the police, while they themselves are feeling the impact of the disease upon their own personnel and organization. Available research does not support or contradict these assertions, but it is

\(^2\) This is an unpublished dissertation by a student in the Public Policy Program at the University of Maryland
important to note that any increase in crime or demand for police services, even if not caused by HIV/AIDS, should logically place a greater strain upon the police.

*What We Know*

We actually know very little about the effect HIV/AIDS has on police personnel, police organization, and police work. Most research generally acknowledges a dearth of knowledge on this subject (Pearce, 2008; Pharoah, 2005). Most available research was done in Malawi. One study also exists which analyzed the impact of the disease on a cohort of police prosecutors in Zambia (Feeley, et al., 2006).

The United Nations Development Program (UNDP) studied the impact and response of the Malawi Police Services (MPS) to HIV/AIDS in 2000. This study found the biggest cause of general attrition among the police was death, and that most occurred between the ages of 30-39 (UNDP, 2000: 85). Death at this age is a common indicator of HIV/AIDS. The mortality rate was highest among constables, first sergeants, second sergeants, and commissioners (UNDP, 2000). Constables and sergeants were the more mobile members of the organization and likely to be posted away from home (UNDP, 2000). The UN projected that the MPS lost 50,879 hours of productivity between 1993 and 2000 due to HIV/AIDS (UNDP, 2000: 88). The MPS also had a significant personnel shortage; it had not made any efforts at human resources planning for dealing with HIV/AIDS-related attrition or large numbers of vacancies (UNDP, 2000). Workplace interventions to prevent HIV/AIDS transmission were limited (UNDP, 2000).

Pharoah (2005) studied the impact of HIV/AIDS on the Malawian Police Service in 2004. Pharoah (2005) indicates that the police attributes of being young,
working away from home, and having a high status caused a greater risk of personnel becoming infected with HIV/AIDS. There was an increase in death rates between 1990 and 2003 among the police (Pharoah, 2005). Death rates increased from 1.1% annually in 1990 to 3.2% annually in 2003 (Pharoah, 2005: 92). Deaths are also accounting for an increasing percentage of all attrition (Pharoah, 2005).

This project studied the impact of HIV/AIDS on absenteeism and mortality, the loss of tacit knowledge, spending upon healthcare, and changes in demand for services. HIV/AIDS exacerbated existing staff shortages, increased workloads, and placed more of a financial burden upon the police department (Pharoah, 2005). Pharoah (2005) found that the MPS could not retain rare skills, which were difficult to replace when personnel died.

Pharoah (2005) indicates that 75% of those interviewed believed that HIV/AIDS was having a moderate to large impact on the ability of the police to fulfill their duties. Managers also reported reductions in staff productivity (Pharoah, 2005). Training and recruiting costs are also absorbing increasing levels of the MPS budget (Pharoah, 2005).

An internal survey of MPS personnel found that over half of personnel felt their jobs placed them at higher risk of HIV infection (Pearce, 2008). A majority (61%) knew someone in the MPS who had died of AIDS, and all felt that HIV/AIDS was affecting their work performance (Pearce, 2008: 5). There was limited recognition by the MPS leadership that HIV/AIDS needed to be addressed as a systemic problem; rather, they were treating it as an external problem or one of individual illness (Pearce, 2008). The study also found that there were high levels of stigma and discrimination towards infected individuals (Pearce, 2008).
A study of the judiciary in Zambia identified the impact of HIV/AIDS on police prosecutors. Police prosecutors are police personnel who have been specifically trained to prosecute cases within the judicial system (Feeley, et al., 2006). This study found a 4% attrition (death) rate of the police prosecutors each year and the average age of death for these individuals was 31 years old (Feeley, et al., 2006: 9). This study found that illness among all members of the trial team, including the police prosecutors, resulted in much longer trial times and increased the likelihood of a dismissal due to illness (Feeley, et al., 2006).

This research on the MPS and police prosecutors in Zambia is a step in the right direction and is important to developing an understanding of the impact of HIV/AIDS on the police. Clearly, more research in more countries is needed to fully understand the effects of HIV/AIDS on police personnel, police organization, and police work. There is also a dearth of information on how and why these impacts occur within the various organizations.

Hypothesized Effects of HIV/AIDS on the Police

This section will describe hypothesized HIV/AIDS impacts on police organization and police personnel that have been identified in the literature. Many researchers have identified ways in which the police may potentially be impacted by HIV/AIDS, but many of these hypotheses have not been tested through research on police organizations. This section is divided into two parts. The first part will describe hypothesized impacts on police personnel. The second will describe hypothesized HIV/AIDS impacts on police organizations.
HIV/AIDS and Police Personnel

HIV/AIDS is likely to have a substantial effect upon both infected and uninfected police personnel. Officers who are infected with HIV, but do not have AIDS, may experience a multitude of symptoms that may limit their ability to do police work (Essig, 2007). As HIV progresses to full blown AIDS, the severity of a person’s symptoms increase (Essig, 2007). These symptoms are likely to have a sizeable impact upon worker absenteeism and productivity.

As officers become more ill, absenteeism is likely to increase. Research on other organizations found HIV/AIDS had a substantial impact on absenteeism. Fox et al. (2004) found that during the last three years of work before dying of AIDS, individuals were absent twice as often. But the largest impact of the disease was one and a half years before AIDS-related termination from death or resignation due to illness (Fox et al, 2004). Rosen et al. (2004: 320) found employees terminated due to HIV/AIDS took between 11 and 68 more sick days in their final years. Feeley et al. (2004: 20) found three times as much leave prior to death; 10% of total working days during the year before death.

At the organizational and individual level, police are likely to experience a decline in productivity. When infected personnel are experiencing symptoms, their ability to work is reduced. Research on other organizations has found that HIV/AIDS caused a sizeable reduction in productivity. Liu et al. (2004) found that some companies experienced reductions in productivity due to increased workloads. Persons with full blown AIDS were found to work three hours fewer per week than persons who were both HIV positive or negative (Liu, et al., 2004: 1188). Fox et al. (2004: 322) found
productivity was reduced 30.5% in the second year before death and 35.1% in the last year of life. Rosen et al. (2004: 320) found AIDS terminated employees were 22-63% less productive in the year before they died. Rosen et al. (2006) found that HIV/AIDS increased labor costs by 8% and reduced the ability to perform services by 5% (Rosen, et al., 2006: 27). Rosen et al. (2006) also found wildlife authority workers were half as productive in the two years before they died of AIDS.

As infected police personnel become ill and die, the police must train staff to replace losses. The quality of police recruits and the training they receive is likely to decrease. This may occur because HIV/AIDS has the effect of reducing the age of the available labor pool (Vass, 2002) and reducing the education levels of the labor pool (De Waal, 2003). Accelerated training to address attrition combined with a less educated labor supply may result in less able and/or less skilled new personnel.

Coinciding with this decrease in the quality of police personnel is a loss of experience and organizational knowledge. Policing is a skill-based career (Bittner, 1972). Skills are built up through job experience and personal networks that take time to develop (De Waal, 2003). This experience will be lost due to attrition and the fact that new personnel are not going to have the time to establish similar skills.

Some research indicates there is a relationship between HIV/AIDS and psychological problems among persons in the general population. Escoto and Flowers (2003) found that HIV/AIDS status was related to hysteria, social introversion, and depression. Common symptoms of some opportunistic infections and HIV in general can include memory loss, confusion, and forgetfulness (Essig, 2007). Officers experiencing
these conditions may have difficulty interacting with the public and fulfilling their other duties.

Whether infected or uninfected, officers will have to deal with the impact of HIV/AIDS on their families. Families in sub-Saharan Africa often form a social safety net for family members (ICG, 2001). It is likely that police officers will have further strains placed upon them from caring for orphaned or sick family members, loss of income from infected persons, and medical costs (Price-Smith and Daly, 2004).

**HIV/AIDS and Police Organization**

HIV/AIDS is likely to have a substantial effect upon the police as an organization. The police may need to reduce their services or change their organizational goals due to HIV/AIDS. These changes include: (1) burden-shifting by subcontracting out certain police tasks, (2) reduction in organizational goals or services, (3) simplification of organizational structure and operation, (4) a loss of institutional memory; and (5) financial costs.

HIV/AIDS is likely to increase healthcare and benefit costs. Many government organizations provide substantial benefits to their employees (Pharoah, 2005; UN, 2004). These benefits not only include healthcare costs, but death and funeral benefits as well. To decrease these costs an organization can reduce benefits and begin employing contractors (De Waal, 2003). This is known as burden shifting (De Waal, 2003). Organizations can transfer the cost of paying for HIV/AIDS to the individual, another party, or in the case of private organizations, the public sector (Barks-Ruggles, et al., 2001). This has been a common response for businesses coping with the HIV/AIDS epidemic (Barks-Ruggles, et al., 2001). Although the police cannot shift the entire fiscal
burden because they are a state entity, it is possible they may begin to sub-contract certain services or reduce benefits to police or other personnel to deal with rising costs.

The police, like any organization, are created to fulfill certain goals. For example, the primary goals of the police could be considered maintaining order, enforcing the law, and providing service (Perez, 1997). Hills (1996) indicates the primary role of the police in sub-Saharan Africa is maintaining order. HIV/AIDS is likely to reduce the already strained ability of the police to fulfill their goals. To fulfill their organizational goals in the presence of HIV/AIDS-related attrition, the police may need to recognize they cannot function as they currently are, and instead must simplify structures, train staff more quickly, and build in redundancy of employees trained to do specific tasks so that death will not have a serious impact upon the organization (De Waal, 2003).

A simplification in structure is also likely to require a reduction in the goals of the police. This shift in police goals and structure can be either managed or unmanaged. A managed change is when an organization is actively involved in the simplification of their structure and the reduction of goals. During unmanaged change this reorganization is occurring without the guidance or knowledge of the organization. Most organizational shifts are unmanaged (De Waal, 2003). If the police were to undergo an unmanaged organizational change due to HIV/AIDS, it would likely limit their ability to function due to (1) organizational paralysis because the police are trying to do too much, (2) application of procedures for recruitment and training which no longer work effectively, (3) reduced morale and increased corruption, and (4) centralization of organizational power because key individuals do much of the work themselves (De Waal, 2003).
Pearce (2008) indicates the hierarchical nature of the police combined with AIDS attrition may lead to a loss of institutional memory. Information in policing is typically passed down from the top to the bottom, and the death or loss of personnel with a large amount of organizational knowledge may have a cascade effect upon the lower levels of police (Pearce, 2008). However, the pyramidal structure of police hierarchy may protect command staff from vacancies driven by AIDS mortality because there are more people waiting to be promoted than there are positions (Pearce, 2008); there will always be someone willing to assume the duties of their superiors. This assumes, however, that there are qualified personnel who have the same knowledge and skills as those they are replacing.

HIV/AIDS is likely to reduce the budget of the police in two ways: (1) a reduction of funds available from the government and (2) increases in direct costs, such as healthcare, associated with the disease. HIV/AIDS may result in a general reduction in the tax base due to a reduction in the labor force and general productivity (Lisk, 2002). Spending on healthcare by the government is also likely to increase (Pharoah, 2005). Combined these costs may detract from the funding of other social services such as education, agricultural support, policing, and defense (Pharoah, 2005). It is possible that less money may be budgeted for policing, although Naidoo (ND) did not find this occurring in South Africa.

Police departments will also experience the direct financial cost of HIV/AIDS. HIV/AIDS may increase costs for police departments in four different ways: (1) costs due to increased insurance premiums; (2) costs due to increased payment of benefits such as death and funeral benefits paid by employers; (3) costs due to lost and reduced
productivity; and (4) new training and hiring costs (Liu, et al., 2004). These phenomena are generally described as the AIDS Tax (De Waal, 2003).

Summary

HIV/AIDS is likely to affect police personnel in a myriad of ways. HIV/AIDS is likely to have an impact upon crime (increasing demand for police services), the organizational structure of the police, and the number and capacity of available police officers. It is also important to realize the police are themselves are members of the community and will be subject to all the physical, emotional, and psychological effects that all members of the population are experiencing. These effects are likely to reduce the ability of the police to respond to crime and maintain order.

Clearly more research is needed to understand the prevalence of HIV and AIDS among personnel in the police organizations and the extent that HIV/AIDS-related illness and death is affecting the organization. Researchers also need to better understand the impact that HIV/AIDS is having upon crime, which may increase or decrease the demand for police services. These hypotheses that researchers have posited need to be tested. Not enough is known to clearly understand the impact that HIV/AIDS is having on police personnel, police organization, and police work.
Chapter 4: Learning from Other Organizations

This project has the goal of identifying the impact of HIV/AIDS on the police. The available information on this topic is limited. There have been a lot of hypotheses, but limited research. Based on this, I initially proposed to gain access to a police organization and study the impacts of this disease on the police. Through the development of this proposal and exploration of research methodologies, two things became clear. First, that gaining access to conduct this research would be difficult due to a lack of access, limited time, and a lack of resources. Fieldwork would not be feasible for a dissertation. Second, due to a lack of research, theory development would be beneficial before conducting field work or other research on this topic. It was therefore necessary to develop an alternative method to contribute to the field and facilitate future field-work.

During the review of available literature, it became clear that the police were not the only organization that is being impacted by HIV/AIDS. There is a body of literature which describes the impact of HIV/AIDS on a wide variety of organizations. This begs the question of what, if anything, can be learned from the available research on the impact of HIV/AIDS on these other organizations? This project seeks to use research about the impact of HIV/AIDS on other organizations to estimate the impact of this disease on the police.

This chapter is divided into three sections, which will provide a basis for the use of this research on other organizations to explore the impact of HIV/AIDS on the police. The first section provides an introduction to organizations. Section two will describe those four organizations which were selected by this project to explore the impacts of
HIV/AIDS on the police. The third section describes problems in the available literature on the comparison organizations.

**Understanding Organizations**

There is a large amount of literature on organizations. Reviewing the current state of the literature on organizations would be a time consuming process, and unnecessary for the purposes of this paper. This section provides a basic understanding of organizations.

By definition, an organization is a social structure created by individuals to support the collaborative pursuit of a specified goal (Selznick, 1947). It is a system of coordinated activities of two or more persons with a purpose. This purpose, or goal, is typically beyond the means of any one individual to accomplish (Richard and Davis, 2007; Blau and Schoenherr, 1971). A formal organization is recognized through its use of clearly stated and routinized procedures for coordinating and mobilizing resources to obtain a desired goal (Blau and Schoenherr, 1971). Delegation of tasks and authority is the primary act of organizations (Selznick, 1947). An organization should not be dependent upon any one person, but should be able to operate independently of any person (Selznick, 1947).

The prototypical organization is embodied in Weber’s description of bureaucracy (Richard and Davis, 2007). Weber’s initial discussion of bureaucracy has served as a basis for organizational sociology and the study of organizations (Richard and Davis, 2007). A bureaucracy is a hierarchical organization based upon the idea of rational legal authority: a pattern of rules and the right of those elected to authority under those rules to
issue commands (Richard and Davis, 2007). It has a fixed division of labor, a hierarchy of officers, a set of general rules that govern performance and decision-making, separation of personnel from official property and rights, and selection of employees on the basis of technical skills (Richard and Davis, 2007). This rational-legal structure creates stable and predictable administrative structures for all members of an organization.

Organizations face a common set of problems. They must induce people to contribute their services (work) and they must control and coordinate those services (Richard and Davis, 2007). Organizations must also gather resources, manage those resources, and then dispense their product (Richard and Davis, 2007; Selznick, 1947). They must also select, train, and replace those persons working for the organization (Richard and Davis, 2007). Organizations must also work with the other organizations operating in their environment (Richard and Davis, 2007).

The police are an organization. Although they may provide a different service, they are still an organization that faces similar problems as other organizations with different goals and structures. Therefore, it may be possible to learn from other organizations about the impact of HIV/AIDS on the police.

Comparison Organizations

Researchers have studied the impact of HIV/AIDS on both public and private organizations offering varied services such as banking, agriculture, and wildlife management. To learn from other organizations about the impact of HIV/AIDS on the police, it was necessary to select a group of organizations that will be used as the basis
for this project. This project selected the military, hospitals and healthcare systems, primary and secondary educational systems, and other civil service agencies. These four comparison organizations were selected for three reasons.

First, there was sufficient available literature which assessed the impact of HIV/AIDS on these four organizations. See Table 4.1 below for the countries and organizations with available research.

Table 4.1: Organizations and Countries Studied

<table>
<thead>
<tr>
<th>Country</th>
<th>Military</th>
<th>Education</th>
<th>Healthcare</th>
<th>Civil Service</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Africa</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Swaziland</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Lesotho</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>-</td>
</tr>
<tr>
<td>Botswana</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Zambia</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Malawi</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Kenya</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
</tr>
<tr>
<td>Tanzania</td>
<td>X</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Uganda</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>-</td>
</tr>
</tbody>
</table>

“X” indicates HIV/AIDS Impact Study, “-” indicates no research available

These studies provided enough information to make this project feasible. As Table 4.1 indicates, Zimbabwe and Tanzania also had only limited research available, but were retained because they fit the criteria to be a member of the original sample and are substantially affected by HIV/AIDS.

Second, these organizations are public service providers. They are specifically geared towards providing a service for the common good (i.e., crime reduction, national security, healthcare, education). They are not concerned with the production of a product such as tea picking or making blenders. Meyer and Rowan (1977) would describe these organizations as having a symbolic output. Their organizations and their output are ones which society has deemed necessary and important. They will continue to be funded and
survive even if they are unable to fulfill the functions for which they were originally intended (Meyer and Rowan, 1977).

Third, these comparison organizations are operating under similar resource constraints and outside regulation by their national governments due to their nature as public agencies. The police and many of the other organizations in Africa are chronically underfunded (State Dept., 2008A-J; CHRS, 2006; UNDP, 2000; Raleigh, et al., 1998). These organizations also often operate under the auspices of larger government bureaucracies. For example, in Malawi all the training and the overall organizational strategy and direction of all civil service organizations (i.e., police, education, healthcare, agriculture, water) are provided by the Human Resources Department (UNDP and Government of Malawi, 2003; UNDP, 2000). Within each sample nation, organizations are generally operating within the same organizational environment, including labor rules, contractual obligations, cultural beliefs, and government oversight.

The military are specifically included because they are intimately related to policing in a number of distinct ways. First, many of the militaries in the sample nations were directly created from police organizations (Sharp and Fisher, 2005; Matlosa, 2005; Rupiya, 2005; Tshabalala, et al., 2005; Clayton and Killingray, 1989). These organizations often operate domestically to maintain civil order and address high levels of violent crime (Henk, 2006; Leroux, 2005; Baker, 2005; Hills, 2000). The police and the military, at one time or another, have also operated together to address insurgencies (Raleigh, et al., 1998; Hills, 1996; Deflam, 1994). The police in the sample also have a military-like hierarchy and discipline (Igobovinia, 1981).
Other civil service agencies represent a catch-all category for agencies as varied as the Zambian Wildlife Authority and the Malawian Water Ministry. These are organizations which provide various services, all of which are for the public good. Healthcare systems and education provide a public benefit and are under similar resource constraints as the police. Healthcare generally provides a 24-hour service and is required to respond to emergency situations. The educational system is generally a large organization which is responsible for providing services to both urban and rural areas.

This project will utilize the literature studying the impact of HIV/AIDS on the comparison organizations from the ten sub-Saharan African nations in the sample. The sampling of only Anglo-phone countries provides a number of distinct benefits when trying to apply what is known about the comparison organizations to the police. The British imposed systems of law, policing, military, and civil service upon the countries they colonized to ensure their ability to control these countries on a long-term basis (Clayton and Killingray, 1989; Brogden, 1987). Practices and procedures within these national organizations are likely to be based upon the prevailing conception of work and organizations in British society at the time they were created (Meyer and Rowan, 1977). That is, the British implemented a system which they believed was the most effective (Meyers and Rowan, 1977). The British were therefore likely to impose similar organizational structures in their different colonies. Research on African police organizations supports this assertion (Brogden, 1987; Igbinovia, 1981; Blunt, 1978). Using only Anglo-phone countries in the sample creates a limited control on the organizational environment and structure of both the comparison organizations and the police.
Quality of Research on the Comparison Organizations

There is variation in the quality of the HIV/AIDS research on the comparison organizations. Some information on the comparison organizations was anecdotal without supporting data, while others were based upon sound research methodology. Higher quality studies include Rosen et al.’s (2006) study of the Zambian Wildlife Authority, Feeley et al.’s (2006) study of the Zambian judiciary, Kinghorn et al.’s (2002) study of education in Botswana, Pharoah’s (2005) study of Local Councils in Botswana, and Shisana et al.’s (2004) study of healthcare workers in South Africa. Others, due to limitations in available data, were based on interviews with affected personnel who sometimes did not have data to support their assertions (Rode, 2005; UNDP, 2000). A description of the methodological limitations identified in the literature on the comparison organizations is described in Table 4.2.

Table 4.2: Methodological Limitations in Impact Literature

<table>
<thead>
<tr>
<th>Project</th>
<th>Country</th>
<th>Organizations</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNDP, 2000</td>
<td>Malawi</td>
<td>Police, Civil Service, Healthcare Education</td>
<td>1. Poor records management and record keeping, data on absenteeism, funeral expenses, illness of unknown value if available.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2. Not possible to distinguish by gender and age group</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>3. Vacancy information was limited</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4. Staff attitudes of records management made project difficult</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5. Unknown rationale for large fluctuations in attrition</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>7. Not able to definitively identify HIV/AIDS impacts from other organizational problems</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8. Explanation of findings was difficult to interpret: there was little uniformity in description or attempts to create uniformity</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>9. Little explanation of organization or duties within the different organizations</td>
</tr>
<tr>
<td>Project</td>
<td>Country</td>
<td>Organizations</td>
<td>Limitations</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------</td>
<td>---------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| Pharoah, 2005    | Malawi, Botswana, Lesotho | Police, Civil Service | 1. None of the organizations kept detailed data on causes of illness or death  
2. Impossible to clearly distinguish HIV/AIDS deaths from non-AIDS related deaths  
3. Human resources records were difficult to access, were often kept manually or in a form which could not be used to look for broad trends, and often could not be broken down by age, gender, or locality.  
4. Interviews are often based on convenience samples |
| Feeley, et al., 2006 | Zambia     | Civil Service       | 1. Data not specific to HIV/AIDS, but rather based upon death of individuals who had potentially died of it.  
2. Limited and non-generalizable sample  
3. Does not include persons doing this type of work in other organizations of this type |
| Rosen, et al., 2006 | Zambia     | Civil Service       | 1. Don’t know the precise nature of death for those studied  
2. Cannot account for the quality of work of those who were will infected with HIV/AIDS |
| Rode, 2005       | Malawi     | Healthcare          | 1. Case Study of one Institution |
| Raviola, et al., 2002 | Kenya   | Healthcare          | 1. Members of the organization did not want to discuss HIV/AIDS  
2. Interviews only does not identify or discuss vacancy rates or levels of infection  
3. Based on interviews with focus groups  
4. Data derived from presentation, actual report not available  
5. Sample consisted of student doctors only  
6. Sample size only included 50 doctors |
| Cheluget, et al., 2003 | Kenya   | Healthcare          | 1. HIV/AIDS prevalence rate among Healthcare workers was unknown |
| Kadzamira, et al., 2001 | Malawi | Education           | 1. Not a representative sample  
2. Human resources data is of questionable validity |
| Kinghorn, et al., 2002 | Botswana | Education           | 1. Reliable absenteeism data is not available  
2. Monitoring and management of sick leave is problematic  
3. Some impacts identified were anecdotal |
| Grasly, et al., 2002 | Zambia | Education           | 1. lack of detail in explanation of impacts |
| Kamwanga, et al., 2003 | Zambia | Education           | 1. Limited Sample  
2. Impacts based on interviews only  
3. Human resources records overall were poor. |
| Abt Assoc., 2000 | Botswana   | Healthcare          | 1. No exact vacancy information or attrition information available for staff  
2. No information on prevalence rates within the staff of the system |
| Feeley, et al., 2004 | Zambia   | Health              | 1. Anecdotal ascertains  
2. Sample included those that died at a young age by illness, not HIV/AIDS  
3. Not a representative sample of hospitals |
In brief, these methodological limitations include a lack of detailed human resources data, over-reliance upon interviews, assertions without supporting data, and small and convenience samples. These problems also include an inability to clearly identify causal impacts of HIV/AIDS, limitations in the scope of the various studies, and incomplete information.

Despite these problems with the literature, it may be possible to learn about the impact of HIV/AIDS on the police from these comparison organizations in the sample countries. The police and the military, civil service, healthcare, and education systems were generally created by the British and face many of the same organizational difficulties. This may make it possible to identify plausible impacts on the police from impacts identified in the comparison organizations.
Chapter 5 – The Direct Impact of HIV/AIDS on the Comparison Organizations

HIV/AIDS is likely to have numerous impacts on an organization. Organizational personnel who are infected with HIV/AIDS are likely to become sick and absent from work, they are likely to have a reduced ability to fulfill their duties, and without treatment, they are likely to die. For the purposes of this project, these impacts on absenteeism, productivity, and mortality of infected personnel will be defined as direct HIV/AIDS impacts. Understanding these direct HIV/AIDS impacts are important to identifying the impact of the disease on the ability of that organization to operate and provide services. This chapter identifies the extent to which information on the direct impacts of HIV/AIDS on the comparison organizations can be used to identify what may occur within police organizations from a face value review of the literature. This face value review will identify the way in which HIV/AIDS is effecting the comparison organizations in the literature and explain the relevance of this information to the police. It will not account for organizational or environmental variation between the comparison organizations and the police which may influence the way the organizations are affected by HIV/AIDS.

Understanding the direct impact of HIV/AIDS requires a solid grasp of the difference between HIV prevalence and AIDS prevalence. HIV prevalence includes all persons infected with HIV. This includes those who are infected but not experiencing any symptoms of HIV and have a relatively healthy immune system. HIV prevalence also includes those individuals who have severely compromised immune systems or have been diagnosed with AIDS. Absenteeism and productivity losses could also be incurred by people who are infected with HIV, but who have a relatively healthy immune system,
due to the emotional and psychological burden of knowing they are infected with HIV. It is those individuals with AIDS and a severely compromised immune system who are going to be incurring the greater burden of AIDS. This will result in absenteeism, productivity losses, and these individuals are the most likely to die. AIDS prevalence information was not available for any of the comparison organizations or the police, nor was it possible with the available information to differentiate between HIV and AIDS and how they affect absenteeism, productivity losses, or mortality in the comparison organizations.

This review will assess this literature at the organizational level, meaning it will identify what can be learned from each of the four comparison organizations. From the outset, a review of literature on the comparison organizations reveals that literature related to the direct impact of HIV/AIDS on police personnel is lacking. Where it exists, available information on the police only identifies HIV prevalence and AIDS mortality. There is not any data available on AIDS prevalence. There has not been any measure of the extent that HIV/AIDS is impacting absenteeism and the extent that this absenteeism and the greater symptoms associated with the disease affects productivity. These data are important to understanding the impact of HIV/AIDS and greater efforts need to be undertaken to collect these data.

This project will be concerned with available information on HIV prevalence within the organizations, as well as the impact that HIV/AIDS is having upon absenteeism, productivity, and mortality among infected workers. By definition, mortality refers to the death of personnel and absenteeism refers to non-attendance at work for any reason (Price and Mueller, 1983). Productivity refers to the ratio of
resources used to the amount of goods and services produced by personnel (Price and Mueller, 1983). For the purposes of this project, these would relate to absenteeism or mortality caused by HIV/AIDS or the productivity losses of a person who is infected with HIV or suffering from AIDS.

This chapter is divided into five sections. The first four sections will describe what is known about the direct impact of HIV/AIDS on each of the comparison organizations in terms of prevalence, absenteeism, productivity losses, and mortality among personnel. Within each section, findings which are of potential relevance to the police will be identified and explored. The final section of this chapter will focus on what can be learned from the combined information on these four comparison organizations which may be of relevance to the police.

The Direct Impact of HIV/AIDS on the Military

Early findings indicated that military organizations in sub-Saharan Africa had extremely high levels of HIV prevalence (Heineken, 2003; UNAIDS, 2003; Heineken, 2001). UNAIDS (2003: 5) indicates estimates of military prevalence levels range from 16% in Namibia to 60% in Zambia. These early estimates indicated that the militaries of Lesotho, Malawi, South Africa, Swaziland, Zambia, and Zimbabwe all had higher levels of HIV prevalence than the national average (UNAIDS, 2003). These data are included in Table 5.1 below.
Table 5.1: Direct HIV/AIDS Impacts on Military Organizations

<table>
<thead>
<tr>
<th>Organization</th>
<th>Source</th>
<th>National HIV Prevalence*</th>
<th>Organizational HIV Prevalence</th>
<th>Productivity</th>
<th>Absenteeism</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botswana Defense Forces</td>
<td>UNAIDS, 2003</td>
<td>38.8%</td>
<td>33%</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
</tr>
<tr>
<td>Zimbabwe Defense Forces</td>
<td>UNAIDS, 2003</td>
<td>33.7%</td>
<td>55%</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
</tr>
<tr>
<td>Umbufo Swaziland Defense Forces</td>
<td>UNAIDS, 2003</td>
<td>33.4%</td>
<td>48%</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
</tr>
<tr>
<td>Lesotho Defense Forces*</td>
<td>UNAIDS, 2003</td>
<td>31.0%</td>
<td>40%</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
</tr>
<tr>
<td>Zambian Defense Forces</td>
<td>UNAIDS, 2003</td>
<td>21.5%</td>
<td>60%</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
</tr>
<tr>
<td>South African National Defense Forces</td>
<td>UNAIDS, 2003</td>
<td>20.1%</td>
<td>23%</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
</tr>
<tr>
<td>Malawian Defense Forces*</td>
<td>UNAIDS, 2003</td>
<td>15%</td>
<td>50%</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
</tr>
</tbody>
</table>

This evidence would indicate the military were particularly at risk and may be spreading the disease to the general population. During the early years of the epidemic, many of these military organizations were stigmatized because they were seen as a source of the HIV problem (Rupiya, 2004). These organizations became hesitant to allow access to study this disease due to this stigmatization (Rupiya, 2004). Militaries were also hesitant because allowing access to study HIV/AIDS impacts would allow reporting on their defense capacity (Rupiya, 2004).

Despite early indications of extremely high prevalence in the militaries in sub-Saharan Africa, more recent studies indicate that the prevalence rates of HIV in the military are likely much lower than the projections in Table 5.1 indicate (Whiteside, et al., 2006). Whiteside, et al (2006) indicates that many military recruits are young, placing them at lower risk of being infected with HIV. It is the older soldier who is at higher risk of infection (Whiteside, et al., 2006). During recruitment, prevalence testing for the Umbufo Swaziland Defense Force found 21% of potential recruits were infected.
with HIV (Simelane, et al., 2004: 77), much lower than the national average which was approximately 33.4% in 2005 (UNAIDS, 2007:11).

Rupiya (2004) indicates that at present, very little is know about the prevalence of HIV/AIDS in military organizations and the resulting impact on absenteeism, productivity, and mortality. The data described in Table 5.1 has been largely refuted. Much of what is known about the direct HIV/AIDS impacts on the military is based upon anecdotal evidence without supporting empirical data. This section will describe the anecdotal evidence regarding HIV/AIDS prevalence, absenteeism, productivity, and mortality losses in military organizations in Anglo-phone sub-Saharan Africa.

Little empirical information is available about the direct impact of HIV/AIDS on any of the comparison military organizations. The only indicators of direct HIV/AIDS impacts in the Botswana Defense Forces are that bed occupancy in healthcare facilities has increased significantly, the number of deployable personnel has been reduced, and the organization has lost a lot of man-hours due to illness (Molatole and Thaga, 2004). The Umbufto Swaziland Defense Force has found an increase in the number of soldiers experiencing HIV/AIDS-related opportunistic infections (Simelane, et al., 2004). The Zambian Defense Forces (ZDF) have lost more military personnel to HIV/AIDS since 1983 than all its military operations combined; and the overall ability of the ZDF to deploy troops has been reduced (Phiri and Simapuka, 2004). In the 1990s, testing of Zimbabwean pilots sent to China for training found that 21% were infected with HIV and 50% had a sexually transmitted infection (Matchaba-Hove, 2004: 173). A voluntary survey of Ugandan soldiers in 2004 indicated a prevalence rate of 21% (ICG, 2004: 6); this is higher than the national adult prevalence rate during that time.
There is also a belief that individuals infected with HIV/AIDS will die during training and operations due to the physical demand of the work and exposure to the elements (Simelane, et al., 2004). The Umbuftho Swaziland Defense Force will not hire a person infected with HIV, because they operate under the belief that their training regimen can kill an infected recruit in 90 days (Simelane, et al., 2004:77). This finding is still under review by researchers. It is unknown the extent that military training will exacerbate the symptoms of persons infected with HIV.

There was no evidence available about the direct impact that HIV/AIDS is having on the Kenyan, Malawian, or South African Armed Forces. Overall, it is clear that very little can be learned about the direct HIV/AIDS impacts on the police from the available literature on the ten military organizations in the sample. Military organizations appear to have even more limited data than the police. Perhaps when more is known about direct impacts on military personnel, it may be possible to learn from these organizations about the impact of HIV/AIDS on the police.

*The Direct Impact of HIV/AIDS on the Civil Service*

Researchers have studied the direct impact of HIV/AIDS on infected personnel in civil service organizations. Anecdotally, each of the comparison organizations are experiencing high levels of absenteeism, productivity losses, and mortality among personnel (Feeley, et al., 2006; Rosen, et al., 2006; Pharoah, 2005; Manning, 2003; UNDP, 2000). Table 5.2 below outlines the known direct HIV/AIDS impacts on the civil service organizations in the sample.
As Table 5.2 indicates, only a limited amount of information is available about the direct impact of HIV/AIDS on the civil service organizations in the sample. Only in the Zambian Wildlife Authority was there an indication of organizational HIV prevalence, but this is a projection based upon the number of deaths which were related to AIDS (Rosen, et al., 2006). The only data which was generally available in most of the comparison organizations was the mortality rates of organizational personnel. These mortality rates are questionable because they do not refer to people who died only of AIDS but could include personnel that died of other illnesses. This is a common problem.
throughout the literature (Rosen, et al., 2006; Feeley, et al., 2006; Pharoah, 2005; Manning, 2003; UNDP, 2000).

Logically, higher levels of adult prevalence should result in higher levels of overall mortality among personnel. Table 5.2 does not clearly support or refute this hypothesis. Botswana Local Councils and the Zambian Judiciary both have approximately a 4% mortality rate, but have different levels of adult HIV prevalence. It could be expected that Local Council workers in Botswana would have a higher mortality rate than personnel in the Malawian Ministry of Agriculture. Botswana does have a higher HIV prevalence rate than Zambia, possibly the mortality rate in these organizations would be higher without the high levels of treatment which are offered in Botswana (UNAIDS, 2007). In a few of these organizations, a national adult HIV prevalence level of 15-17% appears to translate into an organizational mortality rate of 4% annually.

It must be noted that these data are problematic; the extent of the direct impact of this disease varies among personnel of different ages, sexes, education levels, and positions within these different organizations. These data are also derived from different sources and collected in different ways. These findings will be described below to outline some of the variation in direct HIV/AIDS impacts that have been identified in the civil service organizations.

Both the Ministry of Water Development and the Ministry of Agriculture in Malawi were studied by the UNDP (2000). In the Ministry of Water Development, the UNDP (2000: 96) found that mortality of women generally occurred between the ages of 25 and 34, while men generally died over the age of 30. In the Ministry of Agriculture,
the UNDP (2000:51) also found age and sex variation; 72% of men died between the age of 30-40 and 74% of women died between the ages of 24-44. There was also variation in the levels of mortality between personnel in different positions in both the Ministry of Water Development and the Ministry of Agriculture (UNDP, 2000).

Manning (2003) indicates that the Cemeteries and Crematoria, Fire and Emergency Services, and the Electricity Departments in Ethekwini, SA were experiencing some increases in deaths and absenteeism. The Housing Department did not appear to be experiencing higher levels of direct HIV/AIDS impacts. The Housing Department primarily employs a few highly skilled managers and sub-contracts out most of its duties, making it less susceptible to HIV/AIDS. Work in the Department of Fire and Emergency Services and Electricity Department involves highly physically demanding labor (Manning, 2003). When employees in this department were ill it was difficult for them to perform their duties (Manning, 2003).

Pharoah (2005) studied the impact of HIV/AIDS on the Lesothan Ministry of Agriculture and Food Security. Managers in Lesotho indicate that HIV/AIDS-related attrition was on the increase and that illness in the workplace were a big problem (Pharoah, 2005). Pharoah (2005:70) also found variation in mortality among personnel in different positions, between 1999 and 2003: 16% of unskilled personnel died, 13% of technical personnel died, and 47% of professionals died.

Pharoah (2005) studied four different Local Councils (LCs) in Botswana. In each Local Council staff indicated an increase in sickness and death (Pharoah, 2005). The departments in these LCs reported high levels of absenteeism: the head of the department of architecture in Gaborone reported 10% of staff sick on a given week (Pharoah, 2005: 79).
44); the Principle Enviromental Officer of Gabarone reported that one third of his 500 employees were sick at any given time (Pharoah, 2005: 44). Levels of mortality also appear to be high in these organizations (Pharoah, 2005). Data was not available which could allow a determination of differences in levels of absenteeism between the different Local Councils which were studied or that clearly identified absenteeism that was related to HIV/AIDS.

Data on the impact of HIV/AIDS on worker productivity is limited. Both the UNPD (2000), Pharoah (2005), and Manning (2003) indicate anecdotal evidence of reductions in productivity due to HIV/AIDS. Only in the Zambian Wildlife Authority is there empirical evidence of a reduction in productivity. The average ZAWA personnel patrols 197.4 days per year (Pharoah, 2005: 8). Rosen, et al. (2006) determined that infected personnel patrolled only 62.8 days their final year before death, 96.8 days their second year before death, and 123.7 days their third year before death (Pharoah, 2005: 8). These reductions represent a sizeable decrease in worker productivity for personnel who died of AIDS. From this data it was not possible to determine the stage of infection of these individuals. Likely, these individuals were suffering from AIDS in the two years before death, possibly indicating that persons with AIDS are likely to be incurring a significantly higher productivity loss, but data was not available to make this determination.

A review of the research related to the direct impact of HIV/AIDS on civil service organizations does provide some information of relevance to the police. First, there is not necessarily a clear relationship between national prevalence rates and mortality levels among organizational personnel. Second, within organizations there is considerable
variation in mortality among personnel of different ages, sexes, and in different positions.

It is clear from these findings that there is likely to be considerable variation in prevalence, absenteeism, productivity losses, and mortality among personnel within police organizations.

_The Direct Impact of HIV/AIDS on Healthcare Systems_

Anecdotal evidence indicates healthcare organizations are experiencing a substantial direct HIV/AIDS impact on absenteeism, productivity, and mortality (Rode 2005; Shisana, et al., 2004; Feeley, et al., 2004; Harries, et al., 2004; Cheluget, et al., 2003; Dieleman, et al., 2003; UNDP, 2000). The available empirical data are described in Table 5.3.

**Table 5.3: The Direct Impact of HIV/AIDS on Healthcare Organizations**

<table>
<thead>
<tr>
<th>Organization</th>
<th>Source</th>
<th>National HIV Prevalence*</th>
<th>Organizational HIV Prevalence</th>
<th>Productivity</th>
<th>Absenteeism</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botswana Healthcare System</td>
<td>Abt Assoc., 2000</td>
<td>38.8%**</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
</tr>
<tr>
<td>South African Healthcare System</td>
<td>Shisana, et al., 2004</td>
<td>18.8***</td>
<td>16.1%</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
</tr>
<tr>
<td>Zambian Public Healthcare System</td>
<td>Feeley, et al., 2004</td>
<td>16.5****</td>
<td>UA</td>
<td>UA</td>
<td>22% of days last year of death</td>
<td>.4%-3.1% in 1999</td>
</tr>
<tr>
<td>Malawi Ministry of Health and Population</td>
<td>Harries, et al., 2002</td>
<td>15%*</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
<td>2%</td>
</tr>
<tr>
<td>Malawi Ministry of Health and Population</td>
<td>UNDP, 2000</td>
<td>15%*</td>
<td>11.8 - 9.6%</td>
<td>UA</td>
<td>UA</td>
<td>1%</td>
</tr>
<tr>
<td>Mulanje Mission Hospital (Malawi)</td>
<td>Rode, 2005</td>
<td>14.1%</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
<td>1%</td>
</tr>
<tr>
<td>Kenyan Healthcare System</td>
<td>Cheluget, et al., 2003</td>
<td>6.7%</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
<td>8-10%</td>
</tr>
<tr>
<td>Kenyan Healthcare System</td>
<td>CRHCS, 2004</td>
<td>6.1%***</td>
<td>13.5%</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
</tr>
<tr>
<td>Ugandan Healthcare System</td>
<td>Dieleman, et al., 2002</td>
<td>5.0**</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
</tr>
</tbody>
</table>

*Unless otherwise specified National Prevalence Data is the adult prevalence rates in the year of the publication, derived from UNAIDS, 2007
** 2001 Prevalence Data, *** 2005 Prevalence Data ****2003 Prevalence Data
Overall, data on the direct impact of HIV/AIDS on healthcare is limited. There were three organizations in which there were estimations of HIV prevalence levels among personnel. Healthcare workers in South African and Zambia had lower levels of HIV prevalence than the general population. In Kenya, CRHCS (2004:1) indicates the HIV prevalence among healthcare workers is more than double that of the general population.

Only in Zambia was there any empirical evidence describing the impact of HIV/AIDS on absenteeism in healthcare workers. Feeley, et al. (2004: 20) found that professional healthcare workers that were likely to have died of HIV/AIDS were absent 22 more days in their final year before death, 16.2% of total working days for the year. There was not a noticeable difference in absenteeism in their second year before death (Feeley, et al., 2004).

Both Malawi and Zambia have a national HIV prevalence rate of 14-16% and this is resulting in 1-2% attrition rate per year. Research in Kenya indicates a higher level of HIV/AIDS-related attrition among healthcare workers than in the general population.

Shisana, et al.’s (2004) study of the South African public healthcare system also found variation in HIV prevalence levels among personnel, finding a 5.9% higher HIV prevalence level among non-professional (20.3%) than professional healthcare workers (14.4%). Shisana, et al. (2004) also found variation in the healthcare workers who are working in different provinces in South Africa.

In Malawi, there are indications of high levels of HIV/AIDS-related absenteeism and mortality. CRHCS (2004:2) indicates that some facilities had reported absenteeism rates of 25%. This absenteeism was for a variety of reasons including personnel illness,
funerals, caring for relatives, or otherwise unrelated to an illness (CRHCS, 2004). Harries, et al. (2004) found that tuberculosis was the highest cause of death for healthcare workers, followed by some other chronic illness. Many persons who have HIV/AIDS also have TB (Harries, et al., 2004). The UNPD indicates higher levels of mortality among men than women and death rates are highest among healthcare workers of both sexes among 35-39 year olds in Malawi (UNDP, 2000: 72). The UNDP (2000) also indicates variation in the mortality levels of personnel at various positions within the Malawian healthcare system. In 2000 1.3% of clinical officers died, 2.3% of enrolled nurses died, and 0.3% of health surveillances assistants died (UNDP, 2000: 72).

The data in Kenya indicate mixed results and may be of questionable validity. Kenya has a national prevalence rate of 6.1%, but researchers indicate 13.5% of healthcare workers are estimated to be infected (CRHCS. 2004: 1). CRHS (2004) indicates a 22.6% reduction in the number of healthcare workers between 1996 and 2001, but it is unknown if this is due to AIDS-related deaths. Healthcares workers were experiencing an annual death rate of 8-10% (Cheluget, et al., 2003). This is higher than the levels of mortality in any other healthcare organizations. This could be due to extremely poor conditions contributing to high levels of death or these estimates may be problematic. Neither study has an explanation of these data or the reasons that these findings are higher than similar organizations in other countries. Due to limitations in available data, it was difficult to identify meaningful direct HIV/AIDS impacts in the Kenyan healthcare system.

Overall, it is clear that healthcare organizations are experiencing a sizeable impact from HIV/AIDS. A 14-16% HIV prevalence rate is likely to translate into a 1-2%
mortality rate among healthcare workers in Zambia and Malawi. As was found in the civil service organizations, there is also variation among personnel in different positions. The research on healthcare workers also introduces potential variation in prevalence levels based upon whether or not personnel are married or in what geographic region particular personnel work.

The literature on the healthcare workers could indicate married police personnel may be at lower risk than unmarried police personnel. There is evidence a considerable number of police personnel are married. Mbewe et al. (2007) found 72.3% of police in Zambia were married. In Tanzania, Bakari et al. (2002: 315) found 77.7% married. This might indicate that this group of police personnel may be at lower risk of becoming infected with HIV.

The Direct Impacts of HIV/AIDS on Education

Research indicates high levels of HIV/AIDS impacts on educational organizations. Anecdotally, these organizations are experiencing direct HIV/AIDS impacts on absenteeism, productivity, and mortality (Kamwanga, et al., 2003; Kinghorn, et al., 2002; Harries, et al., 2002; Kadzamira, et al., 2001; UNDP, 2000; Act Africa, 2000; Akunga, et al., 2000; JTK, 1999). Empirical data on the direct HIV/AIDS impacts are limited and what data available is of questionable quality (Harries, et al., 2002; Kamwanga, et al., 2002; Kadzamira, et al., 2001; Kinghorn, et al., 2000; UNDP, 2000). There were no data available on organizational prevalence or productivity in any of these organizations. Available data are described in Table 5.4.
Table 5.4: Direct HIV/AIDS Impacts on Educational Organizations

<table>
<thead>
<tr>
<th>Organization</th>
<th>Source</th>
<th>National HIV Prevalence*</th>
<th>Organizational HIV Prevalence</th>
<th>Productivity</th>
<th>Absenteeism</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Botswana Education System</td>
<td>Kinghorn, et al., 2002</td>
<td>38.8%**</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
<td>0.7%</td>
</tr>
<tr>
<td>Swazi Ministry of Education</td>
<td>JTK, 1999</td>
<td>33.4%**</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
</tr>
<tr>
<td>Zambian Education System</td>
<td>Act Africa, 2000</td>
<td>21.5%**</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
<td>4%</td>
</tr>
<tr>
<td>Zambian Education System</td>
<td>Kamwanga, et al., 2003</td>
<td>16.5%</td>
<td>UA</td>
<td>UA</td>
<td>14.4%</td>
<td>UA</td>
</tr>
<tr>
<td>Kenyan Educational System</td>
<td>Act Africa, 2000</td>
<td>15%**</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
<td>1.4%</td>
</tr>
<tr>
<td>Kenyan Educational System</td>
<td>Akunga, et al., 2000</td>
<td>15% **</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
</tr>
<tr>
<td>Malawian Ministry of Education, Science, and Technology</td>
<td>Harries et al, 2002</td>
<td>15% **</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
<td>2.3%</td>
</tr>
<tr>
<td>Malawian Ministry of Education, Science, and Technology</td>
<td>UNDP, 2000</td>
<td>15% **</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
<td>0.8%</td>
</tr>
<tr>
<td>Malawian Ministry of Education, Science, and Technology</td>
<td>Kadzamira, et al., 2001</td>
<td>15%</td>
<td>UA</td>
<td>UA</td>
<td>UA</td>
<td>2.2%</td>
</tr>
</tbody>
</table>

*Unless otherwise specified National Prevalence Data is the adult prevalence rates in the year of the publication, derived from UNAIDS, 2007
** 2001 Prevalence Data

The only empirical data generally available on these comparison organizations was mortality rates of educational personnel. There does not appear to be any indication that higher levels of national prevalence translate into higher levels of mortality within educational organizations. Higher levels of treatment may be resulting in lower levels of mortality among teachers in Botswana (Kinghorn, et al., 2000). If we were to remove Botswana from the comparison of national prevalence and mortality rates there may be some relationship between the two. In 2001, Zambia had a national prevalence rate of...
21.5% and 4% mortality in the education system. Both Kenya and Malawi have lower levels of prevalence and a lower level of mortality, although there is considerable variation in AIDS mortality between different studies in Malawi.

Kamwanga, et al., (2002) studied the impact of HIV/AIDS on four separate school districts in Zambia. This project found a higher death toll among teachers in more rural districts (Kamwanga, et al., 2002). Kamwanga, et al. (2002) also found higher levels of absenteeism among female than male teachers. Only in one of these districts was absenteeism data available, the Chongwe district reported that the system lost 14.4% of person days due to illness (Kamwanga, et al., 2002). Many of the long term illness in Chongwe were found to be related to TB (Kamwanga, et al., 2002).

Harries, et al. (2002) studied mortality among educators in Malawi. This project found that 2.3% of healthcare workers died in 1999, but found a higher level of mortality in women (2.5%) than men (1.9%) (Harries, et al., 2002: 35). Harries, et al., (2002) indicate that these data were also of questionable quality and that records were often incomplete. In Malawi, the UNPD (2000) found that educators in both primary and secondary schools had a mortality rate below the general population. Females typically died between the ages of 25-39 and males from 40-44 years of age (UNDP, 2000: 36). Kadzamira, et al. (2001) also studied the impact of HIV/AIDS on the education system in Malawi. This project studied three different sources of data to estimate the impact of HIV/AIDS which indicated various levels of mortality among educators, including: an average annual mortality rate of 2.4% between 1994 and 2000; a 1.32% mortality rate in 1999; a 2.2% mortality rate in 2000; and a 1.02% of in 1998. Kadzamira, et al. (2001) found higher levels of absenteeism among female teachers. In all, Kadzamira, et al.
(2001) found poor records and a mortality rate between 1-2.4% in the Malawian education system.

The extent that we can learn about the direct impact of HIV/AIDS from the educational system in the sample countries is limited. There are some indicators that national adult prevalence rates do translate into higher levels of mortality in educational organizations, but this may be mitigated by treatment. It is also clear that the quality of available data varies and this can result in variation of estimates of organizational AIDS mortality. It continues to be clear that the levels of prevalence, absenteeism, productivity losses, and mortality vary within and between organizations. It is also clear that there continues to be both geographic and gender variation in direct HIV/AIDS impacts among personnel in organizations.

*Learning from the Direct Impact of HIV/AIDS on the Comparison Organizations*

There appears to be limitations in the amount that can be learned about the direct impact of HIV/AIDS on the comparison organizations of relevance to the police. Empirical data measuring the impact of HIV/AIDS on absenteeism, productivity losses, and mortality is limited. The available information indicates there is likely to be a substantial amount of variation in the levels of prevalence and resulting mortality, absenteeism, and productivity losses among various personnel working in any one organization. Direct HIV/AIDS impacts within an organization are likely to vary by the position personnel are occupying, by the age and gender of the individual, their marital status, and by the geographic area in which an individual is working.
It may also be difficult to learn from the direct HIV/AIDS impact on these organizations because there is variation in the amount of healthcare that is provided to personnel. Military personnel and healthcare workers are likely to have a level of access to medical care better than that which is available to the police. Police, civil service workers, and educational personnel are all likely to face greater similarities in their abilities to obtain healthcare and HIV/AIDS treatment.

This project identified three direct impacts which are relevant to police organizations from the combined literature on the comparison organizations. These three impacts were identified in a number of the comparison organizations and they are explored in greater detail here. Physical work and a harsh work environment may result in reduced productivity and increased absenteeism among police personnel. Female police personnel may be experiencing higher levels of absenteeism, greater productivity losses, and higher mortality. Those police personnel occupying skilled positions may be experiencing higher levels of mortality. Each potential impact will be described independently.

*Physical Work, Harsh Environment, and Reduced Productivity/Absenteeism*

HIV/AIDS will have a greater impact on productivity and absenteeism when an infected person is doing physical labor or is working within a harsh environment. This impact was identified in a municipal fire and emergency services organization (Manning, 2003), the Tanzanian Defense Forces (Mutayoba, et al., 2004), the Zambian Defense Force (Matchaba-Hove, 2004), the Umbufto Swaziland Defense Forces (Simelane, et al., 2004), and the Zambian Wildlife Authority (Rosen, et al., 2006).
A municipal fire and emergency service department in South Africa experienced high levels of absenteeism among those workers doing highly physical labor (Manning, 2003). Fire fighting and emergency services are physically demanding, and persons who were ill were unable to fulfill their duties (Manning, 2003). Manning (2003) also found this occurring in the Ethekwini electricity department. The Swazi military indicates their training regime reduces T-Cell counts to levels resulting in death within 90 days (Simelane, et al., 2004).

Work in the Zambian Wildlife Authority (ZAWA) involves highly physical labor (Rosen, et al., 2006). These personnel are actively patrolling in the wildlife areas, living in nature for two weeks, and are subject to inclement weather without medical care (Rosen, et al., 2006). ZAWA personnel who died of HIV/AIDS experienced a 68% reduction in their ability to patrol during their final year before death, a 50.9% reduction their second year before death, and a 37.3% their third year before death (Rosen, et al., 2006: 8). In comparison to ZAWA, professional healthcare workers in Zambia experienced a 16.2% reduction in productivity their final year and only a limited impact in their second year before death (Feeley, et al., 2004: 19). ZAWA personnel have tasks which require more physical labor and operate in a harsher environment, they also experience high levels of absenteeism and productivity losses.

Both Feeley et al.’s (2004) healthcare study and Rosen et al.’s (2006) ZAWA study were done in Zambia. These two organizations have similar human resources problems and levels of benefits (UN, 2004). Both studies used the same methodology. On the other hand, those in the healthcare system are likely to have better access to medical care, which is limited for ZAWA personnel (Rosen, et al., 2006). Feeley et al
(2004) studied highly educated medical professionals, while little is known about the educational background of ZAWA personnel. ZAWA is largely composed of male in their late thirties while the healthcare workers are generally younger females, this may also influence the difference in productivity losses. However, current epidemiological studies indicate higher HIV prevalence among females (UNAIDS, 2007). This should, all else being equal, result in greater direct HIV/AIDS impacts among healthcare workers, but this does not appear to be the case. Both studies were also limited by available human resources data. Deaths indicated as being AIDS-related were not based upon clear medical determination of infection, but rather based on persons who died of a disease at a young age.

Specific personnel in police organizations may be experiencing greater productivity losses and higher levels of absenteeism due to the nature of their work. Policing appears to be an activity which requires at least a moderate level of physical labor due to the lack of communication and use of foot and bike patrols (State Dept., 2008; CHRI, 2006; Raleigh, et al., 1998). This impact upon productivity is most likely to be felt by those within police organizations who are actively patrolling and working outside with the public, those who have physically demanding tasks, or recruits undergoing physical fitness training. Those individuals who are working inside or who have easy access to motorized vehicles will have lower productivity losses. If there are large numbers of infected personnel doing highly physical tasks in a police organization, they may be experiencing greater losses in overall productivity than other organizations. Due to limitations in the available knowledge of police duties, it is not possible to clearly identify which tasks or personnel are likely to be the most affected.
Higher Absenteeism, Productivity Losses, and Mortality among Female Personnel

Women working within organizations may be experiencing higher levels of absenteeism, productivity losses, and mortality than their male colleagues. This is likely to occur for two reasons. First, current epidemiological data indicate that women have higher levels of HIV prevalence within sub-Saharan Africa (UNAIDS, 2008; UNAIDS, 2007). High levels of HIV infection for woman are likely to result in higher levels of absenteeism and mortality. Second, women are also culturally responsible for taking care of family members who are sick. This will result in higher levels of absenteeism and reduced productivity (Kadzamira, et al., 2001; Kelly, 2000). This impact was identified in the educational system in Malawi (Kadzamira, et al., 2001) and Zambia (Grassley, et al., 2002).

Females make up a sizeable percentage of the educational workforce (Kinghorn, et al., 2002; Grassley, et al., 2002; UNDP,2000). Kadzamira et al. (2004) and Grassly et al. (2002) found higher rates of absenteeism among female than male teachers in Zambia and Malawi. Absenteeism was driven by illness in the family and funeral attendance (Kadzamira, et al., 2004). Grassly et al. (2002) also found more women than men were asking for long term absences, but it was not possible to identify the rationale for the absences from this literature.

These studies had methodological problems; Kadzimira et al. (2004) did not have a representative sample of educational institutions and had questionable human resource data. Grassley et al. (2002) identified this impact anecdotally but did not have supporting data. It is also not possible to determine if this absenteeism was due to HIV/AIDS-related illness among female teachers or whether or not they were taking care of family
members. However, this impact makes logical sense; higher prevalence rates among females should result in greater absenteeism, productivity losses, and death.

It must be noted that the healthcare system findings indicate a higher level of mortality among males than females (Shisana, et al., 2004; UNDP, 2000). It may be that female personnel may not be at greater risk for increased absenteeism and mortality, or this could be due to the better healthcare opportunities that are available to female healthcare workers.

A number of the police organizations have a substantial percentage of the organization that is female, ranging from 10-30% (Mbewe, et al., 2007; Morrison, 2004; RSPS, 2002; Raleigh, et al., 1998). These women are at disproportionate risk of being infected with HIV/AIDS and may be experiencing higher levels of absenteeism, productivity losses, and mortality. There is some literature supporting this impact, Bakari et al. (2000:31) found 18% of female police personnel in Dar es Salaam, Tanzania were HIV positive in comparison to 13.3% of male personnel. Females in these police organizations may be at higher risk of incurring HIV/AIDS-related absenteeism, productivity losses, and mortality. Police organizations may seek to target females for treatment to limit this absenteeism and mortality and the effect this is having on the rest of the organization.

*Higher Mortality in Specialized and Expert Positions*

There is evidence that personnel in roles which require greater levels of expertise are experiencing high levels of AIDS mortality. This impact was identified in the Umbunto Swaziland Defense Force (Simelane, et al., 2004), the Ministry of Agriculture
in Malawi (UNDP, 2000), the Ministry of Agriculture in Lesotho (Pharoah, 2005), and the Ministry of Water Development in Malawi (UNDP, 2000).

In any of these studies there was no mention of why this was occurring. It is possible that due to the nature of their positions, better records were kept on these personnel. It is also possible these individuals are higher paid and are in positions of power and authority which gives them greater access to sex partners, increasing their exposure to HIV. These personnel performed vital roles in the organization, it may be that it was more likely for losses among these personnel to be noticed and subsequently recorded, when it might not be noticed in those doing less expert tasks.

The police organizations in the sample have a wide variety of positions, some of which require high levels of skill and training (CHRI, 2006; BPS. 2003; KPS, 2003; Hills, 2000; Raleigh, et al., 1998; Clayton and Killingray, 1989). Personnel in these positions may be experiencing higher levels of mortality than their less expert counterparts. Those personnel who are piloting helicopters, fixing helicopters, or analyzing forensic data may have higher levels of mortality than less specialized positions. These personnel are hard to replace due to their skills and training. Losses among highly expert personnel could result in a substantial loss of expertise and knowledge, as well as financial costs for the organization to train new personnel.

**Summary**

There were only limited empirical data measuring HIV prevalence levels, absenteeism, productivity losses, and mortality in the comparison organizations. There were no data available on the prevalence of AIDS among organization personnel. This
made it difficult to learn information of relevance to the police from the available literature on the comparison organizations. From this limited empirical evidence, it was not possible to clearly determine that national levels of HIV prevalence are a good predictor of absenteeism, mortality, and productivity losses within the comparison organizations. The levels of AIDS-driven mortality appears to be related to a large number of factors including sex, position, the amount of physical labor, and the likelihood that an individual will become exposed to HIV through the course of their duties. These findings on the comparison organizations indicate the importance of collecting data on HIV prevalence, AIDS prevalence, absenteeism, productivity losses, and mortality on police personnel in various positions, doing various duties, who come from a variety of social and demographic backgrounds. The available evidence indicates high levels of direct impacts on the comparison organizations and suggests the same is likely to occur in the police.
Chapter 6 – The Indirect and Environmental Impact of HIV/AIDS on the Comparison Organizations

There is evidence that HIV/AIDS is having substantial direct impacts on the absenteeism, productivity, and mortality among infected personnel in the comparison organizations. These direct HIV/AIDS impacts are likely to result in substantial impacts on the operations of and ability to provide services of these organizations. For the purposes of this project, the impacts that HIV/AIDS-related absenteeism, productivity, and mortality among infected personnel are having on operations and the ability to provide services will be defined as indirect HIV/AIDS impacts.

It is also clear that HIV/AIDS will not only impact an organization through personnel who are infected with the disease. The environment of an organization matters; this is supported by organizational sociologists (Richard and Davis, 2007). The organizational environment refers to the political, physical, technological, cultural, and social context in which an organization operates (Richardson and Davis, 2007; Scott, 2004). HIV/AIDS may create or exacerbate social problems external to an organization, which impact the ability of the organization to operate or provide services. For example, if HIV/AIDS is increasing crime, this will place a greater strain upon the police. This strain does not come from infected personnel, but rather it comes from the organizational environment having high levels of HIV and AIDS prevalence, which is increasing the levels of crime. For the purposes of this project, these HIV/AIDS impacts which effect an organization through its environment, but are not related to infected personnel, will be defined as environmental HIV/AIDS impacts.

More generally, although these four different comparison organizations are all being impacted by HIV/AIDS, they are also facing different organizational stressors such
as corruption, inefficiency, and a lack of resources. These stressors affect their operations and their ability to provide services. These organizational difficulties will be described where this information is available. The impacts described here are plausibly related to HIV/AIDS, but it is difficult to isolate the HIV/AIDS impacts from the effects of these other organizational problems.

This chapter will identify what can be learned from a face value review of the literature at the organizational level and explore how the indirect HIV/AIDS impacts identified on the comparison organizations may be of relevance to the police. This chapter will be divided into five sections. The first four sections will describe the indirect and environmental HIV/AIDS impacts on each of the four comparison organizations and what can be learned about the police from that organization. Section five will describe what can be learned from this literature as a whole.

**HIV/AIDS Impacts on the Military**

This section will review the available information relating to the indirect impact of HIV/AIDS on the Botswana Defense Forces (Molatole and Thaga, 2004), the Umbuto Swaziland Defense Force (Simelane, et al., 2004), the Zambian Defense Forces (Phiri and Simapuka, 2004), the Tanzanian Defense Forces (Mutayoba, et al., 2004), the Zimbabwe Defense Forces (Matchaba-Hove, 2004), and the Ugandan Defense Forces (ICG, 2004). Identified HIV/AIDS impacts on the military are primarily indirect. They are occurring due HIV infection and AIDS among military personnel. These indirect HIV/AIDS impacts include a reduced ability to meet organizational goals, problems associated with
HIV testing of recruits and military personnel, a loss of discipline and professionalism, and paying non-productive personnel.

**Reduced Ability to Meet Organizational Goals**

Research indicates that many of these military organizations are experiencing a reduced ability to meet their operational or organizational goals due to HIV/AIDS. Molatole and Thaga (2004) indicate a reduction in the number of deployable personnel in the Botswana Defense Forces. A similar problem has also occurred in the Zambian Defense Forces (Phiri and Simapuka, 2004). Matchaba-Hove (2004) indicates that HIV/AIDS has reduced the abilities of the Zimbabwe Defense Forces to be involved in peacekeeping and has resulted in overall reduced preparedness. In Uganda, AIDS-related deaths among senior commanders may have lengthened the amount of time for the military to end an insurgency in Northern Uganda (ICG, 2004). It is possible that HIV/AIDS is resulting in a reduced ability of the police to meet their organizational goals such as crime reduction or maintaining order.

**HIV/AIDS Testing of Recruits and for Promotion**

Many of these military organizations are testing new recruits for HIV and excluding those who are infected, retiring individuals who become infected, and limiting the opportunities of those infected. The countries in the sample generally provide constitutional anti-discrimination protections to individuals infected with HIV (Rupiya, 2004). Discrimination against persons who are HIV positive is also prohibited in international law (Rupiya, 2004). The militaries in many of the sample nations have either outright or tacitly ignored these anti-discrimination clauses (Rupiya, 2004; Molatole and Thaga, 2004; Simelane, et al., 2004; Phiri and Simapuka, 2004; Mutayoba,
et al., 2004; Matchaba-Hove, 2004). These actions have been challenged in court and the military has generally been successful in defending their policies (Rupiya, 2004).

There have been a number of rationales presented for the discrimination against recruits and active duty personnel infected with HIV. Live virus immunizations are given prior to deployment outside the country. These immunizations could harm persons with weakened immune systems (Molatole and Thaga, 2004). Personnel infected with HIV may not be able to donate blood during combat operations (Molatole and Thaga, 2004). There is also a belief that infected individuals will die during training and operations due to the physical demands of the work and exposure to the elements (Simelane, et al., 2004).

The Botswana, Zambian, and Swazi militaries have policies which forbid those who are infected with HIV from being sent out of the country for training (Molatole and Thaga, 2004; Simelane, et al., 2004; Phiri and Simapuka, 2004). Many countries where these training sessions are held also require trainees to be HIV negative (Rupiya, 2004). The military organizations in the sample receive a substantial proportion of their training from other governments (Rupiya, 2006). Receiving this training is an important element of the career ladder for personnel within many military organizations in sub-Saharan Africa (Rupiya, 2006; Henk, 2006; Sharp and Fisher, 2004). In Botswana, the number of military personnel who have been sent on training abroad has dropped considerably (Molatole and Thaga, 2004). In the end, it has the result of reducing overall expertise and skill in the BDF (Molatole and Thaga, 2004).

Some military organizations are purposefully limiting those who can work in specific positions to personnel who are not infected with HIV. The Swazi and the
Zambian militaries are requiring annual HIV tests for individuals within specific positions. In Zambia these positions include air crews and commandoes (Phiri and Simapuka, 2004). In Swaziland, pilots, aircraft engineers, and air traffic controllers are required to be HIV negative (Simelane, et al., 2004).

Rupiya (2004) indicates these policies place an alternative health criterion for promotion, rather than simply their level of skill or expertise. It is not the most skilled who are sent to other countries for training, but rather the most skilled among uninfected (Rupiya, 2004). This limits the pool of available personnel for promotion and command. This also limits the career potential and possibly the commitment of infected personnel within the organization. However, Rupiya (2004) does did not indicate the extent to which this loss of skills was occurring, nor the impact this was having on these military organizations.

The police may not have the same ability as the military to screen recruits for HIV due to national security concerns. Overall, there have been limited indications of HIV testing of police recruits. In Malawi, the screening of police recruits was discussed by government leaders and police command staff, but this has not been implemented due to a lack of funding (Pharoah, 2005). It is not likely that the police will screen recruits for HIV due to the limited financial means of these organizations.

The police, like the military, have a wide variety of positions which require high levels of skills and expertise, such as pilots and forensic personnel (CHRI, 2006; BPS, 2003; KPS, 2003; Raleigh, et al., 1998). If the police did adopt policies requiring HIV tests of those personnel providing expert tasks, it may eliminate skilled people from these positions or result in the hiring of less qualified individuals. The personnel within sub-
Saharan African Anglo-phone police organizations also receive training abroad. This is especially true for the training of command staff (Opolot, 2002; Raleigh, et al., 1998). It is unknown if the governments in the countries where this training takes place require personnel to be uninfected. If these requirements are in place this may result in a reduced pool of personnel for promotion and less skilled managers. Stigma is also high within the population (UNAIDS, 2008; UNAIDS, 2007; Pharoah, 2005), and police personnel may purposefully not seek promotion or training opportunities because they do not want to learn if they are infected with HIV.

Police organizations may or may not be requiring personnel occupying expert positions to remain uninfected. The number of expert positions or command positions in these organizations is unknown. Likely, only a small number of positions and personnel may be affected. It is also possible the police will not be able to flout anti-discrimination rules to the same extent as military organizations. This impact is also not relevant to the rank and file of the organizations. Although this impact may be occurring in police organizations, it may only be occurring to a limited extent.

Loss of Discipline and Professionalism

Within the Ugandan military there was evidence that soldiers who did not have access to healthcare in the field were becoming irresponsible and undisciplined (ICG, 2004). These soldiers knew that they were going to die of AIDS because they did not have access to treatment (ICG, 2004). It is important to note that this finding related to soldiers who were operating within a conflict zone, where access to any medical care was limited (ICG, 2004). Because healthcare for HIV/AIDS treatment is primarily limited to larger urban areas (Grassley, et al., 2002; Abt., 2000), it is possible that those police who
are infected with HIV in rural areas and do not have access to any treatment may also be exhibiting irresponsible and undisciplined behavior. This behavior may result in personnel performing fewer services or a decline in the quality of services. It may also result in increased corruption because officers are not concerned about the repercussions of their actions.

*Paying non-Productive Personnel*

The Umbuto Swaziland Defense Force is continuing to pay and retain personnel who are too sick to work (Simelane, et al., 2004). There is a belief that these individuals will eventually be able to return to work (Simelane, et al., 2004). Simelane, et al., (2004) did not identify the extent this was occurring or the number of positions which were being affected. It is possible the police too may be paying personnel who are no longer able to work.

Overall, the available literature on the military organizations is of some help to understand the indirect impact of HIV/AIDS on the police. It is possible the police may be experiencing a reduced ability to meet their goals. They may also be testing personnel for promotion and training opportunities. Additionally, they may be losing discipline and professionalism among infected recruits and personnel. Finally, they may be paying non-productive personnel.

*HIV/AIDS Impacts on the Civil Service*

Researchers have studied a variety of civil service organizations to identify the extent they are impacted by HIV/AIDS. The civil service organizations include the Botswana Local Councils (Pharoah, 2005), the Lesotho Ministry of Agriculture and Food...
Security (Pharoah, 2005), four municipal departments in Ethekwini, South Africa (Manning, 2003), the Zambian Judiciary (Feeley, et al., 2006), the Zambian Wildlife Authority (Rosen, et al., 2006), the Malawian Ministry of Agriculture (UNDP, 2000), and the Malawian Ministry of Water Development (UNDP, 2000).

There are a wide variety of different organizations which provide various services in different countries in this group of civil service organizations. This section describes the available information on each comparison organization independently. At the same time, many of these organizations are being similarly affected by HIV/AIDS. It would be redundant to repeatedly reiterate how the impacts of each are of potential relevance to the police. Instead, the relevance of all civil service organizations to the police will be discussed at the end of this section.

*Lesotho Ministry of Agriculture and Food Security*

The Lesotho Ministry of Agriculture is responsible for enhancing the agricultural capacity of Lesotho overall, and to improve food production and nutrition among HIV/AIDS-affected households. This Ministry has high levels of inefficiency, a limited capacity to provide services, is overstaffed with clerical and semi-skilled workers, employs personnel who have low commitment and motivation, human resources management and communication are poor, and the capacity of management is limited (Pharoah, 2005). Interviews with managers also indicate demand for service is increasing (Pharoah, 2005). These organizational problems combined with AIDS deaths among organizational personnel are resulting in a reduced ability to provide timely and effective services. Some staff are also transferring from rural to urban areas to obtain better medical care (Pharoah, 2005). The director of livestock services indicates veterinary staff
were unable to respond to requests for assistance (Pharoah, 2005). The organization also lends out seeds, fertilizers, and machinery to farmers, but death of both organizational personnel and farmers, combined with a drought, resulted in these goods not being returned to the organization (Pharoah, 2005).

**Botswana Local Councils**

Botswana Local Councils (LCs) provide government services such as sanitation and social services at the local level (Pharoah, 2005). Pharoah (2005) indicates Local Council personnel are not well-trained and these organizations have limited budgets, which combine to result in a reduced ability to provide services. Local Council managers also indicate low morale, low pay, lack of training opportunities, and a loss of staff to other organizations which are also affecting service delivery. Generally, LCs employ young, lower skilled, and less educated workers (Pharoah, 2005). Interviews with managers indicate an increase in demand due to the provision of HIV/AIDS-related services and a reduced ability to provide services (Pharoah, 2005). Some managers indicate reduced professionalism. For example, employees make appointments with clients and then fail to attend because they are sick (Pharoah, 2005). Pharoah (2005) indicates that 66% of workers interviewed reported they had done extra work because of illness and absenteeism among coworkers.

**Municipal Services in Ethekwini Kwa-Zulu Natal, SA**

Manning (2003) studied the impact of HIV/AIDS on four municipal departments in Ethekwini, South Africa, including Fire and Emergency Medical Services, Electrical, Cemeteries and Crematoria, and Housing Departments. Ethekwini is located in Kwa-Zulu Natal, an area of South Africa with some of the highest prevalence levels in the country.
The Cemetery and Crematoria Department relies upon low skilled but trained labor, and must provide a timely service (Manning, 2003). This organization is experiencing an increased demand due to HIV/AIDS deaths and a reduced ability to provide timely services due to mortality and absenteeism among workers. The Housing Department is incurring fewer indirect HIV/AIDS impacts because they utilize subcontractors, but facing problems due to the death of clients and changes in the nature of demand for their services (Manning, 2003).

The Department of Fire and Emergency Services has a workforce primarily of young males and involves highly physically demanding labor (Manning, 2003). When employees in this department are ill, it is difficult for them to perform their duties; therefore, they are often placed on light duty (Manning, 2003). When employees are placed on light duty this strains the organizations, as there are only a limited number of light duty positions in the organization and these require special training (Manning, 2003). The organization can also easily recruit workers, but it requires years of training for an individual to be fully productive (Manning, 2003). The organization has 505 vacant positions, and a total of 1039 personnel (Manning, 2003: 20). Attrition, combined with a limited ability to train new people, is resulting in too few fully trained and qualified personnel. Because the organization must provide services, sickness places a huge strain on other personnel requiring them to work extra hours (Manning, 2003).

The Zambian Judiciary

Feeley, et al., (2006) identified the impact of HIV/AIDS on service delivery in the Zambian Judiciary. Illness and death were found to result in the adjournment and dismissal of cases (Feeley, et al., 2006). In a sample of cases, 8% were found to have an
illness-related adjournment and 2.2% were adjourned due to death (Feeley, et al., 2006: 11). Attendance at funerals also resulted in an additional 2.4% of cases being adjourned (Feeley, et al., 2006: 11). Cases which were adjourned due to illness typically took twice as long as those cases which were not (Feeley, et al., 2006). If the adjournment was due to death, the case took three times as long to process (Feeley, et al., 2006). Also, a case that was adjourned due to illness was three times more likely to be dismissed (Feeley, et al., 2006). The State Dept. (2008I) indicates the judiciary is inefficient: HIV/AIDS is only worsening the limited ability of this organization to provide services.

The Zambian Wildlife Authority

The Zambian Wildlife Authority (ZAWA) has the duty to patrol Zambia’s national parks and game management areas (Rosen, et al., 2006). ZAWA personnel are located throughout the country and they live and work in camps (Rosen, et al., 2006). Rosen, et al., (2006) found that AIDS related-deaths increased the workload of both supervisors and administrators.

Supervisors spent four days dealing with the death of each individual, including helping the sick person, arranging transport, adjusting the patrol schedule, and processing paperwork (Rosen, et al., 2006: 4). Regional administrators spent four days dealing with each employee death, including spending time on visiting the employee, interacting with the family and arranging the funeral (Rosen, et al., 2006). Each funeral resulted in further absenteeism for the organization, as they were attended by an average of thirty employees (Rosen, et al., 2006: 8). Rosen, et al., (2006) also determined that each death incurred four different costs. These costs include $441 for each sick employee in transport and care, $1,557 for each funeral, $1,100 in recruitment costs to replace the
worker, and $7,869 to pay death benefits to the family of the deceased (Rosen, et al., 2006: 9). It took ZAWA two and a half months to find a replacement worker and ten weeks to train this replacement (Rosen, et al., 2006: 8). New employees were only 75% productive their first three months of work because they were learning their jobs (Rosen, et al., 2006: 8). In total, HIV/AIDS resulted in a 6.2% reduction in the ability of ZAWA to provide services overall and increased labor costs by 9.7% (Rosen, et al., 2006: 1).

**Civil Service Organizations in Malawi**

The UNDP (2000) studied the impact of HIV/AIDS on the Ministry of Agriculture and the Ministry of Water Development in Malawi. These two organizations face considerable obstacles. It takes both organizations six to twelve months to fill vacancies because hiring is done by another civil service entity (UNDP, 2000: 30). There are also ineffective promotion mechanisms and poor human resources planning (UNDP, 2000).

The Agricultural Ministry provides services throughout the country, providing guidance in the production and marketing of crops and livestock (UNDP, 2000). Vacancy rates are high in the organization, ranging from 14-41% in different positions (UNDP, 2000: 58). To address these problems, staff are given duties for which they are not trained, retired personnel are being redeployed, staff from outside the country are being used, and volunteers are contributing their services (UNDP, 2000). There is evidence of an increase in workload (UNPD, 2000). Interviews indicate that morale is low because staff are being asked to work more, but not being paid for it. There is also lower productivity due to funeral attendance (UNDP, 2000). These problems combined
are resulting in reduced quality of service and delayed program implementation (UNDP, 2000).

The Ministry of Water Development has the goal to ensure that all Malawians have access to water. The Ministry’s job is to identify, develop, and conserve water resources (UNDP, 2000). Much of the work of the organizations is done out of regional and district offices (UNDP, 2000). The organization also pays low wages and limited career prospects, making it difficult to retain personnel (UNDP, 2000). The organization is experiencing high levels of mortality and AIDS-related death (UNDP, 2000). There are also high levels of vacancies in the organization overall (UNDP, 2000). The Ministry was dealing with this lack of personnel by increasing the workload of personnel, contracting out duties, and using consultants (UNDP, 2000). The UNDP (2000) indicates reduced service provision, including water pipes breaking in rural areas and being left unfixed, water systems not being redesigned due to a lack of engineers, and reduced collection of hydrological data.

**Learning from Civil Service Organizations**

Overall, this literature on civil service organizations indicates that police organizations are likely to be substantially impacted by HIV/AIDS. This face value review of the literature helps us understand potential HIV/AIDS impacts along a number of different avenues. First, it indicates that understanding the impact of HIV/AIDS is likely to be complicated by internal organizational problems. Low pay, poor training, lack of advancement, and poor human resources planning are all likely to exacerbate operational problems and the provision of services. It also makes it difficult to disentangle the impact of HIV/AIDS from these other organizational problems. Evidence
indicates that many of the police organizations in the sample are facing similar organizational stressors as civil service organizations (State Dept., 2008A-J; CHRI, 2006; Mattes, 2006; Pharoah, 2005; Amnesty Intl., 2002; UNDP, 2000; Raleigh, et al., 1998; Mwalimu, 1991). Likely, service delivery and organizational problem occurring within police organizations are going to be exacerbated by HIV/AIDS.

This literature indicates that organizations are likely to be facing both environmental and indirect HIV/AIDS impacts. Many of the comparison organizations are incurring high levels of direct HIV/AIDS impacts, which are then indirectly impacting operations and service provision. Some of these organizations are also facing increased demand for services due to HIV/AIDS (Pharoah, 2005; Manning, 2003). This literature supports the idea that organizations are going to be affected by levels of infection among personnel and by HIV/AIDS exacerbated social problems in the environment of the organization. These indirect and environmental impacts may combine, even further reducing the ability an organization to provide services.

The ability of the police to provide adequate and professional services is likely to be reduced by HIV/AIDS. They may be experiencing a reduced ability to patrol or may be failing to live up to their obligations to reduce crime. They may also experience a delay in their ability to investigate crimes due to illness and mortality among police personnel. Greater numbers of police personnel may be assigned to light duty work. The ability of the police to provide services may also be further strained if the police are experiencing an increase in the demand for their services.

The research on ZAWA by Rosen, et al. (2006) indicates mortality is likely to result in considerable costs to police organizations. The workload of supervisors and
police administrators will increase to deal with the death of police personnel. The police are also likely to incur sizeable costs for each death, including the provision of healthcare, paying for the funeral, hiring and training a replacement, and paying a death benefit to the family of the deceased. The finances of many of these police organizations are already strained (State Dept., 2008A-J). Any further loss of resources is likely to exacerbate problems within police organizations.

**HIV/AIDS Impacts on Healthcare**

Healthcare organizations are facing a unique and more complicated working environment due to HIV/AIDS. The impact of HIV/AIDS on the healthcare system clearly depicts the environmental HIV/AIDS impacts on an organization. Of the four comparison organizations, healthcare organizations are likely experiencing the greatest impact from HIV/AIDS. They are incurring the direct impact of HIV/AIDS on absenteeism, mortality, and productivity. They are dealing with the indirect HIV/AIDS impacts on the operations of the organizations from personnel who are infected with HIV. Thirdly, they must deal with increased demand for their services due to HIV/AIDS. Increased demand for services is being experienced by healthcare organizations throughout the sample (Rode 2005; Shisana, et al., 2004; Feeley, et al., 2004; Harries, et al., 2004; Cheluget, et al., 2003; Dieleman, et al., 2003; UNDP, 2000). This increased demand combined with impacts on service delivery and operations from infected personnel are straining these healthcare organizations.

This section will describe the impact of HIV/AIDS on healthcare in terms of demand for services and the operational impact that HIV/AIDS and increased demand are
having on these organizations in terms of eight areas. These areas include: organizational
problems, increased demand for services, exposure to opportunistic infections, burnout
and stress among healthcare workers, increased financial costs, problems associated with
the provision of housing, public reaction to reduced service delivery, and the overall
reaction of healthcare to this crisis. Where relevant, these impacts will be discussed in
the terms of the police. The last part of this section will describe the relevance of all
these impacts to the police.

Organizational Problems

Healthcare organizations are strained by a large number of problems. Healthcare
workers in many of the comparison organizations have poor working conditions and low
pay (MSF, 2007; CRHCS, 2004; Raviola, et al., 2002). This is resulting in high
vacancies rates in Kenya (Cheluget, et al., 2004), Malawi (MSF, 2007; CRHCS, 2004),
and Lesotho (MSF, 2007). South Africa and Botswana appear to offer better working
conditions and pay, and they also have lower vacancies than other organizations in the
sample (Shisana, et al., 2004; Abt Assoc., 2000).

There is substantial competition for trained healthcare workers throughout the
sample. Many public organizations are losing personnel to better opportunities in
domestic private hospitals or non-governmental organizations (MSF, 2007; Rode, 2005;
Feeley, et al., 2004). They are also losing workers to healthcare systems in other
countries (MSF, 2007). Doctors in Lesotho are getting jobs in South Africa for much
higher pay, leaving a lack of qualified personnel in Lesotho (MSF, 2007). Even in South
Africa, nurses are being hired to work in more developed countries (MSF, 2007).
Trained healthcare workers are a valuable commodity and there is a high demand for their services throughout sub-Saharan Africa and the rest of the world.

**Increased Demand for Services and Workload**

HIV/AIDS is causing a large increase in the demand for healthcare services. Healthcare workers and admission data indicate an increase in workload in Malawi (MSF, 2007; Rode, 2005), South Africa (MSF, 2007; Shisana, et al., 2004), and Lesotho (MSF, 2007). In South Africa, 75% of workers reported an increase in workload in the past year (Shisana, et al., 2004: 71). Also, 37.4% of South African healthcare workers indicate they have worked longer than their official hours (Shisana, et al., 2004: 72). Admissions data in South Africa indicate an increase in HIV/AIDS and tuberculosis admissions (Shisana, et al., 2004). In one South African Hospital, admission cases doubled in two years (MSF, 2007:3). The Kenyan healthcare system was facing a 22.6% decrease in the number of healthcare workers and an increase in the number of HIV infections (CRHCS, 2004:1).

Healthcare organizations are experiencing a crowding out of patients not experiencing HIV/AIDS-related illnesses (Shisana, et al., 2004; Raviola, et al., 2002; Abt Assoc., 2000). In Botswana, 55% of healthcare patient were infected with HIV/AIDS (Abt Assoc., 2000: 26). In South Africa between 26.3% and 37.8% of patients were infected with HIV (Shisana, et al., 2004: 39). In Malawi, 70% of the health system’s capacity is taken up by HIV/AIDS patients (Rode, 2005: 1). HIV/AIDS requires more effort and resources to treat than other diseases. Additionally, HIV/AIDS patients are expensive to treat because drug costs are typically high (Abt Assoc., 2000). Patients infected with HIV and have AIDS often require longer hospital stays, are typically more
difficult to treat, and are more likely to return for additional treatment after discharge (Shisana, et al., 2004; Cheluget, et al., 2003; Abt Assoc., 2000).

Work in the Context of HIV

Work in the healthcare system creates an opportunity for healthcare workers to be exposed to HIV/AIDS or opportunistic infections while treating their patients. Healthcare workers may also expose their patients to infection. The extent of transmission of HIV between patients and healthcare workers is unknown (Shisana, et al., 2004). Based on inadequate implementation of protections and a lack of reliable infection control, Shisana et, al. (2004) indicates this is a risk in South Africa. This same sentiment is echoed in Uganda (Dieleman, et al., 2004), and Kenya (CRHCS, 2004; Raviola, et al., 2002).

There was also a belief that patients infected with HIV were treated differently than non-HIV/AIDS patients. Healthcare workers were reluctant to provide proper care due to fear of infection (Shisana, et al., 2004). They talked differently when discussing HIV/AIDS patients (Shisana, et al., 2004). South African healthcare workers also rejected, condemned, and isolated people with HIV/AIDS and their friends or family members (Shisana, et al., 2004). Hospital staff in Uganda indicated other healthcare workers did not conduct tasks well, were cautious to avoid injuries, and avoided tasks that involved touching patients due to fear of infection (Dieleman, et al., 2007).

In South Africa, healthcare workers indicate efforts to protect themselves from transmission are inhibiting their ability to perform their duties. It was taking more time to treat patients because they have to wear protective clothing (Shisana, et al., 2004).
Their working speed was slowed because gloves were unavailable or were the incorrect size (Shisana, et al., 2004).

Knowledge of measures to prevent the transmission of HIV is low among healthcare personnel (UNAIDS, 2008; Dieleman, et al., 2007; Shisana, et al., 2004; Ravioloa, 2002) and the general population (UNAIDS, 2007). Shisana, et al., (2004) found that the South African Healthcare system does not adequately provide measures to prevent the transmission of HIV from patients to Healthcare workers. In South Africa, HIV is also not a notifiable disease, which means that healthcare workers do not generally know the status of their patients and their patients do not have to tell them that they are infected (Shisana, et al., 2004). Healthcare workers believed they were at risk of infection in Malawi (CRHCS, 2004), Uganda (Dieleman, et al., 2007), and in Kenya (Cheluget, et al., 2003; Raviola et al, 2002).

Personnel infected with HIV are at also at increased risk of getting infected with other diseases (Essig, 2007). There has been a sizeable increase in the number of persons diagnosed with Tuberculosis (TB) in sub-Saharan Africa (Shisna, et al., 2004; Harries, et al., 2002; Abt Assoc., 2000; Wilkinson and Gilks, 1998). Individuals who are infected with HIV are more likely to contract TB due to their weakened immune systems (UNAIDS, 2008). Healthcare workers in Botswana, who have a high likelihood of being exposed to TB and other opportunistic infections, had a 500% increase in TB between 1995 and 2000 (Abt., 2000: 75). An increase in TB was also found among healthcare workers in South Africa (Wilkinson and Gilks, 1998) and in Malawi (Harries, et al., 2002).
The police may be at higher risk of exposure to HIV in their line of work than the general population. Data on fear of infection among the police is limited. In the Malawian Police Services (MPS), 55% of respondents indicated they felt characteristics of their job placed them at increased risk of infection (Pharoah, 2005: 90). It was not possible to identify the extent that police personnel in other police organizations feared infection, but this would likely be high due to high levels of stigma generally, and low levels of understanding about the transmission and prevention of HIV (State Dept., 2008G; UNAIDS, 2008; Kalichman and Simbaya, 2004). Police do not generally have the resources they require, and the provision of materials to prevent exposure is likely limited. Police might purposefully avoid or outright deny services to people that they believe are infected with HIV, such as prostitutes, drug users, or orphans. The police might not attempt to assist a person who is injured and bleeding. The police often have the discretion on whether or not to provide services and they have only limited accountability for their actions. In the MPS, 90% of respondents indicated that HIV/AIDS was negatively affecting the performance of the police (Pharoah, 2005). There is a high likelihood that fear of infection will reduce service delivery by the police.

*Burnout and Stress among Healthcare Workers*

Burnout and stress among healthcare workers was common throughout the sample. In Botswana and South Africa, hospital staff reported burnout due to high patient loads, the intensive care required to treat HIV/AIDS patients, and the declining ability to provide quality care overall (Shisana, et al., 2004; Abt Assoc., 2000). South African healthcare workers were also providing emotional support and guidance to the families of people who have died, often times when they were not getting paid for it
Healthcare workers are also dealing with the emotional burden of younger and younger people dying of AIDS, which they cannot help (Dieleman, et al., 2007; Shisana, et al., 2004). In Kenya, staff reported serious psychological stressors due to the combination of poor conditions, low pay, increased workload, and fear of HIV/AIDS infection (Raviola, et al., 2002). CRCHS (2004) indicates that fear of infection is increasing absenteeism.

**Increased Financial Costs**

HIV/AIDS is creating substantial financial costs for healthcare organizations. Increases in absenteeism, combined with the necessity of providing medical care, caused increased workload and subsequent overtime costs in the Mulanje Mission Hospital (Rode, 2005). Overtime costs increased from $8,395 in 2000 to $34,390 in 2003, a 309.6% increase (Rode, 2005: 7). This same hospital also provides short-term loans to its personnel. Mulanje personnel are experiencing an increase in relatives who are sick and dying, and some of these workers are paying for relatives’ funerals (Rode, 2005). The amount of money for staff loans increased from $1,236 per year to $5,835 per year in the Mulanje Mission Hospital, an increase of 372% (Rode, 2005: 8).

**Provision of Housing**

The Zambian Healthcare system appears to be a heavily bureaucratized and financially inefficient organization (Feeley, et al., 2004). When a healthcare worker dies, the family continues to live in the employer-provided housing. The family receives a relocation allowance from the government, which is not budgeted for within the organization (Feeley, et al., 2004). These families either will not or cannot leave the premises until they receive this money (Feeley, et al., 2004). A replacement person
cannot be hired until the family vacates the dwelling (Feeley, et al., 2004). Rode et al. (2005) found that the Mulanje Mission Hospital in Malawi could not fill important or strategic positions unless housing was offered, which was resulting in further hiring costs (Rode, 2005). This hospital was a private entity, which meant it had a greater ability to obtain resources, but this problem is likely to be exacerbated in public organizations.

The likelihood of this impact occurring in the police is dependent upon a number of factors. First, whether or not there is a housing shortage. Second, whether or not police organizations provide relocation allowances. Third, whether or not the organization has the funds available to provide these benefits when needed. Fourth, whether or not the organization cannot hire employees when housing is not available. There are indicators of all of these, except the last, in the police.

There are often shortages of available housing in police organizations (State Dept., 2008I; CHRS, 2006; Brogden, 2004; Raleigh, et al., 1998), and it may be difficult to fill an open vacancy within an organization until housing is available. Upon the death of a police officer, his or her family is likely still residing in the housing that was provided to them. Police benefits are generally high (CHRI, 2005; Pharoah, 2005; UN, 2004), so it is likely that the family is provided a death benefit. The family may not be willing or able to move until these resources are provided. Police organizations have limited financial resources; there may be a delay in granting this allowance. This would keep the family from moving and the vacancy from being filled within the organization. These combined strains may increase the financial burden on the police, lead to housing shortages, and an inability to fill vacancies.
Reaction of Healthcare to HIV/AIDS

Hospitals have tried to address this increase in demand for service by increasing the number of beds in their facilities and reducing the length of time that people are treated as inpatients (Shisana, et al., 2004; Abt Assoc., 2000). In Botswana, staff were rotated between the different wards so they are not always treating HIV/AIDS patients (Abt Assoc., 2000). Botswana Hospitals have tried to reduce the number of referrals they make to other facilities and take the work upon themselves (Abt Assoc., 2000). In Kenya and Malawi, on the other hand, staff are referring cases to clinics and peripheral facilities and having non-healthcare workers provide care to reduce their own workload (Cheluget, et al., 2003; UNDP, 2000). In South Africa, nurses in rural areas are providing services which are typically done by doctors (Shisana, et al., 2004).

Medecins Sans Frontieres (2007) indicates they have purposefully modified the ways tasks are carried out in certain rural healthcare facilities in Malawi, South Africa, and Lesotho. MSF (2007) is purposefully moving care to primary clinics from hospitals. They are having doctors only handle complicated cases and overseeing clinics via mobile phone, while they are having nurses provide diagnoses and treatment of opportunistic infections independently of doctors (MSF, 2007). MSF (2007) is also having lay persons give testing, counseling, and general clinical assistance.

Public Reaction to Reduced Service Delivery

The South African healthcare system is experiencing a substantial increase and change in demand, as well as high levels of competition for personnel, which is resulting in decreased service delivery. Specifically, Shisana et al. (2004) found that delays in providing services to patients were resulting in patients then taking these frustrations out
on the healthcare workers, although Shisana et al. (2004) did not document the extent
that this was occurring or the ways in which patients would do this.

The police in sub-Saharan Africa are not able to provide adequate service delivery
(CHRI, 2006; Brogden 2004; Raleigh, et al., 1998). The multitude of factors straining
service delivery by the police is sizeable, and HIV/AIDS is only likely to exacerbate this
problem. Unlike in the healthcare system, it is not likely for the community to take their
animosity out on the police. The public has a number of responses when the police are
unable to address problems of crime and insecurity. These responses include mob
violence, greater reliance upon private security, and the development and use of other
mechanisms with law enforcement functions (Baker, 2005). The police are likely to not
pay a penalty if the community resorts to these alternative measures outside of mob
violence. But, the reductions in service delivery due to HIV/AIDS are likely to increase
citizen use of alternative mechanisms for dealing with crime and insecurity.

Learning from Healthcare Organizations

Overall, it is clear that the healthcare organizations are experiencing considerable
impacts due to HIV/AIDS. Some of these impacts are of potential relevance to the
police. The police may be at increased risk of becoming infected with HIV or
opportunistic infections during the course of their duties, particularly because of the
likely limitations in available protection methods. The police may also be experiencing
problems with the housing that they provide to their personnel. The public may also react
to reduced service delivery by the police.

It is also clear that the healthcare system is facing a number of serious stressors
which the police do not have to face. These organizations are directly responsible for
dealing with the increased demand for services from HIV and AIDS prevalence in the population. The work of healthcare personnel also places them in direct contact with people who are likely to be infected with HIV. These combined factors might limit some of the relevance of the findings on these organizations to the police.

It is clear from the healthcare system that the demand for services and competition for personnel is an important element of the impact that HIV/AIDS will have on an organization. Demand for service and competition are part of an organization’s environment. Competition for trained workers might reduce the number of personnel available to provide services. This may be of relevance to the police. An increased demand for services has the potential of incurring further costs for police organizations. Police personnel may be working more hours, and considering the financial problems of many organizations, they may be doing this without pay. An increase in demand for services, combined with HIV/AIDS-related absenteeism, productivity losses, and mortality might create a substantial strain upon a police organization.

HIV/AIDS Impacts on the Educational Organizations

The educational system is facing a considerable impact due to HIV/AIDS. Education systems are dealing with direct and indirect HIV/AIDS impacts. HIV/AIDS is also affecting the demand for education. This section will discuss the organizational difficulties faced by the education systems, changes in supply and demand for education, financial costs, the migration of educational personnel, and the response of the educational system to HIV/AIDS-related absenteeism, productivity losses, and mortality.
The last part of this section will discuss the combined relevance of this information to the police.

*Lack of Resources for Educational Organizations*

It must also be noted that educational systems are often underfunded and not able to adequately provide services. The Zambian education system is generally underfunded (Grassley, et al., 2002). Rural Zambian schools lack amenities and proper housing (Kamwanga, et al., 2003). The vacancy rate among teachers in Malawian primary schools was 52% and 77% in secondary schools in 2000 (UNDP, 2000: 41). Malawi personnel have low morale and low productivity, in part due to unpaid increases in workload (UNDP, 2000). Kadzamira, et al., (2001) indicates conditions in Malawian schools have deteriorated since 1994. Even in Botswana, which generally is seen to have an effective education system, there is a lack of experienced personnel, a lack of administrative structure and resources, inadequate communication, and a centralized organizational culture in which decisions are made by only a few (Kingham, et al., 2002).

*Supply and Demand for Education*

All else being equal, AIDS mortality is likely to result in a reduced number of teachers to provide an education. AIDS mortality and other stressors are also likely to reduce the number of children to be educated. Students are also dropping out of school to make up for the lost income of sick family members (JTK, 1999). If the reduced supply of teachers is greater than the reduction in demand for education, than an education system will experience greater strain because they have more work for the available teachers. If the demand for education decreases more than the supply of teachers, than the organization will incur less strain because the organization has less work to do.
Projections in Swaziland, Zambia, Kenya, Zimbabwe, and Uganda suggest that demand for education will be reduced to a greater extent than the ability to supply that education, meaning that HIV/AIDS-related attrition will not strain these countries to a great extent (Act Africa, 2000: JTK, 1999), although these projections are dated, and anecdotal evidence indicates a sizeable increase in workload (Kamwanga, et al., 2003; Kadzamira, et al., 2001). But overall, it is difficult to tell the extent that supply and demand in the education system is changing the supply and demand for education overall.

Like healthcare, educators are facing a changed demand because it has to provide services to the increased number of orphans in nearly every country in the sample (State Dept., 2008A-J). Kadzamira, et al., (2002: 29) indicates that 30-35% of children in sub-Saharan Africa are likely to be orphans. Orphans have difficulty attending school because they lack material, financial, and moral support (Kadzamira, et al., 2001). Kinghorn, et al., (2002) indicates schools will be faced with students with high repetition rates and overage students. Orphans will make the provision of education more complicated (Kinghorn, et al., 2001).

Even if educational organizations are not experiencing an increased demand for services, they may have to provide more complicated services due to the orphan population. Although this is not an increased in demand it does change the dynamics of the demand for education.

Financial Costs

Evidence indicates an increase in financial costs for AIDS mortality. In Zambia, provincial education officers indicate mortality is causing them to exceed their budgetary allocations (Kamwanga, et al., 2003). In Malawi, funeral costs were diverting funds
away from school supervision, acquisition of teaching materials, and salaries (Kadzamira, et al., 2001). In Zambia, teachers were also found to continue to draw pay even when they were no longer working (Kamwanga, et al., 2003). In Botswana, the benefits provided as compensation kept teachers working even when they could no longer be productive (Kinghorn, et al., 2002). Teachers would also continue to be paid when they had used up all of their allotted sick benefits (Kinghorn, et al., 2002).

*Migration of Personnel*

Many of the rural schools faced considerable staff shortages (Kamwanga, et al., 2003; Kinghorn, et al., 2001), this is being exacerbated by HIV/AIDS. In Zambia and Botswana, there was also evidence of teachers moving from rural to urban schools to obtain better medical care (Kamwanga, et al., 2003; Kinghorn, et al., 2001).

*Reaction to HIV/AIDS-related Problems*

The educational system has been able to absorb HIV/AIDS-related attrition in a number of ways. The Zambian education system has attempted to accelerate teacher training by doubling the number of teachers being given training and reducing the training course from two years to one year of coursework and one year of on-the-job training (Grassly, et al., 2002). This research indicates schools absorb teacher absenteeism in a number of ways. Kadzamira, et al. (2001) indicates that staff and administrators do not see absenteeism as limiting their ability to provide services. These schools combine classes, have administrators teach classes, transfer pupils to other schools, and schools recruit extra teachers to hedge against death (Kamwanga, et al., 2003). In Malawi and Botswana, absenteeism lead to cancellation of classes, combination of classes, assignment of classes to another teacher, or using less qualified
teachers to teach (Kadzamira, et al., 2001; Kinghorn et al., 2001; UNDP, 2000). Pupils to staff ratios are often high in these institutions. In Malawian primary schools, there were 66 students for one teacher, in secondary schools was 50 per teacher (UNDP, 2000: 42). Combining classes can result in sizeable classes and a decreased opportunity for these students to learn.

Relevance to the Police

Overall, the literature on the education system provides substantial information of relevance to the police. First, the supply of police personnel and the demand for police services is likely to impact the extent that an organization will be affected by HIV/AIDS. The demand for service is part of the environment in which an organization operates; the supply of services is internal to the organization. The impact of HIV/AIDS on an organization’s ability to deliver services is dependent upon the environment and the indirect impact of HIV/AIDS.

Second, instead of being asked to provide more services, an organization may also be asked to provide a more complicated service than what they had previously been providing. Police organizations may be asked to provide a different or more complicated service due to, or in the face of, HIV/AIDS. This may also place a strain on an organization, even if the amount of services demanded of them is not increasing.

From this literature on the educational system, it is clear that the nature of the task or service that an organization provides will affect the way it is impacted by HIV/AIDS. Police supply a special kind of service, different than provided by many organizations. It may be that the type of service police organizations provide makes it more or less likely to be affected by HIV/AIDS-related attrition, absenteeism, and mortality.
From all the comparison organizations, there was an indication that AIDS mortality was resulting in increased absenteeism due to workers attending funerals. Organizational personnel are experiencing the deaths of their families, friends, and coworkers. Personnel are likely to attend the funerals of those they cared for or are acquainted with. Each individual who attends a funeral will be absent from work, and many personnel attending funerals will result in higher levels of absenteeism for the organization overall. There was a general finding across the comparison organizations that funeral attendance was causing higher levels of absenteeism (Feeley, et al., 2006; Rosen, et al., 2006; Rode, 2005; Pharoah, 2005; CRHCS, 2004; Manning, 2003; Kadzamira, 2001; UNDP, 2000).

The UNDP found that an employee spends between 1 and 10 days per month attending funerals (UNDP, 2000). They also found that when senior staff members died, sometimes an entire organization would close and all staff would attend the funeral (UNDP, 2000). The UNDP (2000) estimate that each funeral attended will result in two days of absence for each individual attending a funeral. Funeral attendance was identified as one of the more common reasons for absences among employees in the Malawian educational system (Kadzamira, et al., 2001). In rural areas with smaller and more close-knit social networks, more people are likely to attend funerals, resulting in even higher absenteeism (Kadzamira, et al., 2001; UNDP, 2000). Overall, funeral attendance appears to be a serious driver of absenteeism in organizations.
Absenteeism driven by funeral attendance is likely to be high for police organizations. In Malawi, the UNDP (2000) indicates productivity losses due to MPS personnel taking time off work to attend funerals. The police are often socially isolated and have increased dependence upon one another (Wasikhongo, 1976). The funeral of a fellow policeman is likely to be attended by large numbers of police personnel, increasing the levels of absenteeism throughout the organization. In smaller police station houses and police posts, they may be more likely to attend funerals of people in the community.

More generally, a wide variety of impacts that are of potential relevance to the police have been identified from this literature on the four comparison organizations. From military organizations there are indications that HIV/AIDS is causing a reduced ability to meet organizational goals, reduced professionalism, and changing recruitment and promotion. From civil service organizations, it can be learned that organizational problems are also reducing service provision. HIV/AIDS is likely to reduce the ability to provide services, and financial costs will be considerable. From healthcare organizations, it can be learned that the demand for service and competition for personnel are an important factor in the impact of HIV/AIDS and that certain persons in organizations may be at increased risk of exposure to HIV. From the literature on education, it is possible to identify the importance of changes in supply and demand for services because of HIV/AIDS and that the nature of the service provided by an organization will affect the way an organization is impacted by HIV/AIDS.

It is also clear that there are similarities and differences in way these organizations are being impacted by HIV/AIDS. Both civil service and educational organizations are experiencing a migration of labor, but this does not appear to be
happening in the healthcare system. There is evidence of increased demand in some
organizations, but not in others. Some organizations appear to be better able to deal with
HIV/AIDS-related attrition than others.
Chapter 7: Exploring the Plausible Impact of HIV/AIDS on National Police Organizations

Chapters 5 and 6 reviewed the literature on each comparison organization and described how this information was of potential relevance to the police. Those two chapters explored the literature at the organizational level. There are two problems with this level of study. First, studying this literature at the organizational level does not indicate what can be learned that is relevant to specific police organizations. Second, these comparison organizations are providing services in ten different countries with varying levels of HIV prevalence and treatment availability. This will influence the level of direct, indirect, and environmental impacts on an organization.

Due to these limitations, this project will review the literature at the country level to identify what, if anything, can be learned of relevance to specific police organizations from the comparison organizations in that same country. For example, this chapter will identify what can be learned of relevance to the Malawian Police Services (MPS) from the literature describing the impact of HIV/AIDS on the Malawian defense forces, civil service, healthcare, and education systems. Trying to learn from the comparison organizations at the country level assumes similarities in these organizations which include the environment in which these organizations operate, the severity of their HIV epidemic, the level of treatment in the population, and cultural practices which could contribute to the spread of HIV. These organizations and the police will also face similar legal, social, and political constraints, potentially making the literature on these organizations in that country relevant to the police.

There is variation in the quality and quantity of available information on the different comparison organizations in the sample countries, which limits the capacity to
identify information of relevance to some police organizations in the sample. The literature on the comparison organizations in Zimbabwe, Tanzania, and Swaziland are limited. There was a moderate amount of information available on the comparison organizations in Uganda, Lesotho, Kenya, and Botswana. There was a significant amount of available information on these same organizations in Zambia, South Africa, and Malawi.

This chapter will describe what can be learned about the impact of HIV/AIDS on the police from the literature on the comparison organizations at the country level. This chapter will be divided into 11 sections. The first section will describe the levels of prevalence, the HIV/AIDS burden, and AIDS mortality at the national level, all of which are potential indicators of the level of direct HIV/AIDS impacts likely to be incurred on a particular organization. The next ten sections will describe what can be learned of relevance to the national police organization in each country for the available literature on the comparison organizations. Much of the literature of relevance to this chapter was already explored in Chapters 5 and 6 and it would be of little use to reiterate these findings here. Instead, this chapter will explore how each police organization may be directly, indirectly, or environmentally affected by HIV/AIDS.

HIV/AIDS Prevalence and Mortality in the Sample

The ten nations in the sample are experiencing different levels of HIV prevalence and have implemented various efforts to treat the infected. Higher prevalence levels in the adult population are likely to mean higher prevalence levels among adult police personnel. The provision of Highly Active Anti-Retro Viral Treatment (HAART) can

Without treatment, as the infection of an individual progresses, he or she will become sick, his or her productivity will decrease, he or she will be absent more often, and will eventually die. Absenteeism, productivity losses, and mortality in an organization will compound with every infected person.

The adult prevalence rate in each sample country, the percent of people burdened by AIDS, and the AIDS mortality levels are described in Table 7.1 below.

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Swaziland</td>
<td>33.4</td>
<td>2.31</td>
<td>0.88</td>
</tr>
<tr>
<td>Botswana</td>
<td>24.1</td>
<td>4.56</td>
<td>2.23</td>
</tr>
<tr>
<td>Lesotho</td>
<td>23.2</td>
<td>2.73</td>
<td>1.36</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>20.1</td>
<td>2.61</td>
<td>1.46</td>
</tr>
<tr>
<td>South Africa</td>
<td>18.8</td>
<td>1.75</td>
<td>0.74</td>
</tr>
<tr>
<td>Zambia</td>
<td>17.0</td>
<td>1.57</td>
<td>0.82</td>
</tr>
<tr>
<td>Malawi</td>
<td>14.1</td>
<td>1.24</td>
<td>0.63</td>
</tr>
<tr>
<td>Uganda</td>
<td>6.7</td>
<td>0.38</td>
<td>0.31</td>
</tr>
<tr>
<td>Tanzania</td>
<td>6.5</td>
<td>0.80</td>
<td>0.42</td>
</tr>
<tr>
<td>Kenya</td>
<td>6.1</td>
<td>0.74</td>
<td>0.39</td>
</tr>
</tbody>
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* UNAIDS, 2007: 11  
*** WHO, 2005C  
**** WHO, 2005B

From Table 7.1 it is also clear that the police organizations in the sample are likely to be incurring different levels of direct HIV/AIDS impacts on absenteeism, productivity losses, and mortality.

Table 7.1 includes the percentage of the population burdened by HIV/AIDS in 2005. This represents the percentage of the population who are infected with HIV and at the stage of their infection where treatment is necessary. Persons who are in need of treatment are those infected with HIV, have a compromised immune system, and include those individuals with full-blown AIDS (WHO, 2005). These are the individuals who are likely to be incurring HIV/AIDS-related-absenteeism, productivity losses, and mortality,
but from this information it is not possible to estimate the quantity of absenteeism or productivity losses these individuals are likely to incur. Table 7.1 also describes the AIDS mortality levels in 2002. This represents the percentage of the population who were reported to have died due to AIDS in 2002.

Table 7.1 also indicates that the adult HIV prevalence is not necessarily representative of the potential burden of HIV on an organization. The national HIV prevalence level includes those individuals who are infected but still relatively healthy. For example, Swaziland has the highest prevalence rate in the sample, but does not have the highest mortality and percentage of population burdened by AIDS. This means that although a large percentage of the Swazi population are infected with HIV, the infection among the population are generally at the early stages and many are still relatively healthy. As the infection progresses, a greater percentage of the population are likely to be burdened by HIV/AIDS and AIDS mortality is likely to increase.

The HIV/AIDS burden at the national level could be an indicator of the level of HIV-related absenteeism and productivity losses in a police organization. AIDS mortality at the national level could be an indicator of AIDS mortality at the organizational level. However, these are national level indicators, and include men, women, and children of all ages while organizational personnel are going to be of specific age and gender groups. It is possible that the AIDS burden and mortality may be higher or lower among those adults who are working within these police organizations. These two national level measures will be used to create a crude estimate of the number of police personnel who are experiencing the burden of HIV/AIDS and the number of
personnel who are likely to die of AIDS. These are crude estimates because the numbers of AIDS burdened personnel and level of AIDS mortality is likely to vary over time.

Zimbabwe Republic Police

There is only limited information available about the impact of HIV/AIDS on the comparison organizations in Zimbabwe, which makes it difficult to learn anything of potential relevance to the Zimbabwe Republic Police (ZRP). Matchaba-Hove (2004) explored the impact of HIV/AIDS on the Zimbabwe Defense Forces (ZDF), but the information was not of any direct relevance to the police. The ZDF requires military pilots and personnel getting training abroad to be free from infection (Matchaba-Hove, 2004). Matchaba-Hove (2004) indicates that the ZDF has been studying the impact of this disease on the organization, but this information was unavailable.

Direct HIV/AIDS Impacts on the ZRP

The ZRP is likely to be facing high levels of HIV/AIDS-related absenteeism, productivity losses, and mortality among personnel. Based on national level indicators, the ZRP may be losing 1.5% of its personnel to AIDS every year and 2.6% of its workers may be experiencing HIV/AIDS-related absenteeism and productivity losses. Data were unavailable on the number of ZRP personnel. However, it was not possible to estimate how much absenteeism and productivity losses these HIV/AIDS burdened workers are likely to incur.

Indirect and Environmental HIV/AIDS Impacts on ZRP

It is possible that the Zimbabwe Republic Police (ZRP) are testing their recruits for HIV infection and are requiring certain personnel occupying certain positions and
training to be HIV negative. The ZRP may have more of an opportunity to ignore Constitutional anti-discrimination guidelines because they largely operate with impunity (State Dept., 2008J). The number of orphans is increasing in Zimbabwe (State Dept., 2008J), this could be causing an increased demand for police services. Independent of the information described here, it was difficult to learn anything of relevance from the comparison organizations about how HIV/AIDS may impact the ZRP.

**Tanzanian Police Services**

There was only limited available information about the impact of HIV/AIDS on the comparison organizations in Tanzania, making it difficult to learn anything of relevance to the Tanzanian Police Services (TPS). The only existing literature is Mutayoba, et al.’s (2004) national level policy review. This policy review was necessary because there was not any information or data available about the impact of HIV/AIDS on the Tanzanian Defense Forces. This lack of information makes it difficult to learn about the impact of HIV/AIDS from the comparison organizations about the TPS. The information of relevance to TPS will be explained below.

*Direct HIV/AIDS Impacts on the TPS*

Tanzania is likely experiencing lower levels of mortality and HIV/AIDS-related absenteeism and productivity losses than most of the police organizations in the sample. The TPS is likely to be experiencing mortality levels of .42% per year and 0.8% of its personnel are likely to be experiencing HIV/AIDS-related absenteeism and productivity losses. Based on the number of police, the TPS is likely to be losing 114 personnel per
year to AIDS and 218 personnel are experiencing related absenteeism and productivity losses.

*Indirect and Environmental HIV/AIDS Impacts on the TPS*

There was no information available from the comparison organizations to identify information of relevance to the TPS. Mutayoba, et al., (2004) did indicate that the security sector services (which include police, prisons, national security, defense, and intelligence) had better service than the general population. This could potentially mean the police have better access to the HIV/AIDS prevention and treatment programs. This could also mean that information on HIV/AIDS-related impacts on these organizations could be of potential relevance to the police, if any was available.

*Royal Swaziland Police Services*

There was a moderate amount of information available about the Umbufto Swaziland Defense Force (USDF) (Simelane, et al., 2004) and the educational system in Swaziland (JTK, 1999). But were only of limited value in their potential relevance to the Royal Swaziland Police Services (RSPS). The information of relevance to RSPS will be explained within the context of direct, indirect, and environmental HIV/AIDS impacts below.

*Direct HIV/AIDS Impacts on the RSPS*

Based on what is being experienced by the USDF, it is possible that there will be a great number of police personnel who are experiencing opportunistic infections and symptoms of HIV/AIDS. Swaziland has the highest prevalence rates of any county in the sample (UNAIDS, 2007). But HIV among the population does not appear to be that
advanced, the RSPS is likely losing approximately .88% of its personnel yearly due to AIDS mortality. This may translate into 69 police personnel being burdened by HIV/AIDS and 26 dying each year. As the disease progresses in the population and more become sick and in need of treatment, the AIDS burden and mortality are likely to increase among RSPS personnel. There is also other evidence of increasing levels of HIV/AIDS-related attrition in the RSPS. The RSPS lost a total of 82 staff in 2002, 56% due to death (RSPS, 2002: 2). The RSPS has also had an increasing percentage of attrition due to death and fewer personnel retiring (RSPS, 2002).

*Indirect and Environmental HIV/AIDS Impacts on the RSPS*

It is possible that the RSPS are testing recruits and denying those who are infected with HIV/AIDS from joining the police. The RSPS may also be requiring personnel occupying highly expert positions to remain free from HIV infection. Both are occurring in the military (Simelane, et al., 2004). However, personnel infected with HIV/AIDS who are in the military are allowed to continue working as long as they can and are provided treatment (Simelane, et al., 2004). It is possible the police may provide a similar level of services, but this is difficult to determine with the information that is available.

Overall, there was limited available information about the comparison organizations in Swaziland. This made it somewhat difficult to learn information of potential relevance to the RSPS. But based on their levels of prevalence and treatment in the general population, the organization is likely to be seriously impacted by HIV/AIDS
Ugandan Police Force

In Uganda, there was research available studying the impact of HIV/AIDS on the Ugandan Defense Forces (ICG, 2004) and a group of four Ugandan hospitals (Dieleman, 2007). From these two studies, there was some information of relevance to the Ugandan Police Force (UPF). The information of relevance to the UPF will be explained within the context of direct, indirect, and environmental HIV/AIDS impacts below.

Direct HIV/AIDS Impacts on the UPF

Based on HIV/AIDS prevalence and treatment, the level of direct HIV/AIDS impacts on the UPF is likely to be lower than any other national level police organization in the sample. The UPF is likely to be losing .31% of its personnel to AIDS per year and .38% of its personnel are likely to be experiencing HIV/AIDS-related absenteeism and productivity losses. Based on these data, the UPF is likely to be losing 50 police personnel per year to AIDS mortality and 61 police personnel are likely to be incurring HIV/AIDS-related absenteeism and productivity losses. More generally, ICG (2004) indicates that military personnel who were infected with HIV/AIDS created two problems. First, these soldiers tended to be lethargic and easily tired out (ICG, 2004). The same is likely to happen with the police who are infected.

Indirect and Environmental HIV/AIDS Impacts on the UPF

Based on available information and national level prevalence and treatment the UPF are likely to be indirectly affected by HIV/AIDS, but only at moderate levels. These possible direct and environmental HIV/AIDS impacts will be explored below.

Infected UPF personnel may be more prone to reckless behavior. Soldiers that lacked the proper medication tended to become irresponsible about both discipline and
their sexual practices (ICG, 2004). This is of relevance to UPF personnel who are infected with HIV, work in rural areas, need treatment, and cannot access healthcare. However, the military personnel referenced by ICG (2004) were deployed outside the country while police are typically not.

UPF officers carry assault rifles and like any police officer have a significant number of opportunities to engage in corruption. Recklessness could carry into increased human rights violations and involvement in corrupt practices by HIV-infected personnel who are not undergoing treatment.

UPF personnel, like any other person who is aware of the dangers of HIV/AIDS, will not want to interact with people that they believe are infected. Even though national HIV prevalence is low in comparison to many other sub-Saharan African countries, there are still high levels of stigma and fear. Ugandan healthcare workers were hesitant to engage in behaviors that might result in them being exposed to HIV (Dieleman, et al., 2007). They also did not believe they were adequately protected for contracting HIV during the course of their duties (Dieleman, et al., 2007). There is no reason to think that the police would not be similarly fearful about interacting with people whom they believe are infected or are injured and bleeding. UPF personnel might be hesitant to offer their service to prostitutes, orphans, drug users, or persons with any kind of sickness, denying services to a group of people who are likely to need it.

AIDS-related mortality among skilled UPF personnel may result in less qualified personnel doing more skilled work. Skilled UPF personnel may also be ask to work additional overtime which may or may not result in additional pay. Both occurred in Ugandan hospitals (Dieleman, et al., 2007). Less trained police personnel or even
recruits may be asked to complete tasks for which they were not appropriately trained. Skilled UPF personnel may be asked to work additional unpaid overtime. Dieleman, et al., (2007) found that unpaid overtime has been linked to decreased motivation. There were no indications that unpaid overtime or having unskilled workers completing more skilled tasks was causing problems in any of the hospitals studied.

HIV/AIDS may also affect senior level police personnel and result in a reduced ability to implement long-term strategies. This occurred in the Ugandan Defense Forces (ICG, 2004). AIDS mortality among senior police personnel may limit the capacity of the UPF to effectively implement broad crime reduction strategies or address complicated crime problems.

From the literature on the comparison organizations in Uganda it was possible to learn some information of relevance to the UPF. UPF personnel are likely to fear infection in the course of their duties and may avoid certain tasks to keep them from contracting HIV. Lesser trained police personnel may be asked to complete tasks they were not asked to before and skilled personnel may be asked to work unpaid overtime.

**Royal Lesotho Mounted Police**

It is clear from the information on the comparison organizations that the Royal Lesotho Mounted Police (RLMP) are likely to be seriously impacted by HIV/AIDS. The information available about the impact of HIV/AIDS on the comparison organizations was limited to Pharoah’s (2005) study of the Lesotho Ministry of Agriculture and Food Security (the Ministry) and Medecins sans Frontiers (MSF) (2007) study of the healthcare system. Lesotho is also placed in a precarious position by its proximity to the
economically healthier South Africa. Skilled and trained civil service and healthcare workers are seeking better employment in South Africa, leaving a dearth of skilled labor in Lesotho (MSF, 2007; Pharoah, 2005). Pharoah (2005) indicates serious organizational difficulties at the Ministry of Agriculture, including high levels of inefficiency, high staff turnover, and poor conditions of services which are causing significant difficulties in the abilities of this organization to provide services. These kind of organizational problems, if they exist in the RLMP, when combined with HIV/AIDS, are likely to hamper the ability of the RLMP to provide services. The information of relevance to the RLMP will be explained within the context of direct, indirect, and environmental HIV/AIDS impacts.

Direct HIV/AIDS Impacts on the RLMP

Based on HIV prevalence and the need for treatment, the RLMP are likely to be experiencing high levels of HIV/AIDS-related absenteeism, productivity losses, and mortality. The direct impact of HIV/AIDS on the RLMP is likely to be higher than any other organization in the sample except for the Botswana Police Services. The RLMP is likely to be losing 1.36% of its personnel each year and have 2.73% of its personnel experiencing HIV/AIDS-related absenteeism and productivity losses. The RLMP is likely to be losing 48 personnel per year to AIDS mortality and an additional 96 personnel are likely to be burdened by HIV/AIDS and incurring increased absenteeism and productivity losses. HIV/AIDS-related absenteeism, productivity losses, and mortality are likely to vary among different cadres of personnel. The Ministry of Agriculture had its highest levels of attrition among professional personnel, approximately 47% of professional staff died over a five year period (Pharoah, 2005: 71).
More skilled and senior level RLMP personnel may be experiencing significantly higher levels of absenteeism, productivity losses, and mortality.

*Indirect and Environmental HIV/AIDS Impacts on the RLMP*

Based on the literature from the comparison organizations, the indirect impact of HIV/AIDS on the RLMP is likely to be significant. The organization is likely to have a reduced capacity to provide services due to reductions in the number of available staff. RLMP personnel operating in rural areas are likely to transfer to urban areas in search of better medical care. Vacancies among skilled personnel, in part due to HIV/AIDS-related attrition, are likely to result in less skilled personnel performing tasks for which they were not trained.

It was possible to learn some information of from the comparison organizations in Lesotho of relevance to the RLMP. The organization is likely to be experiencing high levels of HIV/AIDS-related direct impacts. HIV/AIDS-related absenteeism, mortality, and productivity losses, combined with a organizational problems, are likely to result in a reduced ability to provide services by the RLMP.

*Kenya Police Services*

The information available on the impact of HIV/AIDS on the comparison organizations in Kenya was limited to the healthcare system (CRHCS, 2004; Cheluget, et al., 2003; Raviola, et al., 2002). There was a study available on the impact of HIV/AIDS on the education system (Akunga, et al., 2000), but this information was not of any relevance to this project. The available information was only of limited relevance to the police. As with other police organizations in the sample, the Kenyan Police Services
(KPS) is a stressed organization with high vacancies, limited pay, and a large demand for services, operating in an environment made only more difficult by HIV/AIDS (State Dept., 2008C). HIV/AIDS is likely to create more problems for an already troubled organization. The information of relevance to KPS will be explained within the context of direct and indirect HIV/AIDS impacts.

Direct HIV/AIDS Impacts on the KPS

The KPS is likely experiencing moderate levels of HIV/AIDS-related absenteeism, mortality, and reduced productivity. Except for the Ugandan Police Force, the KPS is likely to be experiencing lower level of HIV/AIDS-related direct impacts than any other organization in the sample. The KPS is likely to be experiencing 137 officers dying of AIDS per year and an additional 259 officers experiencing HIV/AIDS-related absenteeism and productivity losses. However, as discussed in Chapter 6, there was variation in HIV/AIDS prevalence and mortality in the healthcare system which made attempting to learn information of relevance to the direct impact of HIV/AIDS on the KPS difficult.

Indirect and Environmental HIV/AIDS Impacts on the KPS

There was some information of relevance to the KPS which could be learned from the healthcare system. Like organizations in other sample countries, the KPS is likely to experience some level of less skilled personnel being asked to perform duties for which they were not trained.

Throughout the available literature on the Kenyan healthcare system, it was clear that medical personnel were especially fearful of contracting HIV through the course of their duties (Cheluget, et al., 2003; Raviola, et al., 2002). This was having a significant
impact upon their psychological well-being (Raviola, et al., 2002). KPS personnel are not likely to have the same opportunities for exposure as in healthcare, but they are likely to come into contact with drug users, prostitutes, orphans, and people with open wounds. Police personnel are likely to avoid interacting with these individuals as well as be fearful of infection during the course of their duties. Doctors in the Kenyan healthcare system were stressed from fear of HIV infection to the point they were experiencing severe psychological distress (Raviola, et al., 2002). Stress was further exacerbated by healthcare personnel seeing large numbers of their coworkers become sick and die from AIDS. KPS personnel may too become overly fearful about HIV infection and become psychologically distressed.

Overall, it was possible to learn only some information of relevance to the KPS. They are likely to be experiencing some levels of HIV/AIDS-related absenteeism, productivity losses, and mortality. The ability of the KPS to provide services is not only going to be limited by HIV/AIDS-related attrition but also by limited organizational capacity.

Botswana Police Services

There was available impact literature on the Botswana Defense Forces (Molatole and Thaga, 2004), the Local Governments or Councils (Pharoah, 2005), the Botswana Healthcare Sector (Abt Assoc., 2000), and the Botswana Educational System (Kinghorn et al., 2002). In Botswana, the adult HIV/AIDS prevalence levels are high and the levels of treatment are also high. It is also clear from the literature that these organizations are experiencing differences in the way they are affected by HIV/AIDS. The information of
relevance to the BPS will be explained within the context of direct, indirect, and environmental HIV/AIDS impacts.

**Direct HIV/AIDS impacts on the BPS**

Botswana has a prevalence rate of 24.1% (UNAIDS, 2007:11). It is the only country which has the resources to implement high levels of anti-retroviral therapy, with 85% of its HIV/AIDS-infected population receiving treatment (UNAIDS, 2007). Based on national level HIV/AIDS burden and mortality, the BPS is likely to be more severely affected by HIV/AIDS than any other police organizations in the sample. Approximately 4.6% of BPS personnel are likely to be experiencing HIV/AIDS-related absenteeism and productivity losses. The organization is likely to be experiencing mortality upwards of 2.23% per year. This would translate into 145 personnel dying per year and an additional 296 incurring HIV/AIDS-related absenteeism and mortality. However, absenteeism, productivity losses, and mortality may be mitigated by the high levels of treatment which were implemented in Botswana between 2004 and 2007 (WHO, 2008).

More generally, personnel in the BPS are likely to have different levels of prevalence among different personnel. The literature on the Botswana comparison organizations also identified significant variation among different cadres of personnel, variation by gender, and levels of education (Pharoah, 2005; Kinghorn, et al., 2002; Abt Assoc., 2000).

**Indirect and Environmental HIV/AIDS impacts on the BPS**

The literature on the comparison organizations indicates a wide variety of indirect HIV/AIDS impacts. There are some similarities and some differences in the way these
organizations are affected by HIV/AIDS. Some of these differences are due to the
demand for their services and the type of services the organization provides.

From both the healthcare and the education literature it is clear that the
compensation and pension benefits are high in Botswana and that this keeps personnel
infected with HIV working long past the time that they are fully productive (Kinghorn et
al., 2002; Abt Assoc., 2000). The Botswana Police Services (BPS) is also a government
agency, so it is likely that they will be experiencing the same phenomena.

AIDS mortality is likely to contribute to the lack of skilled staff, BPS is likely to
have personnel provide services for which they were not trained as was seen in the
healthcare sector (Abt Assoc., 2002), this may result in reduced professionalism and a
reduced ability to provide services.

Botswana is experiencing an increase in the number of orphans (State Dept.,
2008A), and there are some indications that the BPS are having to respond to these
changes (Kinghorn et al., 2002). Kinghorn, et al., (2002) indicates that any impact on
demand for police service by these orphans is likely to be mitigated by the availability of
social services provided by the government.

It is also clear that the kind of services provided by an organization matters. The
police provide a service which is more similar to the healthcare system than education.
Police must respond to emergencies and are on-call to provide services, while educators
do not provide this kind of service. The BPS, like healthcare, are likely to be incurring
greater workload increases due to attrition from HIV/AIDS because they must provide
services on an as needed basis.
The literature also indicates the importance of geography in understanding the impact of HIV/AIDS. In both the education system and the civil service, personnel infected with HIV who are working in rural areas are transferring to more urban areas in search of treatment (Pharoah, 2005; Kinghorn, et al., 2002). Infected BPS personnel may also be migrating to urban areas to get treatment.

HIV/AIDS-related absenteeism and productivity losses are likely to lead to reductions in service delivery and reduced professionalism. It is clear that there is some information to be learned of relevance to the BPS from the military, healthcare, education, and civil service organizations in Botswana. The BPS is likely to be incurring high levels of HIV/AIDS-related absenteeism, productivity losses, and mortality. It is likely to have a reduced capacity to provide services in the midst of an unknown change in demand for services due to HIV/AIDS.

Zambian Police Services

The literature on the comparison organizations in Zambia is quite robust. The available studies on the Zambian Judiciary (Feeley, et al., 2006), Zambian Wildlife Authority (Rosen, et al., 2006), and the healthcare system (Feeley, et al., 2004) were done by researchers using a similar methodology. There is also literature independent of these three sources on the education system (Kamwanga, et al., 2003; Grassley, et al., 2002), and the Defense Forces (Phiri and Simapuka, 2004). Overall, these sources allow a significant amount to be learned of relevance to the Zambian Police Services (ZAPS).

There are cultural practices in Zambia which are likely to contribute to HIV prevalence among police personnel. Phiri and Simapuka (2004) indicate that cultural
practices such as widow/widower cleansing is practiced. This involves the surviving partner having unprotected sex with a member of deceased’s family (Phiri and Simapuka, 2004). The information of relevance to ZAPS will be explained within the context of direct and indirect HIV/AIDS impacts.

Direct HIV/AIDS Impacts on ZAPS

ZAPS is likely to be incurring moderate to high levels of direct HIV/AIDS impacts. Approximately 2.6% of ZAPS personnel are experiencing HIV/AIDS-related absenteeism and productivity losses, and the organization is likely losing 1.46% of its personnel due to AIDS mortality. This would translate into 236 personnel incurring absenteeism and reduced productivity and 123 personnel dying each year. Based on the data from the Judiciary and Wildlife Authority (ZAWA), ZAPS may be experiencing an annual average mortality rate upwards of 3-4%. This means that approximately 3-4% of ZAPS personnel will die each year, causing a significant loss of personnel. This level of mortality identified in ZAWA is roughly double the national average, indicating that police may be more severely affected than the national level mortality estimates indicate.

There is likely to be significant variation in how different personnel are affected by this disease. Female and male personnel are likely to be experiencing different levels of HIV infection. There is likely to be significant variation in the personnel that are occupying different positions or providing different services. There was significant variation in productivity losses between personnel providing patrolling services for the Zambian Wildlife Authority (ZAWA) and for professional healthcare workers (Rosen et al., 2006; Feeley, et al., 2004). Those police personnel doing difficult, strenuous work, in harsh environments are likely to experiencing higher levels of productivity losses.
Indirect and Environmental HIV/AIDS Impacts on ZAPS

ZAPS is likely to be incurring a significant financial and manpower burden dealing with staff who have died due to AIDS. Rosen, et al. (2006) found that supervisors and management spent 8 days of work dealing with each death. Deaths are also expensive, and the death of organizational personnel is likely to costs ZAPS a significant amount of money. For ZAWA, this amounted to $7,869 dollars per worker that died (Rosen, et al., 2006: 11). ZAPS is not likely to have a significant amount of resources and these increased funeral costs would further strain the organization.

Benefits and compensation available to ZAPS personnel may also keep those infected and sick personnel working in their jobs even when they can no longer be productive. This will cause ZAPS to have non-productive personnel who are continuing to get paid, causing a drain upon the organization. It will also limit ZAPS ability to plan for these deaths. This was identified in the education system (Kamwanga, et al., 2003).

It is also possible that ZAPS will be experiencing the flight of personnel working in rural areas to urban areas in search of better medical care for HIV/AIDS treatment. ZAPS personnel who are infected with the disease will seek to get treatment where it is available, primarily urban areas of Zambia.

The overall ability of ZAPS to provide services will be reduced by HIV/AIDS. A reduced ability to provide services and meet organizational goals was identified in the Zambian Wildlife Authority (Feeley, et al., 2004), the Judiciary (Feeley, et al., 2006), and the Defense Forces (Phiri and Simapuka, 2004). These organization were not able to provide the same levels of services due to HIV/AIDS.
It is possible that ZAPS, like the Defense Forces, will test their police recruits for HIV (Phiri and Simapuka, 2004). ZAPS may also require personnel in certain positions, like helicopter pilots and forensic personnel, to remain uninfected. This would limit the opportunities of infected personnel and also deny ZAPS the work provided by high caliber personnel who may be infected with HIV.

In Zambia, there are also differences in the opportunity for personnel working in the different organizations to find work elsewhere. Specifically, healthcare workers have the opportunity to work in other countries or in the private sector (Feeley, et al., 2004). It is doubtful that police personnel will have this same opportunity to leave the organization for better employment, even if there are private security opportunities they may not be as highly paid or have the same level of benefits as the police. This would indicate ZAPS may not be experiencing the same manpower shortages as the healthcare system and therefore not experiencing the same level of strain.

Overall, the literature on the comparison organizations in Zambia offered a wide variety of information of relevance to the Zambian Police Services. ZAPS is likely to be severely directly impacted by HIV/AIDS. These direct HIV/AIDS impacts are likely to reduce the ability of ZAP to provide services and will result in significant costs to the organization.

South African Police Services

The South African Police Services (SAPS), like the other police organizations in the sample, is likely to be seriously affected by the HIV/AIDS virus. It was possible to learn information of relevance to SAPS from civil service organizations (Manning,
2003), the healthcare system (Connelly, et al., 2007; Shisana, et al., 2004; Zelznick and ODonnel, 2005; Wilkinson and Gilks, 1998) and the education system (Badcock-Walters, et al., 2003). The information of relevance to SAPS will be explained within the context of direct, indirect, and environmental HIV/AIDS impacts.

**Direct HIV/AIDS Impacts on SAPS**

SAPS is likely to be experiencing high levels of HIV/AIDS-related absenteeism, productivity losses, and mortality among organizational personnel. South Africa has a prevalence rate of 18.8%. Surprisingly, South Africa does not have the level of treatment provision that its level of wealth would indicate (CIA, 2008). Based on national level indicators, SAPS is likely to be incurring absenteeism and productivity losses from 1.75% of personnel and losing roughly 0.74% of its personnel each year to AIDS mortality. This would translate into 2,401 burdened with HIV/AIDS-related absenteeism and mortality and additional 1,015 SAPS personnel dying each year.

There was some data available on direct HIV/AIDS impacts in the comparison organizations, including a 16.1% prevalence rate among healthcare workers (Shisana, et al., 2004). Two different civil service organizations had mortality rates of 1% in 18 months and 3.2% annually. SAPS may be experiencing mortality rates of 1-3% per year. Again, organizational mortality maybe higher than national level measures might indicate.

As in other police organizations, the levels of direct HIV/AIDS are likely to vary among staff of different genders, occupying different positions, and providing different services. For example, professional healthcare workers had an infection rate of 13.7% while non-professionals had an infection rate of 20.3% (Shisana, et al., 2002). This may
result in SAPS staff with different backgrounds or doing different tasks having different levels of direct HIV/AIDS impacts.

SAPS personnel doing more physical labor are likely to be incurring higher levels of absenteeism and productivity losses. Strenuous physical labor is going to be more difficult to implement when an infected person is experiencing HIV/AIDS-related symptoms and infection. This same difficulty was identified in two civil service organization in Kwa-Zulu Natal (Manning, 2003).

There has also been a significant increase in Tuberculosis infection among healthcare workers and the general population (Shisana, et al., 2004; Wilkinson and Gilks, 1998). SAPS personnel who are infected with HIV/AIDS may be likely to contract this disease during the course of their duties; this will increase levels of absenteeism, productivity levels, and mortality. It would be important for SAPS personnel infected with HIV to be assigned to positions where they were less likely to be exposed to TB.

*Indirect and Environmental HIV/AIDS Impacts on SAPS*

Based on what we have seen in the civil service sector (Manning, 2003), it is possible that SAPS will have problems in long term planning to dealing with changes in demand and mortality related to HIV/AIDS. Little is known about the way that HIV/AIDS impacts demand for police services and how patterns of infection within SAPS will affect the organization, making it potentially more difficult to implement long term planning and strategy.

Due to high levels of HIV/AIDS-related stigma in South Africa, it is possible that SAPS personnel who are exposed to HIV during the course of their duties will not report
their exposure or get tested. Healthcare worker who felt they were exposed to HIV did not get tested for fear that they were infected (Zelznick and ODonnel, 2005). Police personnel, if they are provided with equipment and training to prevent infection, may not use them because they feel this makes their job more difficult. This was also identified in the public health sector (Zelznick and ODonnel, 2005; Shisana, et al., 2005).

Based on findings from the healthcare sector (Shisana, et al., 2005), it is possible that SAPS personnel will avoid providing services to those individuals they believe are infected with HIV/AIDS. SAPS personnel may use their discretion and not provide service to orphans, drug users, and prostitutes.

If SAPS personnel were to be experiencing an increased workload due to HIV/AIDS-related attrition, this could lead to increased stress, physical exhaustion, dissatisfaction, and reduced quality of work. Many healthcare workers report they are working more than their official hours (Shisana, et al., 2005). This might lead to be higher levels of SAPS personnel being treated for stress or related mental illness.

Overall, from the literature on the comparison organizations, it was possible to learn some information of relevance to SAPS. SAPS is likely to be experiencing high levels of HIV/AIDS-related absenteeism and mortality. SAPS may have a reduced ability to plan for the long term, and personnel may be avoiding providing services to persons whom they believe are infected.

**Malawian Police Services**

Of all the countries in the sample, Malawi had more information available about the impact of HIV/AIDS on the different comparison organizations. This include studies
on multiple civil service organizations (UNDP, 2000), the healthcare system (MSF, 2007; Rode, 2005; CRHCS, 2004; Harries, et al., 2002; UNDP, 2000), and the education system (Harries, et al., 2002; Kadzamira, 2001; UNDP, 2000). The information of relevance to the Malawian Police Services (MPS) will be discussed in the context of HIV/AIDS-related direct, indirect, and environmental impacts.

**Direct HIV/AIDS Impacts on the MPS**

The MPS is likely to be seriously impacted by HIV/AIDS. The national HIV prevalence rate is 14.1%. Based on the HIV/AIDS burden and mortality at the national level, the MPS is likely to be incurring mortality of 0.63% per year and have 1.24% of personnel burdened with HIV/AIDS. This would translate into approximately 120 personnel incurring HIV/AIDS-related absenteeism and productivity losses and 61 personnel dying each year. Both Pharoah (2005) and the UNDP (2000) studied the impact of HIV/AIDS on the MPS. Pharoah (2005) indicates high levels of illness and an increase in annual mortality levels from 1-3% between 1990 and 2003. Based on these data, mortality in the MPS is likely higher than at the national level.

There is likely to be significant variation among personnel occupying different positions within the organization. There is also likely to be age and gender differences in the prevalence levels, and hence the mortality, productivity losses, and absenteeism among MPS personnel.

There was some variation in the opportunities for exposure to Tuberculosis for personnel in the different comparison organizations (Harries, et al., 2002). Individuals infected with HIV are more prone to getting TB (Shisana, et al., 2004). Although MPS personnel are not likely to have the same level of exposure to TB as healthcare workers,
they will come in contact with infected individuals through the course of their duties. Efforts should be taken to keep infected MPS personnel away from situations or positions where they could be exposed to TB.

*Indirect and Environmental HIV/AIDS Impacts on the MPS*

It was also apparent that the emotional burden of HIV/AIDS is severe. Uninfected and relatively healthy infected individuals will have to provide help and assistance to their sick relatives, will have to take care of orphaned children of their relatives, and arrange and attend funerals (Rode, 2005). MPS personnel are going to be burdened with the emotional difficulties of working and surviving in this environment.

Malawian government organizations operate under the same civil service rules and all hiring is done by a bureaucracy separate from the organization. This creates a significant delay in the hiring of personnel. Based on data from the comparison organizations, it is likely to take the MPS six months to a year to replace personnel who leave the organization (UNPD, 2000: 62). This means that when the MPS personnel die due to AIDS it will take the organization a long time to replace them, further exacerbating manpower shortages and further reducing the capacity of the organization to provide services.

Based on the literature from the healthcare sector and the education sector there appears to be variation in the different Malawian organization’s capacities to absorb the increased workload caused by HIV/AIDS-related absenteeism and mortality. The education system simply increases class sizes to deal with the increased workload, which does not appear to result in that much extra strain on organizational personnel (Kadzamira, et al., 2001). On the other hand, healthcare was experiencing increased
workload, employee burnout, and financial costs due to the necessity of providing medical care (Rode, 2005; UNDP, 2000). Likely the police would not be under the same pressure to provide services, but they may not be able to simply shrug off the reduced capability to provide services as the education sector. It would be important to identify how the MPS is dealing with this issue. It is likely the MPS is incurring some increased workload and associated costs and not providing some services. If the MPS does have an increased workload and they pay their personnel overtime, then the organization will incur a further financial burden. If MPS personnel are required to work extra without pay, this will only lead to further worker dissatisfaction and have an unknown impact on service provision.

HIV/AIDS-related attrition among senior and skilled personnel is likely to create a rift in the capacity of the organization to provide certain services. The organization will attempt to have untrained or less skilled personnel provide these services. This has occurred in a multitude of the comparison organizations in Malawi (UNDP, 2000).

Many organizations in the Malawian bureaucracy provide funeral services for their personnel who have died. In the Agricultural Ministry, when available funeral funding was used up, the organization diverted funds from other programs (UNDP, 2000). It is unknown where this funding was diverted from or the problems that this diverted funding caused, but most civil services organizations in Malawi are strapped for resources (UNDP, 2000) and any diversion will further reduce the ability to provide services. The same may also occur in the MPS.

None of the civil service organizations, except the healthcare system, appeared to offer healthcare to their employees (UNDP, 2000). A lack of access to healthcare is
likely to inhibit police efforts to prevent the spread of HIV among organizational personnel and help treat those who are infected.

Throughout the comparison literature in Malawi, it was apparent that HIV/AIDS, combined with an already limited capacity to provide services, was significantly reducing the ability of these organizations to provide services. The MPS is going to have a reduced capacity to provide services, with unknown repercussions for the rest of society.

Conclusion

This chapter sought to identify information of relevance to the police organizations in the sample from the literature on the comparison organizations. This was helpful in some cases, but not in others. The literature on the comparison organizations helped us to better understand the potential impact of HIV/AIDS on the Zambian Police Services, the Malawian Police Services, the Botswana Police Services, and the South African Police Services. It was of less use in attempting to understand the impact of this disease on the Royal Lesotho Mounted Police, the Royal Swaziland Police Services, the Kenyan Police Services, and the Ugandan Police Force. It was not really possible to identify any information of direct relevance to the Tanzanian Police Services, the Zimbabwe Republic Police. This chapter does indicate it is possible to learn information of relevance to the police from the comparison organizations.

There appears to be some variation between the national level AIDS mortality rates and mortality rates among organizational personnel. In many cases, AIDS related mortality levels identified in the comparison organizations were roughly double the national AIDS mortality level. This indicates the crudeness of these national level
indicators. These measures do not account for gender and age variation within these organizations. Secondly, they are problematic because they represent national trends at a specific time. The nature of the HIV/AIDS epidemic is changing and prior prevalence data may not be applicable today. This further emphasizes the need to collect information on the direct impact of HIV/AIDS on the police.

Chapter 5, Chapter 6, and this chapter described the extent that the comparison organizations were being impacted by HIV/AIDS through their environment and how they are being directly and indirectly impacted by HIV/AIDS. These chapters also identified some ways in which the police may or may not be affected by HIV/AIDS and the relevance of some information to specific police organizations. These three chapters rely upon a review of available literature and the development of hypotheses about the ways in which the police may or may not be impacted by HIV/AIDS.
Chapter 8: Learning From a Review of Available Literature

The goal of this project is to identify what, if anything, can be learned of relevance to the police from the literature on the impact of HIV/AIDS on the comparison organizations. The initial stage of this approach was to learn the usefulness of a face value review of the available literature relating to the comparison organization. From the literature on the comparison organizations, it was possible to identify only some information of relevance to the police regarding the direct impact of HIV/AIDS. In the comparison organizations, there was substantial variation in HIV prevalence and related absenteeism, productivity losses, and mortality among different organizational personnel. This was especially true of female personnel and personnel doing highly skilled tasks. Personnel in the comparison organizations who worked in harsh conditions and did hard labor were prone to greater direct HIV/AIDS impacts due to the difficulties of their work. While this review was informative, it was not really possible to learn anything of relevance in relation to potential levels of prevalence, absenteeism, productivity losses, and mortality among police personnel.

HIV/AIDS is also likely to impact the police indirectly and through changes in demand for police services. The review of the literature on the comparison organizations in Chapter 6 highlighted significant information of potential relevance to the police. From the limited literature on the military, it was possible to identify the potential for policies forbidding HIV/AIDS-infected recruits from being hired. From the civil service organizations, it became clear that HIV/AIDS is, in many cases, only exacerbating organizational problems (ie. corruption, inefficiency, lack of resources) which are already leading to reduced capacity to provide services. From healthcare, it became clear that
organizations being impacted by HIV/AIDS will be affected by changes in demand for the services they provide, independent of any internal problems caused by the direct impact of HIV/AIDS. From education, it became clear that the kind of services it provides is related to the way in which an organization is affected by HIV/AIDS. All these findings are of potential relevance to the police.

In Chapter 7, this project identified information of relevance to specific police organizations from a review of literature on the comparison organizations in that country. This country level review was informative to varying degrees. In some cases, this review was able to identify information of potential relevance to some police organizations. In other cases, it was not really possible to identify any information of relevance to the police.

This process of reviewing the literature on the comparison organizations does provide some information of relevance to the police. It has some benefits, but also has numerous shortcomings. The remainder of this chapter will identify the benefits and shortcomings of trying to estimate the impact of HIV/AIDS on the police from a review of the literature on the comparison organizations.

**Benefits of Methodology**

Selecting a group of comparison organizations and assessing the available literature provides two opportunities to understand the impact of HIV/AIDS on the police. First, it provides a level of knowledge about the topic which was not held prior to the review. Second, it helps to explain what we did not know about the impact of HIV/AIDS on the police.
Increasing Understanding

Reviewing the literature on the comparison organizations provides an overall depth of knowledge about HIV/AIDS and its impact upon organizations that was not known prior to this project. Systematically reviewing the literature, identifying its strengths and limitations, and trying to understand the available information provides a more systematic and thorough understanding of HIV/AIDS, the HIV/AIDS epidemic, and the ways in which HIV/AIDS is likely to impact the police.

Explaining What We Don’t Know About the Impact of HIV/AIDS on the Police

By systematically reviewing the literature on the comparison organizations and having to assess the value of this literature it became even more clear that we know very little about the impact of HIV/AIDS on the police. Except for the military organizations, there was significantly more information available about the impact of HIV/AIDS on the other three organizations than the police.

At the initial stages of this project, all available literature on the impact of HIV/AIDS on the police was collected and reviewed. From this review, it was possible to determine that little was known about the police. Within the available literature, there was some direction provided about the issues of relevance that needed further study. At the same time, there was a huge area of uncertainty about what was and was not of importance to understanding the impact of HIV/AIDS on the police. To coin the phrase from Donald Rumsfeld, there were many more “unknown unknowns” than the “known unknowns” about how HIV/AIDS is affecting the police. We knew very little about what it was that we did not know about the impact of HIV/AIDS on the police. By reviewing the literature about the comparison organizations, many of these “unknown unknowns”
came to be “known unknowns”, meaning that it became possible to identify what it was that is not known about the impact of HIV/AIDS on the police. This review provided a roadmap for the study of the impact of this topic.

**Summary of Benefits**

Overall, it was clear that this approach of trying to learn from a review of the literature about a specific organization from other organizations does provide some benefit. It helps outlines some possible HIV/AIDS impacts on the police. It also identifies specific areas in which research on this topic needs to concentrate.

**Limitations of Methodology**

The face value review of available literature in Chapter 5, 6, and 7 had a number of limitations. These limitations include: problems with the quality of the available literature on the comparison organizations, a potential bias in the selection of organizations or facilities for study, an inability to account of variation in police organizations, time, an assumption of organizational similarities, a lack of explanation of causal mechanisms, and an inability to specify if and why specific impacts identified in the literature are likely to occur in any particular police organization.

**Quality of Available Literature**

The literature on the organizations varies significantly in quality. In some organizations, the available human resources data was poorly kept and not computerized (UNDP, 2000; Pharoah, 2005; Kadzamira, et al., 2001; Kinghorn, et al., 2002; Kamwanga, et al., 2003). In other cases, the data was anecdotal and relied upon interviews with organizational personnel (Pharoah, 2005; UNDP, 2000; Rode, 2005;
Kadzamira, et al., 2001; Kinghorn, et al., 2002). Other studies had reasonably good data (Rosen, et. al., 2006; Feeley, et al., 2006; Feeley, et al., 2004; Abt Assoc., 2000). A face value review does not account for the variations in the quality of available information from the comparison organizations.

**Selection Bias**

This project is based on a review of available research about the impact of HIV/AIDS on a group of comparison organizations. These comparison organizations can include both large and small organizations, or specific parts of these organizations. For example, in the case of healthcare the comparison organizations studied could be a single hospital (Rode, 2005), a small group of hospitals (Dieleman, et al., 2005), or an entire healthcare system (UNPD, 2000; Abt. Assoc., 2000). Only Pharoah, et al.’s (2005) study of the South African healthcare system indicates that its findings are representative in any way. This creates three potential biases in the available research. First, there could be a bias in the selection of particular facilities within each organization due to ‘available data’. Second, there could be a bias in the selection of organizations or facilities by researchers. Third, there is the possibility that governments may have influenced access or findings.

The availability of data could have biased this review of the literature in two ways. First, some organizations did not have records available for research. Researchers studying their facilities would have then had to rely upon interviews of select personnel who might have the ability or the wherewithal to misrepresent what was actually occurring in that facility. On the other hand, researchers could have selected facilities or organizations that had available data. These organizations could be different from those
without available data in some systematic way which could have influenced findings of that research.

Bias could also have occurred in certain facilities being studied which may be more seriously affected by HIV/AIDS than the other facilities operating in that same organization. This is specifically relevant to the hospital and the education system where the system may be provided at the national level, but in actuality each school or hospital is a separate entity. Those facilities which were studied in the comparison organizations may be more or less severely affected than others, causing the estimated impact of HIV/AIDS to be exaggerated or suppressed.

Because the comparison organizations operate at the national level it is possible that there may have been government interference in the research process. Based on the available research on the police and the military, access has been limited to these organizations because of national security concerns (Rupiya, 2005; Whiteside, et al., 2006; Heineken, 2001). It is possible that a researcher trying to study the entire healthcare system may have been dissuaded from conducting research, not provided all available data, or was pushed to suppress certain findings. The ability of a country to provide medical services or educate its population could be considered a national security interest. Healthcare, education, and the ability to provide basic social services could influence economic investment, which would be important to a country’s future livelihood. Findings which may highlight this reduced capacity may have been suppressed. Many of these governments have been known to interfere in the operation of their criminal justice system (State Dept., 2008B-D; State Dept., 2008F-J). It may be possible they have somehow interfered in the studies of the comparison organizations.
However, there was not any direct reference to political interference in the available literature.

Bias could have affected this review of available literature in a number of ways. It could have resulted in the misrepresentation of certain data through interviews, or the government could have allowed access only to specific organizations. Bias could have resulted in those facilities with a more or less severe problem being studied, making the findings unrepresentative of the entire system. Governments may also have influenced the research process or suppressed certain findings which they may have considered problematic.

*Organizational Variation of the Police*

This face value review of the literature does not account for what we know about each particular police organization. It is likely that the relevance of the information identified in the literature on the comparison organizations may be more or less relevant based on what is known about the specific police organizations in each country. Organizations vary in their processes, tasks, and structure, and understanding how this variation in police organization matters to the impact of HIV/AIDS would be important.

*Time*

The ten different countries have significant variation in the level of HIV prevalence in their general population at any given point in time. The level of HIV prevalence and treatment in the general population in each country also changes over time. There is not only variation in the level of HIV/AIDS prevalence between countries, but there is also variation between the same countries at different periods of time.
A perfect example of this issue is the rapid increase in the levels of treatment provision in Botswana. Botswana increased its level of treatment dramatically between 2004 and 2007 (WHO, 2008). Prior to 2004, Botswana had high levels of prevalence but did not have high levels of treatment provision (WHO, 2008). The level of direct impacts on absenteeism, productivity losses, and mortality among organizational personnel in Botswana would likely have been higher prior to this increase in treatment. The studies of the comparison organizations in Botswana occurred prior to this increased treatment provision; the study of healthcare was published in 2000, the study of education was published in 2002, the study of the Local Councils in 2005, and the study of the military in 2004. The most recent study was published four years prior to this project. This means that the Botswana Police Services are dealing with a different HIV/AIDS epidemic than they were when the research on the comparison organizations occurred; the information identified in this review may no longer be relevant.

This problem is not only limited to Botswana, but is relevant to all the comparison organizations in the ten different countries in the sample. Using this methodological approach, it was not possible to account for the impact that time, and, more importantly, variations in the level of prevalence and treatment in the country when the research occurred, will have on the findings of this project.

Assumption of Organizational Similarities

This project reviewed the literature at two levels. Chapters 5 and 6 reviewed the literature at the organizational level, trying to learn anything of relevance to the police from each comparison organization. Chapter 7 reviewed the literature at the country
level, trying to learn anything of relevance to the police from the comparison organizations. These reviews make two assumptions.

The first assumption is that the same comparison organizations in the different countries are similar enough to enable them to be studied as a group. In Chapter 5 and 6, there was an assumption that the specific comparison organizations (healthcare systems/military/civil service/education) in all countries in the sample were similar. Based on this assumption, the literature on these organizations could be assessed together. This assumption is problematic for a number of reasons. First, because these organizations are operating in different countries, they are experiencing different levels of HIV/AIDS prevalence in their general population. The same comparison organization in different countries will be facing a somewhat different HIV/AIDS epidemic. In some cases, these differences can be quite drastic. Independent of their respective HIV/AIDS epidemics, these organizations are operating in different environments. They are bound by

The second assumption is that HIV/AIDS impacts identified in different comparison organizations in the same country are of automatic relevance to the police in that country. The country level review of the literature assumes that the comparison organizations (military, healthcare, civil service, and education) are similar enough to the police that the way HIV/AIDS impacts one of these organizations is automatically of relevance to the police. However, these organizations have different resources constraints, different levels of manpower, provide different services, and have varying levels of demands placed upon them. This issue is apparent when looking at the healthcare system which is experiencing a significant increase in demand, when some of
the other organizations are not. The death and illness of children due to HIV/AIDS is reducing the demand for education, but increasing the demand for healthcare. These two organizations in the same country will be differently impacted by HIV/AIDS.

The comparison organizations within each country are likely to vary in a number of different ways, some of which have been identified by this project as being relevant to the way in which organization will be affected by HIV/AIDS. These variations will be described below.

Certain organizations, specifically healthcare and the military, are likely to have better access to HIV/AIDS treatment than civil service, education, and the police. Because the personnel in these organizations have healthcare available to them, this may result in reductions in HIV/AIDS-related absenteeism, productivity losses, and AIDS mortality in comparison to the other organizations operating in that same country.

There is variation in the demographics of the personnel employed by these organizations. There are different levels of education, ratios of male to female employees, and education levels. These all appear to be tied to the levels of direct HIV/AIDS impacts inside an organization. Differences in demographics, which cannot be accounted for using this methodological approach, are likely to result in variation in the way an organization is affected by HIV/AIDS.

The comparison organizations, and the police, are large organizations employing thousands of people. Within these organizations, there are different personnel that are doing various tasks to fulfill organizations goals. Some of these tasks are administrative, some are supervisory, and others are involved in the direct provision of services. In terms of policing, there is a group of people making sure workers get paid and maintain
human resources records, there are command staff who supervise activities, and there are personnel actively providing police services. These positions require different kinds of tasks, which require different levels of emotional, intellectual, and physical effort to complete. The ability of individual experiencing HIV/AIDS-related symptoms to complete their tasks is likely to vary based on the kind of service they are providing. This approach cannot account for this variation.

Many of the comparison organizations, and the police as well, are strapped for resources. But these organizations have differences in their capacity to raise their own money. Some organizations, like education and healthcare, can and will assess fees for the services provided. These organizations may be able to increase these fees to help the organization cope with cost increases caused by the HIV/AIDS epidemic. However, if the police charge a fee for services, it is considered corruption. If individual police do assess a fee for service, this is only likely to benefit that individual and potentially his immediate supervisor, not the entire organization.

This project studied a variety of organizations. Some of these organizations provided the same services. Other organizations operated in the same environment. This makes it difficult to determine through a face value review of the literature the relevance of information from the comparison organization to the police.

*Lack of Explanation of Causal Mechanisms*

Chapters 5, 6, and 7 outlined possible ways in which HIV/AIDS may impact police organizations. This approach does not explain how or why a specific impact is occurring in a comparison organization. For example, from the review of the literature on the education and healthcare systems, it is clear that these organizations are coping
with absenteeism differently. HIV/AIDS-related absenteeism among healthcare workers is increasing workload and financial costs, while the education system is able to absorb this absenteeism without a similar increase in workload.

*Does not identify if Specific Impacts will occur in any Police Organization*

If this methodology cannot help us to understand why a specific organization is affected by HIV/AIDS in a specific way, then it will be even more difficult to determine the applicability of that specific HIV/AIDS impact to the police. There is an assumption in this project, and in some of the literature more generally, that the police and the other comparison organizations are likely to be impacted by HIV/AIDS in the same way. In all actuality, it is not possible to make this determination based on available information.

**Conclusion**

In all, it was possible to learn some information of relevance to the police from the literature on the comparison organizations. The first stage of this project, the face value review, does have some benefit. But it is clear that it also has a significant number of limitations. These limitations indicate the need to be skeptical of the relevance of this information to the police organizations in the sample. This face value review should not be considered a stand-alone piece of research. Instead, it should be viewed as a first stage in the process of trying to estimate the impact of HIV/AIDS on the police from the literature on the comparison organizations.
Chapter 9 – Environmental & Organizational Variation and the Impact of HIV/AIDS

This project’s methodological approach has two stages to estimate the impact of HIV/AIDS on the police from the literature on the comparison organizations. The first stage of this approach, the face value review of the literature, had a number of limitations. The second stage will try to learn from this literature in a different way. In this second stage, this project will identify common trends in the way HIV/AIDS is affecting the comparison organizations. Based on these common trends, I will try to understand how the organizational structure of the comparison organizations influences the way they are affected by HIV/AIDS. By understanding how organizational structure influences the impact of HIV/AIDS, it may be possible to estimate the impact of HIV/AIDS on the police.

This chapter is divided into five sections. The first section provides background relevant to studying organizations in terms of their structure. Section two describes how organizational structure may be used to understand the impact of HIV/AIDS on the comparison organizations. Section three describes the theoretical model developed by this project to estimate the impact of HIV/AIDS on the police. Section four and five describe the parts of the organizational structure which were identified by this project as mediating the impact of HIV/AIDS on the comparison organizations.

The Study of Organizations

The study of organizations has been ongoing for upwards of 60 years. Early organizational sociologists studied single organizations (Scott, 2004; Etzioni, 1966). Organizational scholarship gradually evolved to the point where organizations could be
compared based upon their structure and processes (Scott, 1992). This understanding of organizations in terms of their parts is known as the open systems model of organizations (Scott, 2004: 8). Under the open systems model, organizations vary in their size, structure, and operating processes, but possess common organizational attributes (Richard and Davis, 2007; Scott, 2004; Blau and Schoenherr, 1971; Blau, 1970). Studying organizations in terms of these attributes, or organizational components and processes, allows the comparison of many and different organizations.

An organizational component is here defined here as a constituent element or part of an organization. It refers to the parts or building blocks of which an organization is comprised. An organizational process is a series of actions within an organization which result in a desired end. Organizational processes are steps or actions which organizations or personnel inside an organization take to accomplish a specific goal.

All organizations can be described and compared in terms of specific components and processes (Baum and Rowley, 2007; Scott, 2004). For example, all organizations must make decisions about their resources. The number of people who can make these decisions is generally known as centralization. Organizations may have few decision makers (high centralization) or many decision makers (low centralization), but they must all have personnel responsible for making decisions about resources. Subsequently, organizational similarities and differences can be identified based on the degree of centralization.

As a result, components and processes in one organization can be measured and then compared to components and processes within another to identify similarities and differences between them. Organizations with different structures, outputs, or in different
locations can be compared based upon similarities and difference in their components and processes.

Again using the prior example of centralization, it is possible to look at the differences or similarities between specific organizations. Organizations A, B, and C are all large organizations with approximately 1,000 employees. Organization A is a police organization and has 10 people who can make decisions about resources. Organization B is a shoe distribution company with 15 people who can make decisions about resources. Organization C is a not-for-profit healthcare provider with 100 people who can make decisions about resources. Based on this information, Organization A and Organization B are similar in their degree of centralization. Organization C is less centralized than the other two organizations because it has more people who can make decisions about resources. Organization A and B provide different services and are likely very different in many other ways, but they are similar in their degree of centralization. Nor does this mean that Organization B and C are different in every way, but are different in their degrees of centralization.

A primary effort behind much early scholarship in organizational sociology was to identify various organizational components and processes and study how they relate to each other. As the study of organizations progressed, the identification and validation of components and processes increased. There now appears to be some consensus regarding standard organizational components and processes (Baum and Rowley, 2007; Scott, 2004; Price and Mueller, 1983).

Organizational components and processes fall into a number of categories. These categories include strategy, resources, people, formal internal structure, informal
structure, organizational environment, work/tasks, and technology (Richard and Davis, 2007). Within each of these categories are a large number of organizational components and processes, more than what would be reasonable to discuss here. These are broad categories and some organizational components and processes may fall under more than one. A description and some examples from each category of organizational components and process are described below.

**Strategy**

All organizations need to make choices on how they are going to meet their goals or to perform certain tasks. Organizational strategy is the set of choices that an organization makes about its clients, market, competition, specific tactics, outputs and the goals that it sets (Richard and Davis, 2007).

**Resources**

Organizations have to gather resources in order to meet their organizational goals. These resources include financial and human capital (Richard and Davis, 2007). Organizations can also be public or private, meaning their financial resources are funded by the state or by private individuals (Richard and Davis, 2007). Organizations have to manage their resources to ensure that they survive.

**People**

Organizations are comprised of people that make the organization function. It is people, in some form or another, which enable an organization to reach its goals (Richardson and Davis, 2007). This category of organizational components can include how these people are recruited, the pay are given, their careers within an organization, the
knowledge people have, the various skill sets people possess, and the needs and preferences of individuals within an organization (Richard and Davis, 2007).

*Formal Internal Structure*

All organizations must also have a formal internal structure. The internal structure of organizations is comprised of a multitude of components. These can include grouping of jobs into larger units, such as working groups and departments (Richard and Davis, 2007; Payne, et al., 1971). They can also include formal lines of communication among people within an organization (Richard and Davis, 2007). Internal structure can also include the number of subordinates or work units a manager supervises or the number of jobs between the person doing the actual work and the chief executive (Payne, et al., 1971; Pennings, 1973).

*Informal Structure*

Within any organization, there is an informal structure (Richard and Davis, 2007; Elsbach, 2007). Informal structure includes the values, beliefs, and expectations shared by members of the organization (Richard and Davis, 2007). For example, informal organizational structure can include rule orientation, which is the extent to which rules are followed within an organization (Payne, et al., 1971), or distributive justice, which is the degree to which rewards and punishments are related to performance (Price and Mueller, 1983).

*Organizational Environment*

The organizational environment includes the political, physical, technological, cultural, and social context in which an organization operates (Richardson and Davis, 2007; Scott, 2004). The operational environment can also include the workplace
regulation and environmental protection laws in a given nation state or gender relations of that specific country. The environment influences the structure and work processes of an organization (Richard and Davis, 2007; Baum and Rowley, 2007; Scott, 2004; Hannan and Freeman, 1977; Pennings, 1973; Payne, et al., 1971).

**Work/Output**

Organizations are specifically created for a specific task or goal (Selznick, 1947). Organizations all have specific goals which they seek to accomplish and tasks that are associated with meeting those goals (Richard and Davis, 2007). These goals and tasks vary according to the environment in which an organization operates and it’s clients (Richard and Davis, 2007).

**Technology**

To conduct work and tasks an organization must rely upon technology (Richard and Davis, 2007). Technologies are those elements necessary to convert raw materials to the finished product or supports the tasks an organization. They can include machines, equipment, and the skills of persons working in an organization (Richard and Davis, 2007). Using the example of the police, technologies can include the computer-aided dispatch system used to receive and dispatch the police to emergencies in addition to the skills which an officer has developed over time to investigate crimes.

**Organizational Components and Processes and the Impact of HIV/AIDS**

From the review of available literature on the comparison organizations, it is clear that every organization is not likely to be affected by HIV/AIDS in the same way. It is possible that differences in specific organizational components and processes might
influence the way an organization is impacted by HIV/AIDS. The structure of an organization may moderate or exacerbate the impact of HIV/AIDS. It may also cause the organization to be affected by the disease in specific ways.

For example, AIDS mortality among personnel that provide services could result in greater reductions in service delivery when an organization has a large number of administrative personnel. Administrative intensity is the measure of how many employees are involved in providing services compared to the number of employees administering the organizations (Price and Mueller, 1983). Because this organization had high levels of administrative intensity, they incurred greater losses in service provision when service providing employees died of AIDS. On the other hand, a second comparison organization with lower levels of administrative intensity and more personnel providing services did not incur as much of a loss in its ability to provide services when personnel died of AIDS. Therefore, based on these findings from these two different comparison organizations, it would be possible to estimate that police organizations with high administrative intensity are going to experience greater reductions in service delivery for each service provider that dies than those with lower levels of administrative intensity.

Based on what is known about the study of organizations and their constituent parts, it should be possible to study the impact of HIV/AIDS on the comparison organizations through the lens of their organizational structure. This project specifically will focus on those HIV/AIDS impacts that were identified in multiple countries and/or in multiple organizations in the same country. These common trends in the impact of HIV/AIDS will then be analyzed to identify how any why this impact occurs in those
comparison organizations. It may then be possible to more clearly estimate the extent that specific impacts identified in the comparison organizations may be of relevance to the police. This approach represents a middle area between assertions regarding potential HIV/AIDS impacts, which are common, and the studies by Pharoah (2005), the UNDP (2000), and Feeley, et al., (2006) which have studied the impact of this disease on the police in Malawi and Zambian Police Prosecutors.

A Theoretical Model of the Impact of HIV/AIDS on the Police

The literature from the comparison organizations shows that the impact of HIV/AIDS on an organization is dependent upon a variety of external and internal factors. First, it is dependent on the environment in which the organization operates. The organizational environment is the political, physical, technological, cultural, and social context in which an organization operates (Richardson and Davis, 2007; Scott, 2004). HIV/AIDS is impacting the external environment, which might affect the amount of services demanded of that organization. Second, the impact of HIV/AIDS is also dependent upon the level of direct HIV/AIDS impacts on organizational personnel, including prevalence, absenteeism, productivity losses, and mortality. HIV/AIDS-related attrition among infected personnel will cause internal operational problems and reduce the ability of the organization to provide services. However, organizations are structured differently and perform processes differently. This structural variation will mediate the impact of HIV/AIDS. The organizational environment and internal direct and indirect HIV/AIDS impacts will combine to result in an overall reduction in the ability of an organization to provide services. This is depicted in Figure 9.1 below.
As Figure 9.1 indicates, the impact of HIV/AIDS on an organization’s ability to provide services is dependent upon both the external environment and factors internal to the organization.

Elements of the organizational environment which influence the impact of HIV/AIDS on an organization include the demand for services and competition for personnel. A change in demand caused by HIV/AIDS will impact the operations of an organization and its ability to provide services. HIV/AIDS may also influence the competition for trained personnel, by reducing the ability of an organization to maintain its labor force. This will impact the internal structure of the organization, but not necessarily impact operations and reduce service delivery in and of itself. Both demand and competition for personnel are also driven by factors independent of HIV/AIDS. Any increase in demand, even if unrelated to HIV/AIDS, when combined with HIV/AIDS-
related attrition among personnel and its effect upon operations, may reduce service provision by an organization.

The severity of the HIV/AIDS epidemic at the national level is going to be an important driver of the extent that HIV/AIDS will be present among personnel in an organization. In any organization, the extent that personnel are affected by HIV/AIDS is likely to vary among personnel of different sexes, levels of education, and those providing different services. Personnel will become sick, be absent, be less productive, and die due to HIV and AIDS. HIV/AIDS-related attrition will impact operations and reduce service delivery, but the impact of attrition will be mediated in some ways by the organizational structure. Combined, all the varied HIV/AIDS impacts on an organization are likely to result in a reduced ability to provide services.

Environmental Factors Relevant to the Impact of HIV/AIDS

This project identified two environmental factors relevant to the impact of HIV/AIDS on police organizations. These environmental factors include the demand for services and competition for skilled personnel. These will be defined below.

Demand

This project is concerned with two different types of demand. The first is a change in the level of demand for services (Manning, 2003). Demand does not necessarily have to be driven by HIV/AIDS, though it may be. Any change in the services demanded of an organization is likely to impact its ability to provide services.

The level, or amount, of demand relates to an increase or decrease in the quantity of services an organization is asked to provide. In terms of education, an increase in the
number of children enrolled in school would be an increase in the level of demand. Teachers now have to provide services to more students. The second type of demand is a change in the nature of demand (Manning, 2003). This type of demand is more relevant to public agencies who are service providers. The nature of demand relates to the kind of service which an organization is providing. A change in the nature of demand means that an organization is being asked to provide a service different in some way than it had previously (Manning, 2003). A change in the nature of demand could mean either the provision of a specific service becomes more difficult or the organization needs to provide an entirely new service. Using the same example as above, educators are facing an increase in the number of orphans who require greater levels of services such as counseling and financial support (Kinghorn, et al., 2002). The education system is no longer only teaching students, but has to provide for the more complicated needs of orphans (Kinghorn, et al., 2002), changing the nature of the service demanded of educators.

**Competition for Personnel**

This project is specifically concerned with the extent an organization competes with other organizations for personnel. Trained and skilled personnel are a finite resource in many sub-Saharan African countries (Pharoah, 2005; UNDP, 2000). As with demand, competition for personnel may be partially related to HIV/AIDS attrition among the general workforce. It may also be related to a variety of other factors including levels of education in the workforce or the prevailing wages offered in any given country.

Competition can be measured by the extent that an organization is losing resources to other organizations in their same niche (Scott, 2004; Price and Mueller,
Competition for personnel can come from other organizations who offer the same service, such as private hospitals competing with public hospitals for personnel in the same country. It can refer to organizations in one country trying to hire trained personnel in another country, such as the hiring of nurses throughout sub-Saharan Africa by South African hospitals (MSF, 2007). Competition will likely reduce the number of people available in the general workforce who meet the standards for work within an organization.

Internal Organizational Components and Processes Mediating the Impact of HIV/AIDS

This project identified fifteen organizational components and processes which mediated the impact of HIV/AIDS on the four comparison organizations. These are described in Table 9.1 below.

| Table 9.1: Organizational Components and Processes Mediating the Impact of HIV/AIDS |
|---------------------------------|---------------------------------|
| Goal Effectiveness              | Departmentalization             |
| Financial Effectiveness         | Management Concern for Employees|
| Level of Benefits               | Knowledge Retention             |
| Expertise                       | Training                        |
| Specialization                  | Perishability of Services       |
| Labor Supply                    | Penalty for non-Completion      |
| Geographic Departmentalization  | Workload                        |
| Centralization                  |                                 |

This section establishes working definitions of the fifteen internal organizational components and processes. These organizational components and processes identified by this project have generally been identified and validated by organizational sociologists. They are described independently below.

Goal Effectiveness

This component relates to the extent to which an organization is able to attain its goals. Organizational goals relate to a desired level of change in input, transformation,
and output during a given period (Van de Ven, 1976). Goal effectiveness is generally measured by the extent or percentage of goal attainment at the end of a given operating period (Van de Ven, 1976). The measurement of goal effectiveness is more difficult in service or public organizations (Price and Mueller, 1983). Price and Mueller (1983) indicate public services can be measured by the extent that an organization gets a return on resources it provides.

**Financial Effectiveness**

Organizations vary to the extent to which they have available financial resources. A financially viable organization can pay its bills (Price and Mueller, 1983). This component also focuses upon an organization’s ability not only to obtain, but also efficiently use, its financial resources (Price and Mueller, 1983). Financial effectiveness focuses only upon capital, not land, equipment, labor, or managerial knowledge (Price and Mueller, 1983).

**Level of Benefits**

The level of benefits relates to the compensation an organization provides to its employees. Some organizations offer substantial benefits such as health and life insurance, housing, death benefits, sick leave, and vacation. Other organizations offer minimal or few benefits.

**Expertise**

Expertise refers to the degree of knowledge or skills among personnel who work in the organization, or more specifically, for those doing specific tasks (Van den Ven, 1976). For example, the care for sick or injured individuals in the healthcare system is generally done by nurses or doctors. These persons generally have a higher level of
expertise, including greater education and on-the-job training (Abt Assoc., 2000). In other organizations, the person who does the work, like persons who provide mortuary services in Ethniwiki Kwazulu Natal, require much less education and training (Manning, 2003). This component is different from specialization (see below). It refers to the individuals in an organization doing specific duties, while specialization refers to the division of labor within an organization.

**Specialization**

For the purposes of this project, specialization refers to the degree labor in an organization is differentiated by tasks or positions (Pennings, 1973; Pugh, et al., 1968). Specialization can be measured in a variety of ways. It can be measured by the extent that official duties are distributed among a number of positions within an organization or the extent that specialist roles exist within an organization (Price and Mueller, 1983; Pugh, et al., 1968). For example, in the military there are personnel that have jobs that range from cleaning toilets to piloting and fixing helicopters.

**Labor Supply**

Labor supply reflects the availability of personnel within the organization. Some organizations have more labor than is required for the services demanded of them; others may only have 50% of the personnel they need. Labor supply could potentially be reflected in the vacancy rates of the organization or the ratio of workers in the organization to those it is supposed to provide.

**Geographic Departmentalization**

This component specifically addresses the extent that an organization is providing services and subsequently has its personnel located throughout a country (Price and
Mueller, 1983). Price and Mueller (1983) indicate this can be measured by the number of geographic sub-divisions in an organization or the extent that organization is responsible for providing services to multiple locations. Some organizations operate in many urban, as well as rural areas; these organizations would have high levels of geographic departmentalization. Other organizations only have personnel providing services in one or two locations, an indicator of low levels of geographic departmentalization.

**Centralization**

Centralization refers to the way in which an organization makes decisions (Richard and Davis, 2007). Some researchers have defined this component as the number of persons who make decisions about the distribution of resources or the performance of tasks in an organization (Price and Mueller, 1983). Highly centralized organizations have a small group of people making decisions about the entire organization: decentralized organizations have many people making these same decisions (Pugh, et al., 1968).

**Departmentalization**

This component relates to the manner in which work is subdivided in an organization. Classic divisions are by function and product (Price and Mueller, 1983). In a functional structure, the major subunits are defined in terms of the stages of the manufacturing process of one product or service (Price and Mueller, 1983). In a product structure, each department has responsibility to market a specific product or service (Price and Mueller, 1983).

**Management Concern for Employee Environment**
This relates to the extent to which senior personnel in the organization devote time to the needs of their employees (Payne, et al., 1971). Some organizations will provide for their employees and care about their working environment, while others do not (Payne, et al., 1971). Management concern can be measured through the perceptions of how senior personnel act towards others in the organization or the extent that administrators defend or act in the best interests of their employees (Pennings, 1973; Payne, et al., 1971).

**Knowledge Retention**

Knowledge retention refers to where an organization stores its knowledge. Organizations typically fall on a continuum between tacit and recorded knowledge. Tacit knowledge refers to knowledge which is stored in the minds of people who work within an organization (Argote and Ophir, 2007; Lant, 2007). Recorded knowledge refers to the storing of knowledge in manuals, routines, databases, or processes (Argote and Ophir, 2007; Lant, 2007). For example, in terms of the police, tacit knowledge refers to a police officer’s understanding of the communities and the criminals where he or she works. Recorded knowledge would refer to procedural manuals or the crime data that are recorded by that police officer and maintained by the police department.

**Training**

Training refers to the degree to which skills and knowledge of an individual can increase productivity in different organizations (Warglien, 2007; Price and Mueller, 1983). There are two types of training. General training equips an individual to work in any organization (Price and Mueller, 1983). Specific training equips personnel for tasks within that organization (Price and Mueller, 1983). Training could relate to the extent
that certain training provided by one organization can be used by other organizations which provide a different service (Price and Mueller, 1983) or by the extent that specific tasks depend on skills learned in that particular organization or through formal schooling.

**Perishability of services**

Perishability of services relates to the extent that the output or service produced by an organization can be stored for later use (Pauly, et al., 2002). Perishability relates to specific services in organizations, or specific tasks by personnel within these organizations. If a person arrives at a hospital with a serious gun shot wound, the service of emergency medical workers must be provided at that moment. This is a highly perishable service. But, if the service an individual provided was folding pizza boxes, the employee could fold multiple pizza boxes at one time and then use these folded boxes whenever they were needed. This is an example of a non-perishable service. Tasks and duties vary in the extent that they are perishable.

**Penalty for non-completion**

Penalty for non-completion refers to the extent an output or service provided by an organization can go uncompleted without a penalty (Pauly, et al., 2002). This component can also refer to a delay in service provision, increasing the difficulty of performing that task at a later time (Pauly, et al., 2002). Using the same example relating to perishability of services described above, not treating a gun shot wound would have a high penalty for non-completion. Without treatment, the individual may die or his or her health condition may worsen. An unfolded box does not have the same penalty for non-completion.
Workload

Workload refers to the amount of performance required by personnel in a specific job in an organization (Price and Mueller, 1983). Personnel in certain organizations may have a higher workload than others. Workload has been measured either by the number of hours a day a person is actively working or the number of persons a worker is expected to provide services to (Price and Mueller, 1983).

Summary

This project identified two environmental and fifteen internal components and processes which mediate the impact of HIV/AIDS on organizations. Based on an understanding of the organizational structure of the comparison organizations, it should be possible to better estimate the impact of HIV/AIDS on the police. The common trends in the impact of HIV/AIDS and how these trends relate to the organizational structure of the comparison organizations will be described in the next chapter.
Chapter 10: The Impact of HIV/AIDS on Operations and Service Delivery

This project’s goal was to determine if it was possible to estimate the impact of HIV/AIDS on the police by studying the literature on a group of comparison organizations. Based on the information gained from the comparison organizations and the organizational structure and environment of the police, the police organizations in the sample are likely to incur a wide variety of HIV/AIDS impacts which will affect their operations and service delivery. This chapter will describe those HIV/AIDS impacts and the organizational elements which are related to them. The impacts described here are not tailored to an individual police organization, but are used to describe how and why impacts identified in the comparison organizations could be used to estimate the impact of HIV/AIDS on the police.

Because a goal of this project is to identify plausible impacts on the police, each impact will be described independently. Within the context of each impact there will be a discussion about what is known about the police and the comparison organizations in terms of those organizational components and processes relevant to that impact. Throughout this discussion, I will explore the plausibility of this impact within the sample police organizations. This process will follow a standard format. First, the impact will be identified. Second, the evidence related to the relevant components in the comparison organizations will be described. If measurement or methodological problems exist in the comparison literature which are relevant to this finding they will also be discussed here. Third, the rationale and extent of this impact occurring within the police organizations will be discussed.
These HIV/AIDS impacts on operations and service delivery were identified in a number of different comparison organizations. It would be redundant to explain the same impact in each and every comparison organization. In these cases, the impact on one comparison organization will be used as an example of this impact and its related environmental and internal components. The other comparison organizations which experienced a similar impact will be referenced, but not explained in any detail. The environmental and organizational components and processes described in Chapter 9 will be used to explain how and why HIV/AIDS is impacting the organizations.

As described in the previous chapter, the impact of HIV/AIDS on an organization is dependent upon the organizational environment, as well as HIV/AIDS-related attrition among organizational personnel and subsequent effects on the rest of the organization. Not all HIV/AIDS impacts described in this chapter are solely dependent upon organizational personnel who are infected with HIV/AIDS and the resulting impacts this has on the organization’s ability to operate and provide services. The impact of HIV/AIDS on an organization is also dependent upon changes in its environment which will alter its ability to provide services. Together these environmental, direct, and indirect impacts will reduce the overall ability of the organization to provide services.

This chapter will be divided into three sections. The first section will describe the way HIV/AIDS can impact the environment of an organizations and how this will reduce operations and service delivery. The second section will describe how HIV/AIDS-related absenteeism, productivity losses, and mortality will affect operations and reduce service delivery. Section three will describe how the environmental and HIV/AIDS-related absenteeism, productivity losses, and mortality combine to impact an organization.
Organizational HIV/AIDS Impacts due to the Environment

Environmental impacts are not occurring as a result of absenteeism, productivity losses, and mortality among infected and sick personnel. Rather, they are caused by changes in the environment, which may or may not be related to HIV/AIDS, which affect the organization’s ability to provide services. The environmental impact of HIV/AIDS is primarily related to changes in the demand for police services. If HIV/AIDS is causing a different type of demand, an increase or decrease in demand, or if this is occurring for any other reason, it could impact police organizations in two ways. First, an increase in demand, or more a complicated demand, in a departmentalized organization is likely to reduce its ability to provide services. Second, workers who are operating in an environment where they could contract HIV, or where they fear they could contract HIV, may provide less services. Each impact will be described independently.

Departmentalization and Reduced Service Provision

Departmentalization, when interacting with an increase or change in the nature of demand, can lead to inefficiency. Departmentalization refers to different parts of the organization being responsible for a variety of specific tasks (Price and Mueller, 1983). Increased or changed demand that relates to specific services provided by specific departments will place a greater workload upon those personnel who supply that service. Those personnel who perform tasks in other departments will not be affected. This results in some workers being overworked and others being underutilized. This environmental impact was only identified in the Botswana Healthcare System (Abt Assoc., 2000). It was included due to the quality of the research and the clarity in

The healthcare system in Botswana is experiencing an increase in demand, as well as a change in the nature of demand, due to HIV (Abt Assoc., 2000). HIV/AIDS is more complicated to treat than many other diseases and often requires longer hospital stays (Shisana, et al., 2004; Abt Assoc., 2000). The healthcare system is departmentalized (Abt Assoc., 2000). Certain elements of the system provide specific medical services, but not all of these medical services are involved in responding to HIV/AIDS-related demand. Medical and general wards were experiencing high workload due to HIV/AIDS, while other wards were underutilized (Abt Assoc., 2000). Strain was placed on specific parts of the organization instead of being spread throughout. To address these problems, hospitals were rotating staff between the different wards to give their personnel a break and were changing their referral patterns to not overburden parts of the organization (Abt Assoc., 2000).

The police, like many other national organizations, provide a multitude of services both within the organization and to the public. They are often responsible for border security, crowd control, and addressing violent crime (State Dept., 2008C; Namanya, 2008; State Dept., 2008I; BPS, 2003; RSPS, 2002; Raleigh, et al., 1998; Hills, 1996). Their personnel are trained for different tasks to provide different services (State Dept., 2008C; Namanya, 2008; State Dept., 2008I; BPS, 2003; SPS, 2002; Raleigh, et al., 1998; Hills, 1996). The police are departmentalized. Workload is generally high within the police organizations in the sample (Pelser, et al., 2004; UNDP, 2000; DFID, ND).
The extent that the police will be experiencing inefficiency is dependent upon the type of demand HIV/AIDS places upon the organization.

Little is known about the demand for police services in the sample, especially the extent that HIV/AIDS may be reducing or increasing it. If police organizations are not experiencing any change in the demand for their services, this impact is not relevant. However, there are two indicators of a change in demand for police organizations. There are indicators of a shift towards more violent gun-related crime (State Dept., 2008F; State Dept., 2008E; Pokhariyal and Mathuri, 2003; Stavrou and O’Riordan, 2004; Baker, 2004; Simelane, et al., 2004; Wood, 2000). This could be driven by increases in poverty due to HIV/AIDS, but the research is unclear. It was not possible to identify the extent that functional specialties exist that are strictly supposed to react to violent crime within these police organizations. Many have mobile and more militarized units (Hills, 2000), and likely these groups would be deployed to address an increase in violent crime. The militaries within these countries are also active domestically, so it is possible they would shoulder the burden of dealing with more serious crime, as is seen in Uganda (Baker, 2005) and South Africa (State Dept., 2008E).

There is also a growing HIV/AIDS orphan population (Kamwanga, et al., 2003; State Dept., 2008A-J). Some police organizations have developed units specifically to provide services to children and to women (Namanya, 2008; State Dept., 2008B; State Dept., 2008C; State Dept., 2008D; State Dept., 2008I). If this orphan population is increasing demand for police services, these units and their personnel could experience an increased workload.
More generally, within a departmentalized police organization, there are likely to be departments which are dealing with an increased or changed demand, while others may not be experiencing the same strain. It is possible certain departments may be experiencing reduced demand. It would be important to identify changes in demand, and identify what elements of the organization must respond. This would enable these organizations to shift resources from one department to another to address inefficiency and reduce workload on overburdened parts of the organization.

Psychological Strain and Mental Illness due to Fear of Infection

Organizational personnel who are experiencing the death of their colleagues and fear exposure to HIV are likely to experience emotional strain. The extent of the psychological and emotional toll on personnel is dependent on their workload, fear of infection, and general working conditions. Research on the psychological trauma associated with HIV/AIDS and increased workload has occurred in healthcare. Of all the organizations studied for this project, the healthcare system appeared to be the most strained by these factors and its personnel were suffering a serious emotional toll.

Healthcare systems face an increased and more complicated demand for services, and high levels of competition for skilled personnel, which combine to result in a limited supply of personnel and an increased workload (Dieleman, et al., 2007; Rode, 2005; Shisina, et al., 2004; UNDP, 2000; Feeley, et al., 2004; CRHCS, 2004; Cheluget, et al., 2003; Raviola, et al., 2002; Abt Assoc., 2000). Protection mechanisms to prevent the transmission of HIV from patients to doctors are limited, and healthcare workers fear being infected during the course of their work (Dieleman, et al., 2007; Shisana, et al., 2004; Raviola, et al., 2002). Healthcare workers are also experiencing the emotional
strain of treating HIV infected individuals. The disease has no cure and resources for treatment are limited; healthcare workers are not able to cure their patients (Rode, 2005; Shisana, et al., 2004; Raviola, et al., 2002). Demand is causing an increased workload, which must be done by fewer personnel. This results in high levels of burnout and an emotional toll on healthcare workers (Rode, 2005; Shisana, et al., 2004; Cheluget, et al., 2003; Raviola, et al., 2003).

The police are not experiencing the same severity of these factors as healthcare workers. They are not going to be dealing with the same emotional toll of being unable to help AIDS patients. However, there are a number of factors within police organizations that may place their personnel at greater risk of increased stress, burnout, and reduced morale. Police workload is high (Pelser, et al., 2004; UNDP, 2000; DFID, ND) and the supply of personnel will be affected by HIV/AIDS-related attrition. In Malawi, 76% of police respondents indicate they had to do additional work because of absenteeism (Pharoah, 2005: 95). The police are also coming into contact with persons who they believe may be infected with HIV, potentially heightening their fear of infection (Pharoah, 2005). The police, in some of the countries, are responsible for responding to emergency medical situations (Mbewe, et al., 2007) and increasing their likelihood of coming into contact with people who are infected with HIV or opportunistic infections. The police are socially isolated, which places a greater reliance upon each other for companionship (Wasikhongo, 1976). They could be more deeply affected by the death and illness of their fellow personnel.

Dieleman et al. (2007) found that unpaid overtime worsened satisfaction within the healthcare system. It is unknown the extent that overtime is paid to the police for...
work outside their normal working hours. The police are generally not allowed to unionize, pay is generally poor, and most of the organizations do not have enough financial resources (State Dept. 2008A-J), limiting the organizations’ ability to absorb high overtime costs. These factors have the potential of combining to result in greater stress and burnout among police personnel.

If a police man or woman has a high workload, fears being infected with HIV, and sees his or her coworkers die, this will undoubtedly result in an emotional toll. If a psychologically strained policeman is put into a stressful situation, he may react poorly and this could result in physical harm to a civilian. Policing is already a stressful occupation, and adding more stress could result in additional human rights violations or use of excessive force. With many personnel experiencing these same problems, this will result in an overall diminished ability to provide services for the entire organization.

Organizational HIV/AIDS Impacts due to Infected Personnel

In any country with high levels of HIV and AIDS prevalence in the general population, it is also likely that there will be high levels of infected personnel working in an organization. These infected personnel in the later stages of the disease will be sick, absent from work, less productive, and will eventually die. An organization which is facing high levels of competition for personnel will have its supply of labor reduced, exacerbating problems caused by HIV/AIDS-related attrition. These direct impacts on sickness, absenteeism, productivity losses, and mortality due to HIV/AIDS are likely to cause substantial indirect impacts upon an organization, including the inefficient utilization of skilled labor, reduced goal effectiveness due to HIV/AIDS attrition among
management, HIV/AIDS infected personnel continuing to be paid even though they are no longer productive, reassignment due to sickness leading to inefficient use of resources, and a loss of organizational knowledge due to AIDS mortality.

*Inefficient utilization of skilled labor*

AIDS mortality will result in vacancies among less skilled personnel. In some organizations, these less skilled personnel are responsible for highly perishable tasks with a high penalty for non-completion. If mortality reduces the supply of less skilled labor, then these tasks must then be performed by someone else. These tasks which had formerly been done by less skilled personnel must then be done by highly trained and skilled personnel who already have other duties. The workload of these skilled personnel is increased with simple duties which less skilled persons could perform. This impact was only identified in the Botswana healthcare system, and was included due to clarity in the identification of relevant organizational components by Abt. Assoc. (2000).

This health system is experiencing a shortage of medium skilled workers responsible for duties such as turning patients and changing linens in hospital beds (Abt Assoc., 2000). This shortage is driven partly by AIDS mortality (Abt Assoc., 2000). These duties are necessary to provide proper care; there is a high penalty for non-completion (Abt Assoc., 2000). If not completed, this can cause further illness or death for patients, so the nurses did it themselves (Abt Assoc., 2000). The healthcare system in Botswana is already experiencing an increase in the level and complexity of care required due to HIV/AIDS (Abt Assoc., 2000). This translates into a higher workload for personnel within the organization (Abt Assoc., 2000). Performing these less skilled tasks
increased the workload of these nurses, when they are already facing increased and more complicated demand due to HIV/AIDS.

Policing is a skilled career, and these skills are developed over years of working as a police officer (Pharoah, 2005; Perez, 1997; Bittner, 1972). Police organizations have some highly skilled and professional personnel within their ranks (Opolot, 2002; Clayton and Killingray, 1989). It is difficult to determine the extent to which this impact would occur in the police because there is limited information on the workload of specific personnel and work processes within the sample police organizations. Vacancies and HIV/AIDS attrition is likely to affect personnel across the entire organization, which means that people who are doing less skilled jobs will also be affected. The police do not generally pay a high non-completion penalty (State Dept., 2008C; Lumina, 2006; Amnesty Intl, 2002; Mwalimu, 1991), but some of their service delivery is perishable (Mbewe, 2007; Baker, 2005; Abrahamson and Williams, 2005). There may be some inefficient utilization of skilled labor in police organizations.

As part of the police response to crime, or the investigation of a crime, there may be certain paper work or procedures typically done by less skilled personnel which have to be done to ensure prosecution. If less skilled personnel are unavailable, it is possible skilled personnel may take it upon themselves to complete these tasks. These police organizations also respond to emergencies and more serious crimes (Mbewe, 2007; Baker, 2005; Abrahamson and Williams, 2005). Serious disorder such as riots will also demand the attention of the police. Highly skilled personnel may be deployed to deal with these emergency situations of disorder, when their skills could be better used elsewhere. Experienced investigators may have to do tasks which less skilled personnel
could do, such as conducting surveillance or maintaining watch over a serious crime seen. The skills of expert police personnel may be wasted providing services which could be done by civilians or the rank and file.

_HIV/AIDS and Reduced Goal Effectiveness due to Limitations in Oversight by Managers_

The basic structure of all organizations involves a hierarchy, with certain individuals involved in managing and directing the labor performed by lower level personnel (Richard and Davis, 2007; Scott, 2004). The ability to manage labor to reach organizational goals will be affected by absenteeism and mortality among personnel who are the decision makers. This, in turn, will reduce the ability of an organization to reach its goals and provide effective services because managers are not providing direction.

The attrition-induced problems of supervision are related to a number of different organizational components. The supply of managers will be driven by competition and AIDS mortality. The degree of centralization will determine the impact of manager attrition. Attrition among managers/decision makers in highly centralized organizations will have a greater effect on the organization. At the supervisory level, death among supervisors will limit the ability of an organization to implement specific programs or operations. In geographically departmentalized organizations with high degrees of centralization, supervision of the distant parts of the organization will also be affected. Combined death among managers and supervisors will result in reduced goal effectiveness. This was identified in the Ugandan Military (ICG, 2004), the Malawian Healthcare System (UNDP, 2000), and Malawian Ministry of Agriculture (UNDP, 2000). The Malawian organizations will be used to describe this impact.
The healthcare system in Malawi depicts the impact of supervisor attrition on goal effectiveness. The Malawian healthcare system is experiencing high levels of HIV/AIDS-related attrition among supervisors. This attrition, combined with competition, is resulting in a low supply of supervisors known as clinical officers (UNDP, 2000). Clinical officers appear to be responsible for the direct supervision of nurses (UNDP, 2000). Nurses are the primary personnel responsible for delivery of services (UNDP, 2000). This organization is also facing an increase in demand and more complicated service provision due to HIV/AIDS (UNDP, 2000). High vacancy rates are resulting in high supervisor to nurse ratios, which create difficulties in the coordination of service delivery (UNDP, 2000). The Malawian health sector also has poor information management systems (UNDP, 2000), which could place an increased reliance upon direct contact between supervisors and nurses. There are too few supervisors to adequately coordinate the activities of the nurses and implement new strategies, which the UNDP (2000) indicate is causing problems in overall service delivery within the organization.

The Malawian Ministry of Agriculture depicts the interaction between AIDS mortality, geographic departmentalization, and centralization on goal effectiveness. In this organization, a low supply of labor among more senior personnel in the Ministry of Agriculture was driven by HIV/AIDS and a combination of other factors including competition for skilled personnel, low pay, limited resources, and low levels of commitment and satisfaction (UNDP, 2000). The Ministry of Agriculture is geographically departmentalized (UNDP, 2000). Senior positions were primarily located at headquarters, when much of the work of the ministry was done in rural areas (UNDP, 2000). High vacancy rates among senior level personnel were reducing the
management’s ability to visit geographically distant parts of the organization and oversee what was occurring (UNDP, 2000). Decisions about these programs were made at the headquarters (UNDP, 2000), indicating a higher degree of centralization. Those programs in distant geographic areas that required close supervision by management were being negatively affected (UNDP, 2000). The UNDP (2000) did not identify the extent that visits by senior personnel were reduced or the exact impact on these programs.

The police are a geographically departmentalized organization (CHRI, 2006; Steinburg, 2005; Stavrou and O’Riordan, 2004; Pelser, et al., 2004; SPS, 2002; Malan, 1999; Raleigh, et al., 1998; Merenin, 1982), but we do not know the extent of HIV and AIDS among senior staff. In the Malawi Police Services, the UNDP (2000) indicates a low supply of labor among senior staff. Overall planning in many police organizations is done at the center (Hills, 2007; Merenin, 1982; Igbinovia, 1981), but operational decisions are made at lower levels within these organizations (CHRI, 2006; Raleigh, et al., 1998; Merenin, 1982). Both strategic and operational decisions may be affected by HIV/AIDS-related attrition among police supervisors and police managers.

Strategies within the police organization are often driven by the center of the organization (Hills, 2007; Marenin, 1982; Igbinovia, 1981). If the police are experiencing mortality among senior management, this could cause reduction in the ability of the police to alter or change their strategy to respond to emerging threats such as terrorism or organized crime. This ability to change strategy is also dependent upon the extent that police in more rural areas, or areas farther away from headquarters, are involved in proactive policing. If the police are simply reacting to crime then direction by the headquarters will likely not be necessary. For elements of the police who are
responsible for proactively addressing problems such as drug dealing, arms trafficking, and organized crime, a reduction in supervision at the center may limit their ability to respond to these problems.

Operational decisions in a reactive organization may be less affected by a lack of oversight by senior personnel, but operations will be affected by HIV/AIDS-related attrition among supervisors. It is difficult to identify the extent that the police will have similar problems in work unit supervision. Undoubtedly, the police will be facing attrition among supervisors. In the Malawian Police Services, there are high levels of mortality among sergeants (Pharoah, 2005; UNDP, 2000), but the impact of mortality upon the ratio of sergeants to the number of personnel they are supervising is unknown. Attrition among sergeants and other supervisors could cause more problems with coordination and supervision and further reduce service delivery.

Most of these police organizations are generally not goal effective (Mattes, 2006; Abrahamson and Williams, 2005; Pelser, et al., 2004; Stavrou and O’Riordan, 2004). HIV/AIDS-related attrition among supervisors is not going to result in these police organizations suddenly becoming ineffective at dealing with crime and disorder. Attrition among management and supervisors may only worsen the limited effectiveness of these police organizations in dealing with these problems.

It is possible that the Botswana Police Services (BPS) may be affected differently by HIV/AIDS than the other police organizations in the sample. Judging by the indicators of crime rates and domestic order maintenance (Roth, 2007; Naude, et al., 2006; Henk, 2006), the BPS appears to be a goal effective organization. HIV/AIDS-related attrition among supervisors may have a greater impact upon this organization’s
ability to continue to fulfill those goals. Because the BPS has something to lose, meaning they are effective, they may be more likely to be affected by losses among supervisors and managers.

*Keeping Non-Productive Personnel on the Books*

Without treatment, the productivity of an HIV infected person will decrease as the severity of their symptoms increase (Essig, 2007). When these individuals are no longer productive, it would be logical to retire them and hire a replacement. Instead, some organizations are continuing to pay personnel when they can no longer be productive. This appears to be driven by two sets of independent factors. In the Swazi military (Simelane, et al., 2004), the Botswana educations system (Kinghorn, et al., 2002), and the Botswana health system (Abt Assoc., 2000) it was driven by managerial concern for their employees and the level of benefits provided within the organization. In the Zambian education system (Grassley, et al., 2000) this same impact is driven by financial inefficiency and tacit knowledge retention. The Botswana health system and the Zambian education system will be used to describe this impact.

Botswana healthcare workers were making the conscious choice to keep ‘working’ for an organization even when they could no longer be productive (Abt Assoc., 2000). These benefits were too good for these workers to give up (Abt Assoc., 2000). Managers allowed this to happen because they were concerned about the welfare of these workers (Abt Assoc., 2000). These healthcare workers are still earning a salary, but were often ill or absent and had substantially reduced productivity (Kinghorn, et al., 2002; Abt Assoc., 2000).
In Zambian education, this same impact is driven by tacit knowledge retention and general financial inefficiency within the organization. Grassly, et al., (2002) indicates that many workers continue to get paid when they are too sick to work or when they are dead because the organization does not realize that they are no longer working. This organization lacks comprehensive human resources records, indicating tacit knowledge retention, which mean it is more difficult for them to track their workforce (Grassly, et al., 2002). They are also a financially inefficient organization, which means they are not only lacking in financial resources but often mishandle their money (Grassly, et al., 2002).

Management concern and high benefit levels or tacit knowledge retention and general financial inefficiency are likely to result in police organizations continuing to pay personnel even after they can no longer work. There are indicators that the police in some organizations do have higher levels of benefits (Pharoah, 2005; UNDP and GOM, 2004), while in others they are described as low (State Dept., 2008I; CHRI, 2006). Likely, even limited benefits offered to police personnel will keep them working because it is better than being unemployed. There are some indicators of management concern for employees among lower level management and supervisors (Wasikhongo, 1976), but not generally by the command staff. Managers and supervisors may allow personnel who are too sick to work to continue to draw pay. It would be surprising if upper-level police managers endorsed this process.

Police organizations also generally have tacit knowledge retention and only limited, if any, computerized human resources records (CHRI, 2006; Pharoah, 2005; RSPS, ND; UNDP, 2000; Raleigh, et al., 1998). The police are also financially
ineffective organizations (State Dept., 2008A-J; UNDP, 2000; Raleigh, et al., 1998). Financial inefficiency and tacit knowledge retention would indicate that police organizations are likely to be mistakenly paying personnel who are too sick to work or dead. Both the Botswana Police Service and the South African Police Services have computerized records systems (Mattes, 2006; Steinburg, 2004; BPS, 2003). These two organizations may be able to limit the number of sick or dead personnel they are mistakenly supporting.

Whether on purpose or by mistake, if police organizations are continuing to pay salaries and benefits to persons who are too sick to work or who are dead, this could create a number of problems. The police do not generally receive all of the resources that they require from the government (State Dept., 2008A-J; CHRI, 2006; UNDP, 2000; Raleigh, et al., 1998), which limits their ability to effectively provide services to the community and pay their personnel. By having a continuous financial drain from individuals who are no longer working, this further reduces the ability of the organization to meet its responsibilities and its long term goals. Keeping sick and dying personnel on the books also inflates the number of personnel which management believes it has available and limits long term planning in the comparison organizations (Manning, 2003; Kinghorn, et al., 2002). This could keep police organizations from being able to fill vacancies, exacerbate manpower shortages, and further reduce service delivery.

At the same time, by continuing to pay personnel who are too sick to work or deceased, the organization is providing some degree of social service to these personnel and the greater community. Personnel who are infected with HIV/AIDS and sick are still receiving pay, receiving their health benefits, and continuing to have the opportunity to
obtain pension or death benefits. Even though they are too sick to work, if these personnel continue to be supported by the organization, they have the capacity to maintain themselves and their extended family. Without the pay and benefits of these workers, these families may no longer be able to maintain cohesion or support themselves. A family which no longer can maintain itself would only further burden the state.

*Reassignment due to Morbidity & Inefficiency*

As the disease in an infected person progresses, without treatment, the severity of his symptoms will worsen (Essig, 2007). The more severe symptoms a person is experiencing, the less will they be able to complete their duties. If the duties of an infected person involve physical labor, their ability to complete these duties will decrease even more quickly. This person may then get reassigned to lighter duties where they are no longer productive. This is likely to cause an over abundance of personnel on light duty, who are no longer contributing their services to the organization. This was observed in the Zambian Wildlife Authority (Rosen, et al., 2006), the Botswana Local Councils (Pharoah, 2005), a municipal electric department (Manning, 2003), and a municipal fire and emergency services department (Manning, 2003). There was no indication in any of these organizations the impact that this reassignment of personnel was having on the greater organization. The Zambian Wildlife Authority will be used to describe this impact.

Work in the Zambian Wildlife Authority is highly physical. Personnel too sick to patrol were assigned to light duty activities (Rosen, et al., 2006). As more personnel grew sick, more and more personnel were assigned to light duty (Rosen, et al., 2006).
Eventually, there were more personnel on light duty than was needed (Rosen, et al., 2006). The primary duty of ZAWA personnel is to patrol the wildlife parks. Personnel that cannot patrol are, in a sense, not providing any service to the organization. Police work does not appear to be as physically demanding as patrolling by ZAWA personnel, but there are likely to be a number of duties which are physically demanding. Likely, police organizations will experience greater numbers of personnel infected with HIV, who have a reduced immune system, and are no longer able to do more physically demanding tasks. They will subsequently be reassigned to less stressful work, even if there are no positions available. Police organizations may become overburdened with personnel doing light duty work, and this may result in too few personnel doing the more physical tasks. The organization may be helping to support these infected workers and their families. However, these personnel will also be a financial drain upon these police organizations, but will no longer be able to provide services.

The Impact of AIDS Mortality on Organizational Knowledge

Organizations can retain their knowledge in a number of ways. An organization with tacit knowledge retention retains its knowledge in the minds of its personnel, rather than in routines, rules, or manuals. When an organization retains its knowledge tacitly and personnel leave the organization or die, their knowledge will be lost. This impact was identified in the Mulange Mission Hospital in Malawi (Rode, 2005) and the Lesotho Ministry of Agriculture (Pharoah, 2005).

Rode (2005) indicates tacit knowledge retention and a loss of personnel was occurring in a hospital in Malawi. This hospital also stored its knowledge in individuals;
it did not document its rules or provide procedural manuals (Rode, 2005). When experienced personnel left the organization for any reason, the hospital would lose the knowledge these individuals possessed. Not only would the organization lose this knowledge, but there were other repercussions. For example, a head nurse had indicated all nurses would get a pay raise but this was not documented (Rode, 2005). The head nurse left the organization before the raise occurred, and when the nurses later requested their raise, they were denied it (Rode, 2005). The nurses threatened to strike and stop working overtime which would jeopardize service delivery at the hospital (Rode, 2005).

The police may not be stricken with same problems in the loss of administrative knowledge because much of their organizational structure and administration is determined by the government and in their procedural rules (Brogden, 1994; Mwalimu, 1991). But most police organizations retain their knowledge tacitly (CHRI, 2006; Pharoah, 2005; SPS, ND; UNDP, 2000; Raleigh, et al., 1998). When experienced personnel die, their knowledge will be lost. More generally, skills such as interviewing and investigations take years to develop; if these skills are lost, this will cause problems for any organization. It is also likely to result in a reduced quality of service delivery by the police.

Organizations can protect their knowledge by recording it or storing it in routines and procedures. The South African Police Services and the Botswana Police Service record more of their knowledge (Steinburg, 2004; BPS, 2003). These two organizations may be able to protect some of their knowledge from being lost due to AIDS mortality.
Organizational HIV/AIDS Impacts due External Environment & Infected Personnel

HIV/AIDS is likely to impact an organization in a variety of ways. Some of these impacts are dependent only upon the organizational environment, others occur due to HIV/AIDS-related attrition among organizational personnel. There are also HIV/AIDS impacts on operations and service provision which occur due to a combination of the external environment and HIV/AIDS-related attrition among personnel in the organization. These combined factors are likely to result in organizational tasks which should require high levels of skills being done by less skilled personnel and a migration of infected personnel in search of medical care. Finally, based on levels of demand, supply, and a penalty for non-completion of services, organizations are likely to reduce the level of services they provide.

Deskilling of Specific Tasks within the Organization

National public service organizations tend to provide a wide variety of services, and personnel providing these services subsequently have a wide variety of tasks. Certain tasks require more skill and expertise than others. When an organization loses those personnel who can perform complex tasks, a less skilled person may end up providing these tasks. Increases in demand are likely to result in a greater number of complex tasks done by the less skilled. This will especially be true if that specific task must be provided. This phenomenon, defined here as deskilling, refers to certain duties being performed by less skilled personnel due to a lack of skilled personnel which are supposed to perform them.

General training, high levels of competition for skilled workers, and AIDS mortality are contributing to a limited supply of labor among the comparison
organizations. Combined with greater demand for services, this leads to deskillling. The worse the labor supply, the greater the extent to which deskillling is likely to occur. If the service provided is perishable and has a high penalty for non-completion, deskillling will occur at an even greater rate because the service must be provided. This impact was identified in many different comparison organizations, including the Zambian educational system (Grassley, et al., 2002), civil service organizations in Lesotho (Pharoah, 2005) and Malawi (UNDP, 2000), and healthcare in Botswana (Abt Assoc., 2000), Malawi (UNDP, 2000), South Africa (Shisana et al, 2004), and Kenya, (Cheluget, et al., 2003). The way in which deskillling occurs in healthcare organizations will be used to describe this impact.

Healthcare organizations experienced an increase in the level and complexity of demand due to HIV/AIDS (MSF, 2007; Rode, 2005; Shisana, et al., 2004; CRHCS, 2004; Cheluget, et al., 2002; Abt Assoc., 2000). They are also experiencing high levels of HIV/AIDS-related absenteeism, productivity losses, and mortality (Rode, 2005; Shisana, et al., 2004; CRHCS, 2004; Cheluget, et al., 2003; Raviola, et al., 2003; UNDP, 2000; Abt Assoc., 2000). Competition for skilled nurses is high, private facilities and hospitals in other countries can pay better wages (MSF, 2007; Cheluget, et al., 2002; UNDP, 2000). Nurses in sub-Saharan Africa are generally trained to function independently of doctors and can prescribe medication (Abt Assoc., 2000; UNDP, 2000). Those tasks being deskillled are generally those done by nurses, which require a high level of expertise and years of training (Abt Assoc., 2000; UNDP, 2000). Medical care is perishable and has a high penalty for non-completion (Cheluget, et al., 2002; Abt Assoc., 2000).
The impact of labor supply on deskilling is depicted in the severity of deskilling in Kenya and Malawi compared to Botswana or South Africa. South Africa and Botswana both have more healthcare resources than Kenya and Malawi (Shisan, et al., 2004; Cheluget, et al., 2002; Abt Assoc., 2000). In Botswana and South Africa, deskilling is primarily occurring in rural areas (Shisana, et al., 2004; Abt Assoc., 2000). In these two countries, nurses were being asked to provide services done by doctors (Shisana, et al., 20004; Abt Assoc., 2000).

A low supply of labor, increased demand, and a perishable service with a high penalty for non-completion resulted in deskilling in both Kenya and Malawi. Kenyan healthcare workers trained relatives to provide less skilled services and nurse assistants and non-professional personnel were providing certain types of care (Cheluget, et al., 2002). In Malawi, ward attendants were doing work which was supposed to be done by nurses (UNDP, 2000). By definition, a ward attendant has no medical training and is generally responsible for cleaning and doing menial tasks (UNDP, 2000). Ward attendants were doing the work of registered or enrolled nurses, positions which require three years of training (UNDP, 2000). In Zimbabwe and Malawi, deskilling due to limited labor supply and high demand was resulting in unskilled labor doing the work of healthcare professionals. At least in South Africa and Botswana, skilled personnel were still performing these tasks.

Within these healthcare organizations, it was not possible to identify the exact tasks that were being deskilled. It was also not possible to identify the precise impacts deskilling was having on these organizations. There is evidence of deskilling having a negative impact on the Malawi’s Ministry of Agriculture. Deskilling was resulting in an
increased workload for the supervisors of deskilled personnel, because they were not adequately trained or prepared for their duties (UNDP, 2000). It was also resulting in lowered morale among those being supervised by these less skilled individuals (UNDP, 2000).

There are factors which could plausibly contribute to the deskilling of certain duties in the police organizations. Police are likely to be experiencing AIDS mortality. Even without clear evidence of competition for trained police personnel, many of these organizations have a limited supply of labor (State Dept., 2008; Pharoah, 2005; UNDP, 2000) and also have a high workload. These factors combined with increased absenteeism and mortality due to HIV/AIDS may cause the police to deskill certain duties.

These organizations may have clerks do certain duties previously done by police personnel. Taking reports and interacting with people that come to the police station could be done by non-police personnel. This is dependent upon the extent to which an organization has unskilled labor available. It also is likely that less experienced police personnel will be given duties for which they have not received appropriate training nor have the needed experience. It takes many years of experience for an individual to become skilled at criminal investigation. It is possible these duties could be placed in the hands of less skilled personnel. This might further reduce the ability of the police to respond to crime, resulting in more work for already overloaded personnel. Less skilled and experienced personnel may also react inappropriately, use excessive force, or violate human rights. It is also possible that personnel may be promoted to supervisors or managers without appropriate training. Opolot (2002) indicates that training of
supervisory personnel is often negligible. This could create problems within the organization if inexperienced personnel are promoted from the ranks.

However, the extent of deskilling in police organizations is dependent upon the demand for services and the penalty for non-completion it pays for not providing those services. If demand for police services is not increasing, deskilling may not occur to the same extent or at all. If a police organization is experiencing an increase in demand, deskilling might occur for specific tasks that must be done. But this not necessarily an issue for most sub-Saharan African police organizations, because they do not pay a high penalty for non-completion of tasks (State Dept., 2008C; Lumina, 2006; Amnesty Intl, 2002; Mwalimu, 1991). Instead of having less skilled personnel try to complete complex duties, they may not simply perform these tasks or services at all. The South African Police Services and Botswana Police Services are both accountable for the services they provide (Bruce, 2007; Amnesty Intl., 2002). These two organizations may experience greater levels of deskilling than the other organizations because they are mandated to provide certain services.

*Urban Migration of Infected Personnel*

If an organization is geographically departmentalized, they are likely to experience a migration of infected personnel from rural to urban areas in search of HIV/AIDS treatment. This migration is occurring due to geographic departmentalization, HIV and AIDS prevalence among the workforce, and a lack of available treatment in rural areas. This migration is resulting in rural staffing shortages and higher levels of absenteeism among urban personnel. This impact was identified in the Local Councils in Botswana (Pharoah, 2005), the Lesothan Ministry of Agriculture (Pharoah, 2005), the
Zambian education system (Kamwanga, et al., 2003) and the Botswana education system (Kinghorn, et al., 2002). These four organizations provide different services and have different levels of resources, but are experiencing the same HIV/AIDS impact. The Botswana Local Councils will be used to describe this impact.

In Botswana, Pharoah (2005) found that civil service personnel who work for local governments, called Local Councils, were transferring from rural areas to the capital city of Gabarone to obtain better medical care. Local councils have high levels of geographic departmentalization (Pharoah, 2005; Picard, 1979). Workers had the ability to transfer to urban areas, because Local Councils operate under a single unified civil service system (Picard, 1979). Transfers are controlled at the national level (Picard, 1979). This migration of personnel created rural staffing shortages and urban staff overages with higher levels of absenteeism (Phaorah, 2005).

The police are geographically departmentalized (CHRI, 2006; Steinburg, 2005; Stavrou and O’Riordan, 2004; Pelser, et al., 2004; SPS, 2002; Malan, 1999; Raleigh, et al., 1998; Merenin, 1982) and are also likely to be affected by the same limitations in the availability of HIV/AIDS treatments as other organizations. The police are likely to be experiencing a migration of their personnel from rural to urban areas to access healthcare. Rural police stations may be experiencing staffing shortages, while urban police stations may have a full complement of personnel, but higher levels of absenteeism because their personnel are undergoing treatment for HIV/AIDS. The extent that individual police personnel have the ability to initiate their own transfer is unknown. If the police do not have the same ability to transfer, then they may not experience this same migration. Instead, this may result in higher levels of absenteeism and mortality among personnel in
rural areas because they are not able to obtain treatment. Making treatment available to those personnel working in rural areas could mitigate this impact.

The Kenyan Police Services and the Zambian Police Services primarily provide services in more urban areas (State Dept., 2008C; State Dept., 2008I). These two organizations may not be experiencing as much migration of personnel in search of treatment for HIV/AIDS because they may have better access to treatment.

This same phenomenon is occurring in three very different countries; Botswana has higher levels of treatment and is relatively wealthy, while Lesotho and Malawi are much poorer and have lower levels of treatment provision in their general population (CIA, 2008; UNAIDS, 2007). Any organization that is geographically departmentalized may be experiencing a similar migration of personnel in search of treatment.

Demand, Supply, Non-completion Penalty, and Service Delivery

The ability of an organization to provide services is affected by a number of different factors. The ability of an organization to provide services is based upon the level of demand. An increase or change in demand may reduce service delivery in an organization. The ability of the organization to meet their demand is also partially dependent upon the supply of available labor within the organization. Changes in either are likely to affect the ability of the organization to provide services; changes in both even more so. But the impact of supply and demand is partially dependent on the non-completion penalty an organization pays for not providing particular services.

HIV/AIDS-related attrition will reduce the supply of personnel to provide services. Independent of HIV/AIDS, the supply of personnel is also affected by
competition for personnel. The greater the penalty for non-completion, the greater likelihood the organization will continue to provide the service and incur increased financial costs and a higher workload. Services with a low penalty for non-completion may be delayed or simply not done at all. This impact was identified in the Lesotho Ministry of Agriculture (Pharoah, 2005), the Local Councils of Botswana, the Malawian Educational System (Kadzimura, et al., 2001; UNDP, 2000), the Botswana Educational System (Kinghorn, et al., 2002), and a municipal Crematory and Cemetery Services in South Africa (Manning, 2003). This impact will be discussed in relation to these different organizations due to variation in the non-completion penalty each pays for not providing services.

Changes in service delivery and demand were identified in the Lesotho Ministry of Agriculture and the Local Councils of Botswana (Pharoah, 2005). Both organizations were experiencing AIDS mortality among personnel as well as an increased demand for services (Pharoah, 2005). Reduced supply of services and death resulted in persons doing extra work and reduced professionalism (Pharoah, 2005). For example, employees were making appointments with clients and then not showing up because they were too sick (Pharoah, 2005). In both organizations, Pharoah (2005) was not able to identify the type of work which was affected or the magnitude of these reductions in service delivery. A non-completion penalty did not appear to be a factor in the provision of service in either organization, but this could not clearly be ascertained due to limitations in available information.

In Malawi and Botswana, the school system was able to absorb absenteeism in a number of ways. This included increasing class sizes, doubling up on classes, increasing
the number of study halls, and canceling classes (Kinghorn, et al., 2002; Kadzamira, et al., 2001; UNDP, 2000). These two education organizations were not as affected by the reduced supply of labor caused by HIV/AIDS deaths and absenteeism because they do not have to pay the costs for not teaching their students. These organizations absorbed teacher absenteeism and worked to make sure students were monitored, but teacher absenteeism reduced the amount of learning opportunities provided to the students. These organizations are meeting their daily responsibilities of providing an ‘education’ to their students, but there will be a long term penalty not incurred by the school when these students do not have the education they need to obtain skilled jobs and contribute to the economy. The student and the country, not the teachers, are penalized for these organizations not providing an education to their students.

A penalty for non-completion exacerbated service provision. In a municipal cemetery and crematorium department, Manning (2003) found that supply of personnel was being reduced by absenteeism and death and that demand was increasing due to high levels of death. This organization has a high penalty for non-completion and provides a perishable service (Manning, 2003). They have to provide funeral or crematory services, which could not be delayed (Manning, 2003). This organization experienced considerable levels of absenteeism and death among employees, which, combined with the non-completion penalty, placed a strain upon the organization (Manning, 2003). Manning (2003) did not identify this strain.

The ability to provide services is affected by a combination of factors, including competition, AIDS mortality and absenteeism, a reduced supply of personnel, an increase in demand, and a non-completion penalty. Although the prevalence data on the police are
limited, there is evidence of AIDS-driven mortality in the police (Pharoah, 2005; Amyunza-Nymungo, 2001), indicating a reduced supply of services. The labor supply in police organizations is also limited (State Dept., 2008I; Pharoah, 2005; UNDP, 2000) and the ratio of police to the public is generally high throughout the sample. With or without an increase in demand, HIV/AIDS-related attrition is also likely to result in reductions in the timeliness and effectiveness of service delivery. Some police organizations, specifically those with more personnel, will be better able to absorb HIV/AIDS-related attrition without reducing services.

There are indicators of competition for police personnel (Abrahamson and Williams, 2005; Baker, 2005). If private security companies are hiring skilled personnel, then this may reduce the supply of labor available to a police organization. This will result in a reduced ability of that organization to provide services.

Demand for police services may be increasing due to higher levels of crime and gun related crime (Hills, 2007; Simelane, 2007; Roth, 2007; DFID, ND; Baker, 2006; Abrahamson and Williams, 2005; Pokhariyal and Mathuri, 2003). In other countries crime is decreasing (SAPS, 2008; KPS, 2008). If a police organization is experiencing an increase in demand for services, this may also result in a reduced ability of the organization to provide the level of service it previously provided. However, the police in most of the sample countries pay a low non-completion penalty (State Dept., 2008C; Lumina, 2006; Amnesty Intl, 2002; Mwalimu, 1991). Therefore, the police are likely to be reducing the services they deliver, not accruing an increased workload for personnel or greater financial costs to pay overtime. Citizens and businesses are therefore likely to be getting less police services. Police may be patrolling less. They may be taking more
time to investigate crimes. Reduced service provision might turn more people to the use of alternative mechanisms such as private security or mob justice.

Summary

The direct impact of HIV/AIDS on absenteeism, productivity losses, and mortality are likely to have a serious indirect impact upon operations and service delivery in police organizations in sub-Saharan Africa. It is also clear that changes in the environment in which an organization operates will impact the ability of a police organization to operate and provide services. Police skills and expertise are likely to be inefficiently used or misused. Mortality among leadership is likely to result in a reduced ability to provide strategic planning and also result in an increased strain on work unit supervisors, such as sergeants and corporals. Police organizations will lose knowledge and experience. The finances, resources, and the ability of the organization to conduct human resources planning will be seriously affected. Finally, police personnel are likely to experience burnout and stress. These impacts will all combine to reduce service provision by a police organization.
Chapter 11: Learning from Comparison Organizations

This project sought to identify the extent that it was possible to estimate the impact of HIV/AIDS on the police from the literature on a group of comparison organizations. The initial review of the literature on the comparison organizations in Chapter 5, 6, and 7 had a number of limitations. While informative, these limitations indicated that it was overall somewhat difficult to learn from one organization about another through a face value review of the literature.

To utilize the literature to estimate the impact of HIV/AIDS on the police, a complimentary approach was needed in the second stage which would utilize the existing information but study this information in a new way. In Chapter 9 and 10, this project developed a theoretical understanding of the literature by studying the organizational structure of the comparison organizations and how this relates to the impact of HIV/AIDS. A theoretical model was then developed from this literature. It was then possible to explore the relevance of this information to the police in a more systematic way. Through this stage of the methodological approach it was hoped to identify information of relevance to the police and address some of the limitations of the face value review of the literature.

This chapter will explore the benefits and limitations of this project’s methodological approach. It will also identify if it was possible to estimate the impact of HIV/AIDS on the police from the literature on the comparison organizations. This chapter is divided into three sections. The first section is an exploration of the benefits of this methodological approach for learning about the impact of HIV/AIDS on the police. The second section will explore its limitations. The third section will explore the extent it
was possible to estimate the impact of HIV/AIDS on the police by studying the impact of this disease on a group of comparison organizations.

**Benefits**

Both the face value review of the literature and the development of a theoretical model helped to better understand the topic and identify what was known and not known about the impact of HIV/AIDS police. Some of these benefits relate to this approach overall, while others relate to the benefit of studying the impact of HIV/AIDS organizationally instead of a face value review of the literature. Through this understanding it was possible to better understand how HIV/AIDS is likely to impact the police. This approach had a number of benefits. These benefits include dealing with a lack of access and capacity to do field work, developing research questions, reducing the need to assume organizations are similar, providing a greater understanding of causal mechanisms, and helping to identify how HIV/AIDS may affect specific organizations.

*Dealing with a Lack of Access and Capacity to do Field Work*

By trying to study the available literature on the impact of HIV/AIDS and identifying information of relevance to the police, it allows the opportunity to study a topic which otherwise might not have been able to be studied for a dissertation. Collecting data on the impact of HIV/AIDS on the police in sub-Saharan Africa would be a significant task. It would be necessary to gain access to these police organizations, which is likely to be difficult. It would require the development of sources and contacts. It would require partnering with an institution in sub-Saharan Africa to facilitate access. It would require significant outlay of funds to initiate this process. Trying to estimate the
impact of HIV/AIDS on the police from the comparison organizations contributes to the field and is more feasible than field work for a dissertation.

*Developing Research Questions*

A goal of this project was to better understand the impact of HIV/AIDS on police organizations and provide some direction to future research. By trying to understand the comparison organizations, the way they are affected by HIV/AIDS, and the influence of their organizational structure on the impact of HIV/AIDS it helps to identify those questions which need to be asked during field work and data collection. This also provides some understanding of the causal mechanisms behind why a particular police organization may be affected in a specific way.

*Reduced Assumption of Organizational Similarities*

In the review of the literature at organizational and country levels there was an assumption that these organizations were similar enough to study as a group or similar enough to the police to learn from them. This was problematic because it is clear these organizations vary in a number of ways at the organizational and country levels which will influence the direct, indirect, and environmental impacts of HIV/AIDS. Because this project looked at specific attributes of these organizations and the way they are related to the impact of HIV/AIDS, it provided the opportunity to identify commonalities in organizational structure and related HIV/AIDS impacts. Similarities in these organizations along specific attributes and similar HIV/AIDS effects related to that organizational attribute reduced the need to assume these organizations were similar. This made it possible to learn from one organization about another.
Greater Understanding of Causal Mechanisms

By trying to study the literature from the comparison organizations and the way they are affected by HIV/AIDS through the lens of their organizational structure it allowed a better understanding of how and why specific HIV/AIDS impacts are occurring. It was possible to identify some of the internal and external variables which are related to the impact of HIV/AIDS on any particular organization.

HIV/AIDS Impacts in Specific Organizations

A limitation of the literature review was an inability to determine if those impacts identified in the literature on the comparison organizations were of any relevance to particular police organizations. In the second stage of this methodological approach, it was possible to identify the parts of an organizational structure that influence the way HIV/AIDS impacts the comparison organizations. If a particular police organization has a similar organizational structure, then it would be logical to assume that they could be impacted in the same way. This approach does not clearly determine which impacts are of relevance to particular police organizations, but does provide some direction.

Summary of Benefits

The methodological approach of trying to learn from other organizations provides a number of benefits. This approach has allowed the opportunity to better explore this area and make a contribution to the literature without conducting field work. It has helped to identify and develop research questions. It has reduced the necessity of assuming that the comparison organizations and the police are similar by identifying how organizational structure relates to the impact of HIV/AIDS. It has provided a greater understanding of the causal mechanisms behind the HIV/AIDS impacts identified in the
comparison organizations. Finally, it has helped to outline how specific HIV/AIDS impacts are of relevance to specific police organizations.

Limitations

Trying to learn from a group of comparison organizations to estimate the impact of HIV/AIDS from the police through a literature review and the development of a theoretical model based upon organizational structure. These limitations include an inability to account for all factors related to the impact of HIV/AIDS, other diseases causing absenteeism and service delivery, and the systemic problems of these organizations. This project is also dependent upon the quality of available literature and cannot identify all the impacts of HIV/AIDS on an organization. There is also limited information on the structure and processes of the comparison organizations. Finally, it is not possible to account for the provision of treatment and the impact of stigma when trying to identify how HIV/AIDS is affecting the comparison organizations.

The Complicated Impact of HIV/AIDS

The prevalence levels of HIV/AIDS in any particular country and organization are dependent upon a wide variety of factors. These factors include, but are not limited to, poverty levels, the availability of healthcare, economic constraints, circumcision practices, and marriage practices (Buve, et al., 2002). The level of HIV/AIDS prevalence among personnel in any organization is likely to vary among persons of different genders, positions, and education levels. In any organization, the subsequent impact that HIV/AIDS-related absenteeism, prevalence, and mortality will have on the ability of that organization is also dependent upon a wide variety of factors ranging from resources to
organizational structure in addition to the demand for its services. The impact of HIV/AIDS on a particular organization is complicated. Overall, this methodological approach cannot account for all the complexities of how and why HIV/AIDS is impacting a particular organization in a particular way. It offers a general, rather than a specific, understanding of the mechanisms through which HIV/AIDS is going to affect an organization.

Other Diseases Independent of HIV/AIDS

Healthcare capacity in many of the countries in the sample are limited. There are a wide variety of diseases, including Malaria and Tuberculosis, which are going to be causing absenteeism, death, and mortality losses among personnel. These diseases may be compounding the problems of absenteeism and even further exacerbating the impact that HIV/AIDS is having on the organization. Alternatively, because the available data in most of these organizations is limited, absenteeism, productivity losses, and death that are believed to be associated with HIV/AIDS could instead be caused by these other diseases.

Inability to Account for Systematic Organizational Problems

Shisana, et al. (2004) indicates that it was extremely difficult to disentangle the impact of HIV/AIDS from the other systemic problems of the South African healthcare system. Capacity in many of these organizations is limited by corruption, lack of resources, and bureaucratic inefficiency. Trying to account for the influence of these problems on the ability of these organizations to provide services independent of HIV/AIDS was difficult.
Quality of Available Literature

The literature on the organizations varies significantly in quality. Because this project relies upon the literature from the comparison organizations as a source of data, it is affected by all the inherent problems in the literature. These problems range from a reliance upon anecdotal data, limited samples, poor data quality, and difficulty determining the representativeness of the findings.

Does not account for all Impacts of HIV/AIDS

Those impacts that were identified in this project through both the review of available literature and the organizational study do not account for all ways that HIV/AIDS is going to affect an organization. Those impacts identified here are based upon available information. Undoubtedly information will be missed or identified as unimportant by the persons who collected the data or those who documented the findings in the literature on the comparison organizations. In a sense, this information is filtered by the primary researcher of each particular study. Therefore, this project is dependent upon what individual researchers and authors did or did not decide to focus their research or their writing.

Lack of information on the Comparison Organizations

The information available about the organizational structure of the comparison organizations is limited. Some of this information was available, while in other cases it was necessary to impute the organizational structure from existing information. The studies on the comparison organizations were not formulated with the intent of describing the structure of that particular organization. Overall, it was not really possible to adequately identify all the attributes of the organizational structure of the comparison
organizations which could have influenced the impact of HIV/AIDS. Many of these organizational attributes are related (Baum and Rowley, 2007; Scott, 2004) and dependent upon one another. It is likely there are other organizational attributes related to those HIV/AIDS impacts identified by this project that are important to understanding the impact of this disease.

*Treatment Provision*

HIV/AIDS cannot be cured, but an infected individual’s life can be dramatically lengthened and their quality of life improved by treatment (Rosen, et al., 2000). Treatment would result in reduced levels of direct HIV/AIDS impacts such as absenteeism, mortality, and productivity losses. Different countries have supplied treatment at different levels within their population (UNAIDS, 2007). It was not possible to account for these differences in treatment specifically among personnel in the organizations. Personnel within these organizations may be receiving treatment individually or through services provided by the organization. The extent of treatment provision, if unknown, could cause misunderstanding in the identification of potential HIV/AIDS impacts and their related mechanisms. If the extent of treatment is unknown, it cannot be accounted for when discussing potential impacts. Field-work or any research into the impact of this disease on an organization should identify the extent treatment may be mitigating the impact of HIV/AIDS.

*Stigma and HIV/AIDS*

Stigma is likely to make the study of HIV/AIDS more difficult. Pharoah (2005) indicates that stigma affects the recording of HIV/AIDS as a cause of death in human resources data. People may not record a death as being related to AIDS because they
may want to hide the information or the information may be hidden from them. In the three organizations which Pharaoh (2005) studied, it was not directly possible to identify AIDS related deaths. This was common in studies of other organizations (Rosen, et al., 2004; UNDP, 2000). Persons are hesitant to get tested for HIV/AIDS for fear of being rejected by their spouses, families, and communities (UNAIDS, 2008; Maughan-Brown, 2006). Stigma limits data collection efforts and may hamper future data collection on this issue because it may create difficulties in the analysis of organizational level data. Stigma may also limit people’s openness during interviews, which were used as a basis for some of the findings in the literature on the comparison organizations. Stigma may also limit the ability of this project to clearly identify AIDS mortality and illness.

Speculation

In total, it must be noted that this approach of trying to learn from organizations is speculative. It points the research in a general direction but does not actually help to identify if something is occurring in a particular organization and the magnitude of that occurrence. This approach cannot clearly identify how and the extent that particular police organizations are affected by HIV/AIDS.

Methodological Assessment

This project sought to identify if it was possible to estimate the impact of HIV/AIDS on the police using information from a group of comparison organizations. Based on this goal, and after a review of the limitations and benefits, it is believed this methodological approach was effective in estimating the impact of HIV/AIDS on the police. This approach provided a framework for studying the impact of HIV/AIDS on
the police. This framework organized the knowledge and allowed it to be assessed and studied in a way that identified relationships and information that was not known prior to this project. This framework facilitated the identification of the various ways in which HIV/AIDS will impact an organization. HIV/AIDS can impact an organization internally, through absenteeism, productivity losses, and mortality. HIV/AIDS can also impact an organization by changing the environment in which these organizations operate. This approach also helped to identify organizational attributes, such as geographic departmentalization and knowledge retention, which mediate the impact of HIV/AIDS on an organization. These contributions would have been possible without this method of organizing and learning from the information on the comparison organizations.

The remainder of this section will explore this methodological approach. First, it will explain its success. Secondly, it will identify which stage of the methodology was the most informative. Third, it will explore from which organization(s) it was possible to learn the most.

Estimation of the Impact of HIV/AIDS

Through the review of the available literature and the development of a theoretical understanding of the impact of HIV/AIDS on police organizations, this project was able to make a contribution to the available research. It allowed for a more informed understanding of how HIV/AIDS will impact the police, identified avenues for future research, and helped to better identify how specific police organizations may be affected by HIV/AIDS. This methodological approach should be taken for what it is. It should be taken as an exercise to develop theory and develop questions for future research. It
should not be taken as a replacement for field work measuring the impact of HIV/AIDS on the police. This approach should serve as a tool to guide research and make it more effective and efficient.

Which Approach was the most Useful?

There were two stages of this project. The first stage included a review of the literature and the second involved the development of a theoretical model to estimate the impact of HIV/AIDS on the police. These two stages were interdependent. The initial literature review, without the accompanying theoretical discussion of how organizational structure mediates the impact of HIV/AIDS, would have been of some value and informativeness. This approach had a number of limitations. The development of the theoretical model in the later part of this project to identify and explore particular HIV/AIDS impacts on the comparison organizations and understand their potential relevance to the police was also informative. But its informativeness would have been limited without the initial review of the literature. The review identified the necessity of taking the analysis one step further. The literature review combined with the theoretical model made this approach into a single project. Both stages were important to estimating the impact of HIV/AIDS on the police.

Which Organization(s) provided the most Information

This project sought to learn from information of relevance to the police from the military, the civil service, healthcare, and the education system. Some of these organizations were more similar than others to the police, potentially making their information more relevant to the police.
The comparison organizations which was likely the most similar to the police was the military. The military and the police were often times created from the same original organization (Clayton and Killingray, 1989). The police and the military are hierarchical organizations, with a clear chain of command, and a similar goal of maintaining order and national security. If a researcher were to apply this methodological approach to any single organization, the military would be the prime candidate. One civil service organization, the Zambian Wildlife Authority, was similar in many ways to the police. The organization’s primary duty was patrolling and it had primarily a male staff. It is possible that specific civil service organizations that have tasks and duties similar to the police may also be good as a comparison organization for application of this methodology.

The healthcare system and the education system are significantly different from the police. The healthcare system is dealing with the brunt of the HIV/AIDS epidemic, its levels of demand are significant, and health workers have access to a level of care which other organizations do not provide. The education system of all the organizations is probably the least similar to the police. It does not provide an emergency service, is affected by HIV/AIDS demand differently, workers have varying levels of work required of them, and can absorb attrition differently.

Despite the differences between the police and healthcare, certain civil service organizations, and the education system it cannot be said that their inclusion in this project was not a contribution. It was precisely the similarities and differences between these organizations which helped to better understand how HIV/AIDS is likely to impact the police. These similarities and differences led to some organizations being affected by...
HIV/AIDS differently. Some of these different organizations were also affected by HIV/AIDS in the same way. These differential effects provided depth and a better understanding of how HIV/AIDS affects organizations. Perhaps it may have been possible to study one fewer comparison organization, but this project would have been of less value without the inclusion of each.

**Conclusion**

This methodological approach of trying to estimate the impact of HIV/AIDS from a group of comparison organizations was effective. It provided a better understanding of the impact of HIV/AIDS on the police and provided directions for future research. Contributions to the field will be briefly described in the next chapter.
Chapter 12: Discussion and Conclusion

Independent of identifying the usefulness of learning from comparison organizations, this project had a number of contributions to understanding the impact of HIV/AIDS on the police. This chapter is divided into two sections. Section one describes the contributions of this project to the field. The second describes direction for future research. Section three concludes this manuscript.

Contributions of this Project

This project has made a number of distinct contributions. It categorized the HIV/AIDS impacts into environmental, direct, and indirect HIV/AIDS impacts. This project also identified environmental and internal organizational components and processes related to the way HIV/AIDS affects police organizations. Each contribution is explained in greater detail independently.

Categorization of Environmental, Direct, and Indirect HIV/AIDS Impacts

This project found it necessary to categorize HIV/AIDS impacts into direct and indirect impacts. It also identifies the importance of the organizational environment. Direct impacts are absenteeism, productivity losses, and mortality caused by HIV/AIDS. Indirect impacts are those effects that occur in the greater organization as a result of absenteeism, mortality, and productivity losses among infected personnel. Environmental HIV/AIDS impacts are those that are caused by changes in the environment, not infected personnel. Prior literature in this area, as well as the impact literature on the comparison organizations, did not differentiate between the ways in which an organization is likely to be impacted by HIV/AIDS. Categorizing HIV/AIDS
impacts into these types may seem academic, but it provides a more detailed understanding of how an organization will be affected by HIV/AIDS. Direct impacts on infected personnel will lead to indirect impacts within the rest of the organization on service delivery and operations.

This project also identified the importance of understanding the environment in which an organization operates. The severity of the HIV/AIDS epidemic and the availability of treatment is of logical importance to the impact on a police organization. But demand and competition for police personnel are also important to understanding the impact of HIV/AIDS on these organizations. The level of demand for services an organization is being asked to provide and competition for skilled workers will exacerbate the shortage of labor in organizations. These are occurring at the same time that the supply of services is being reduced by HIV/AIDS.

*How Environment and Organizational Structure can mediate the Impact of HIV/AIDS*

Police organizational structure mediates the way it will be affected by HIV/AIDS. Organizations also are affected by their environment. This section will briefly describe how parts of the environment and specific components and processes identified relate to the impact of HIV/AIDS on a police organization.

Police organizations that have expert personnel are likely to experience increased mortality and absenteeism among this specific cadre. These organizations are also likely to take steps to protect themselves from this mortality by prohibiting infected persons from occupying these positions. This is likely, in turn, to result in a reduction in the overall quality of the personnel in these positions, because the organization is drawing from a smaller pool of qualified labor. With increased demand and mortality among these
expert positions, these expert tasks may have to be done by less qualified personnel. At the same time, increased mortality among less skilled positions may result in an increased workload for skilled and expert personnel when tasks done by these less skilled personnel have a high non-completion penalty and are perishable.

Organizations either rely upon workers who they train (specific training) or hire skilled workers from the general workforce (general training). It will be more difficult for organizations that rely on general training to hire replacement workers when the size of the general labor pool is shrinking due to HIV/AIDS mortality. These organizations are likely to incur greater costs to hire and then retain their workers. Because police organizations rely upon specific training, they will not face this same problem, though they may face greater difficulties in replacing knowledge lost through mortality.

Competition for trained personnel will also factor into an organization’s ability to replace personnel lost due to HIV/AIDS-related attrition. The extent the organizations are in competition for trained police personnel is unknown, but there are some indications this is occurring in some countries (Baker, 2005; Abrahamson and Williams, 2005). When skilled and educated personnel are in high demand, as seen in sub-Saharan Anglophone Africa (De Waal, 2003), it will be more difficult for an organization to replace workers. Combined with this, personnel may be hired out of an organization by others offering better pay or working conditions. The greater the competition, the more difficult it will be for an organization to hire and retain workers. Competition may increase vacancy rates in an organization, increasing workload, and reducing the ability of the organization to provide services.
The demand for and the supply of services are related to the extent that HIV/AIDS will affect a police organization. Police organizations experiencing AIDS mortality and absenteeism will experience a decreased ability to supply services. They simply have fewer personnel to provide services. The extent that this mortality will affect service delivery in an organization is driven by changes in the level or type of services demanded of the police. The greater the increase in the level of, or change in the type of demand, the more difficult will it be for the police to continue to supply the same level of services in the face of HIV/AIDS-related attrition. If demand for police services decreases, AIDS mortality may not matter.

Police organizations supply a variety of services and perform a variety of tasks to fulfill those services. Police organizations that provide tasks or services with a high penalty for non-completion or that are highly perishable are likely to experience greater increases in workload and financial costs. In these organizations, certain tasks must be completed or the organization pays a high price. These tasks with a high non-completion penalty may be done by less skilled personnel; in addition, perishable tasks with a high non-completion penalty that require little skill may be done by highly expert people. If a police organization does not pay a penalty for non-completion, they may simply be able to stop providing that particular service. If they must provide a service, this may result in greater workload, financial costs, and strain upon police personnel that are responsible for providing it.

Police organizations provide a wide variety of services. This is described as departmentalization. To provide these different services a police organization will have personnel assigned and trained to work in these positions. Departmentalization may
make the provision of services inefficient when an organization is incurring a specific increase in demand related to any one department. When this demand affects specific departments, that department is strained, but this may leave other departments doing the same amount or less work. Departmentalization, when interacting with changes in demand, could cause inefficiency and increased workload for specific personnel. A police organization which is able to determine the changes in demand it experiences may be able to shift resources to deal more efficiently with this problem.

The point at which decision making occurs is likely to influence the extent a police organization will be impacted by HIV/AIDS-related absenteeism and mortality among management and supervisors. If the organization is highly centralized with decisions made by a few at the center, mortality and illness among managers could result in reduced goal effectiveness for the entire organization. In less centralized police organizations, the deaths of managers may not have the same effect. Deaths among managers may not matter because they are not the primary decision makers in the organization. It is HIV/AIDS-related mortality among decision makers that will have the greatest effect on a police organization.

Police organizations with high levels of geographic departmentalization are likely to be affected by HIV/AIDS in two distinct ways. First, attrition at central management will reduce the ability of the organization to oversee its geographically disparate parts. This may then result in a reduced ability of the police to realize their goals. Second, geographic departmentalization involves personnel being posted throughout the country. When personnel are infected with HIV/AIDS, self-preservation should drive them to seek medical attention where it is available. In sub-Saharan Africa, HIV/AIDS treatment is
generally available in urban areas. Infected police personnel will transfer to urban areas where treatment is available. This is likely to result in rural staff shortages and too many staff in urban areas. Despite these staff overages in urban areas, these posts will also be experiencing high levels of absenteeism and mortality because more infected personnel are there trying to obtain treatment. If police organizations want to maintain their service delivery in these geographically disparate places, it may behoove them to make sure these personnel have access to HIV/AIDS treatment.

The level of benefits provided to some police personnel may keep them working even when they are no longer able. This generally occurs under two conditions: with the permission of management or because the organization does not realize it. Those dying of HIV/AIDS need to continue working to earn their pay as long as possible to provide for their family, even when they can no longer be productive. High benefit levels will keep people working, even when they can no longer contribute to reach organizational goals. They become a drain on the organization, absorbing resources but not being productive.

Organizations either retain their knowledge in the minds of their employees (tacit) or record it in books, manuals, routines, or procedures (recorded). The more a police organization relies upon tacit knowledge, the more knowledge it will lose when personnel die of HIV/AIDS. Organizations can protect their knowledge by recording it. Relying upon recorded knowledge will also reduce the likelihood that organizations will be mistakenly pay their workers when they are dead or too ill to work. This creates two problems for an organization. First, it incurs financial costs, which it often cannot afford, and it does not get any service from these non-productive individuals. Second, the police
cannot plan for HIV/AIDS-related attrition because it does not know which personnel in which positions are truly productive.

Financially ineffective police organizations are likely to face numerous difficulties due to the HIV/AIDS virus. It is likely that they will not be able to provide the means for their personnel to protect themselves from HIV/AIDS infection or opportunistic infections during the course of their duties. They are also likely to continue to pay personnel who are no longer working or who are dead.

These components and processes were identified as relevant to the way HIV/AIDS affects a police organization in four different comparison organizations in ten different countries. Organizational structure and function influence the way in which the police in sub-Saharan Africa are impacted by HIV/AIDS.

**Directions for Future Research**

Studying the impact of HIV/AIDS on the police can occur on a number of different levels. First, it is possible to study the impact HIV/AIDS is likely to have upon police personnel who are infected with the disease. Infected personnel will be sick, be absent from work, have lower productivity, and be incurring the psychological effects of being infected with a chronic illness. It is also possible to study the impact of HIV/AIDS on the police through social problems caused by HIV/AIDS that have the potential to make the work of the police more difficult. Third, it is possible to study how police organizations themselves are likely to be impacted as a whole by the combined impact of large numbers of infected police personnel and a worsened working environment. Finally, it is possible to study the impact that a police organization weakened by
HIV/AIDS has upon the rest of society when its ability to respond to crime and maintain order is reduced.

There are some researchers that have indicated HIV/AIDS is likely to increase crime (Pharoah, 2005; Fourie and Schonteich, 2001). Understanding the relationship between HIV/AIDS and crime would be an important to study in the future. It is one of the responsibilities of the police to respond to crime and it would be important to understand how HIV/AIDS is affecting crime and demand for police services. HIV/AIDS is also exacerbating other social problems, which the police will have to deal with on a day-to-day basis. It will be important to identify how the police are affected by other changes in their organizational environment.

Understanding the impact of HIV/AIDS on a policeman or policewoman infected with HIV/AIDS would also be important. It would be important to understand how they are psychologically impacted, knowing they are infected with an incurable disease. It would also be important to understand how the symptoms of being infected with HIV/AIDS and opportunistic infections would affect the ability or motivation of an infected police officer to do their duties.

This project tried to understand how HIV/AIDS impacts police organizations. From this effort come a number of directions for future research. The dearth of data regarding the direct impacts of HIV/AIDS on infected police personnel limits our ability to quantify how the disease affects an organization. The extent that HIV infection, illness, and death due to AIDS translate into productivity losses and absenteeism is unknown. This knowledge is a first step to understand the direct HIV/AIDS impacts on police organizations. Understanding the HIV/AIDS prevalence rates, levels of illness,
and AIDS mortality among the organization and how these translates into absenteeism, productivity, and mortality in any of these ten police organizations will move the field one step closer to understanding the organizational impact of this disease.

The extent that HIV prevalence, illness, and AIDS mortality in these police organizations translates into direct HIV/AIDS impacts on the police operations and services delivery in the sample is unknown. In all sample countries, there will be police personnel who are sick or dying of AIDS. Certain impacts may only occur after an organization experiences a certain level of HIV/AIDS-related attrition. Efforts need to be undertaken to identify how absenteeism, productivity losses, and mortality translates into indirect HIV/AIDS impacts on an organization.

HIV/AIDS is likely to reduce the ability of the police to provide services to the public. There is limited information about service delivery within police organizations in the sample. Understanding the level and type of services provided by these organizations is important for a number of reasons. First, it helps to show where changes in demand for police services need to be measured. A better understanding of the services these organizations provide, or seek to provide, will then facilitate a better determination of goal effectiveness or changes in the level or type of demand. On the same note, researchers need to better understand the impact that HIV/AIDS is having on demand for police services. It is then possible to better plan for it.

Identifying the services provided by these police organizations provides a means of understanding how the direct and indirect impacts of HIV/AIDS are affecting service delivery and the environment of these police organizations. Reductions in service delivery could mean many things, including: (1) longer response times; (2) a complete
lack of any response; (3) lower clearance rates; (4) lower professionalism; (5) fewer officers patrolling; or (6) reductions in the ability of the organization to be proactive. Any of these reductions in service delivery may be occurring and this could result in different kinds of problems for the organizations, its personnel, or those people demanding police services.

Finally, it would be important to study the impact that reductions in the ability of the police to provide services are having on the rest of society. The police will be providing fewer services and it would be important to understand how citizens are coping. Police may be less able to deal with crime and disorder, so these problems might increase. The police are important to maintaining order in society and it would be important to identify if reduced police services translate into national instability.

Conclusion

Sub-Saharan Africa is one of the epicenters of the HIV/AIDS epidemic, with more persons infected than any other region in the world (UNAIDS, 2008). Millions have died of AIDS and millions more are currently infected with HIV, the virus that causes AIDS (UNAIDS, 2008). This disease destroys individuals, strains family structures, weakens economies, burdens health systems, and can destabilize entire countries. It is clear that the police will be affected by HIV/AIDS, but the way in which this will happen are unclear.

The police, like many organizations in sub-Saharan Africa, are experiencing the impact of this disease on their personnel, and, as a result, their organization as a whole. The police will be expected to perform services and contribute to the public good even
through they may not be able to do so. It is clear that the citizens of these countries want
more of the services that the police provide (Baker, 2005; Pelser, et al., 2004; Stavrou
and O’Riordan, 2004). It is therefore important to understand the impact that HIV/AIDS
will have on police personnel, police organizations, and police work.

This project estimated the impact of HIV/AIDS on the police from a group of
comparison organizations. It sought to move beyond assertions and conjecture and
identify how the environment and internal organizational components and processes are
related to the impact of HIV/AIDS on an organization. Through these components and
processes, this project identified a number of plausible impacts on the police
organizations in the sample. These organizational components and processes are
potentially relevant to any police organization dealing with the impact of HIV/AIDS.

This project identified a number of avenues for future research and it is clear that
more research in this area is needed. This project helped to theorize about the impact of
HIV/AIDS on the police, but will only be of real benefit when these findings are
incorporated into fieldwork. This project explored how and why certain police
organizations may be impacted by HIV/AIDS, but it is essential that research be
undertaken to identify if these impacts are occurring. Understanding the impact of
HIV/AIDS on these police organizations in Anglo-phone sub-Saharan Africa and
mitigating its impacts on these organizations is essential. It is hoped that projects such as
these might in turn help these countries to deal with the social and economic implications
of the HIV/AIDS epidemic.
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