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ABSTRACT

STIGMAS, SOCIAL NORMS, AND CULTURE AS MEDIATORS OF HIV AND AIDS INCIDENCE IN SOUTH AFRICA

By

SKYEISHA CHAUNKIAH SWAIN

MAY 02, 2023

Human immunodeficiency virus (HIV) is a significant global public health issue with 38.4 million individuals living with the virus in 2021. South Africa has experienced the world's largest HIV epidemic across all regions, with 7.5 million individuals living the virus, 210,000 new infections and 51,000 related deaths, in 2021. Interventions have focused on targeting sexual behaviors and addressing mediators of HIV transmission, such as poverty, age, socioeconomic status, education, and gender. Despite a drop in HIV incidence, the virus is still having a negative impact on the continent. This paper highlights overlooked but essential mediators of HIV transmission in South Africa, including contemporary African stigmas, social norms, and cultural practices. Examples of these mediators unique to South Africa include stigmas surrounding people living with albinism, social norms such as child and forced marriages, and cultural rituals such as bloodletting and blood brotherhood. Research has shown that there is a link between these mediators and HIV transmission, but the response to these factors has been limited. The proposed interventions Traditional Healers Education Program, PLWA Safe Communities and the Child Marriage Act of 2023 all aim to not only solve these mediators, but fill in the gaps of the previous interventions. Overall, to further decrease HIV incidence in South Africa, tailored interventions are needed to address unique risk factors affecting vulnerable populations. Despite relatively small population sizes, vulnerable communities should not be overlooked, due to their disproportionate burden of HIV incidence and transmission, as well as the human rights implications.

STIGMAS, SOCIAL NORMS, AND CULTURE AS MEDIATORS IN HIV AND AIDS
INCIDENCE IN SOUTH AFRICA

by

SKYEISHA C. SWAIN

B.S., UNIVERSITY OF KENTUCKY

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of Georgia State University in Partial Fulfillment
of the
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MASTER OF PUBLIC HEALTH

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APPROVAL PAGE

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INCIDENCE IN SOUTH AFRICA

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May 2nd, 2023

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Author's Statement Page

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Skyeisha C. Swain

A handwritten signature in cursive script that reads "Skyeisha C. Swain". The signature is written in black ink and is positioned below the printed name.

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Chapter 1: Introduction

Background

Human immunodeficiency virus (HIV) is a retrovirus that infects the T-Cells of the human immune system and destroys or impairs their functions. A person infected with HIV usually experiences progressive immune system depletion, ultimately leading to immunodeficiency. On the other hand, acquired immunodeficiency syndrome (AIDS) is the collection of symptoms and infections resulting from untreated HIV infection. AIDS can develop in as little as 8 to 10 years without adequate care. The degree of immunosuppression present at the time of diagnosis or the emergence of certain infections that are regarded as markers indicating the HIV infection has advanced into AIDS are two ways to identify the disease. In humans, HIV can be found in bodily fluids such as blood, vaginal fluids, semen, and breast milk. HIV can be transmitted through vaginal or anal intercourse, blood transfusions, sharing contaminated equipment and needles, and from mother to infant during pregnancy, childbirth, and breastfeeding (NIDA, 2020).

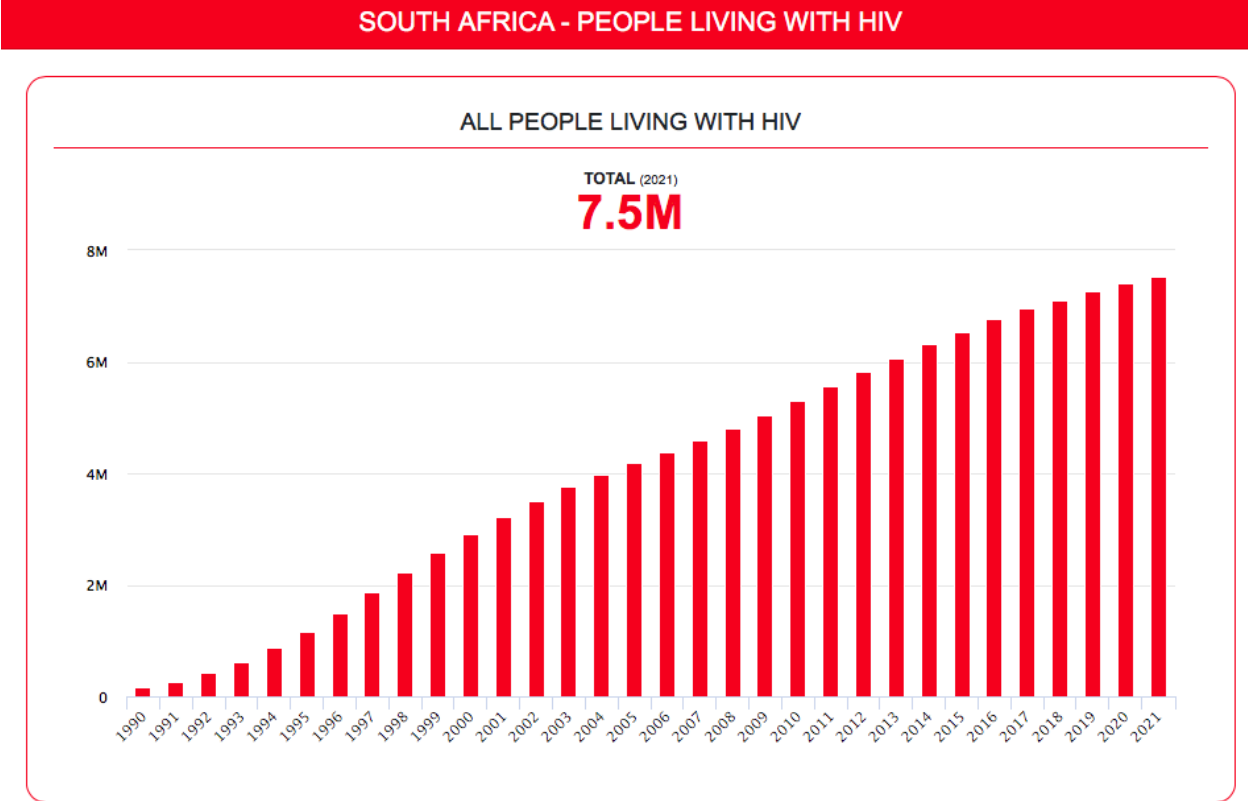
The World Health Organization (WHO) reports that HIV is one of the current urgent health challenges the world will face over the next decade. Globally, approximately 38 million people were living with HIV in 2021. There were 1.5 million new cases of HIV, and millions of people have died from AIDS-related causes since the beginning of the epidemic (UNAIDS, 2022). In addition, many individuals living with or at risk of HIV lack access to care, treatment, or prevention. Furthermore, 13% of people living with HIV are unaware of their infection; most importantly, there is no known cure for HIV.

According to WHO, the African Region remains the most severely impacted by HIV/AIDS as it is a leading cause of death and affects 1 in every 25 adults. As a result, South Africa accounts for approximately 20% of all people living with HIV worldwide, with around 7.5

million people living with HIV (Nicol et al., 2023). More concerning, just as in the previous decades, the rate of individuals living with HIV is expected to rise gradually over the next decades as shown in figure 1 (UNAIDS, 2022)

Figure 1

South Africa - People living with HIV



Past and current research has shown that HIV/AIDS remains one of South Africa's biggest obstacles and one of its most significant social issues, despite effective initiatives in preventing and treating the virus. With no cure, past and current prevention and intervention strategies primarily concentrate on lowering transmission rates and community viral load. In order to do that, researchers must understand the different pathways of association between the exposure and outcome (HIV) to help better understand the causal structure of the association. As a result, they are able to pinpoint the areas in which more research or intervention is required as well as the

best ways to intervene. Mediators, an intermediate variable between an exposure and the outcome that is influenced by the exposure on the causal pathway to the outcome, can be used to explain this association (Farland et al., 2020). With that, current strategies have focused on targeting sexual practices and behaviors and addressing key mediators of HIV transmission and acquisition, such as poverty, age, socioeconomic status, education, and gender (de Oliveira et al., 2022).

The current epidemic and the rapid increase in HIV incidence throughout South Africa raises the question of whether the most focused mediators of HIV in South Africa are missing important factors. Another important question is why the prevention and transmission efforts are not resulting in lower rates of HIV incidence. With that, this paper discusses African stigmas, social norms, and cultural practices that should be highlighted as mediators of HIV transmission in South Africa. Following that, intervention strategies utilizing the modified social-ecological method will be offered in order to help combat these mediators.

HIV/AIDS Epidemic in South Africa

South Africa, which lies in the southernmost point of Africa, has a population of over 57 million people and the largest population of people living with HIV worldwide. According to a UNAIDS dataset sourced from the World Bank, as of 2021, there were 7.5 million people living with HIV in South Africa. Preceding the start of the first wave of the HIV epidemic in South Africa, it was estimated that the first case of HIV infection was reported in 1982 in a man. Later that year, 250 random blood samples were taken from men living in Johannesburg, which resulted in 12.8% of the individuals being infected with the virus (Yousufzai, 2017). The spread of HIV in South Africa is coined as explosive due to the rapid rise in HIV prevalence over time

based on annual anonymous antenatal surveys, which showed a rise from 0.76% in 1990 to 10.44% in 1995 and 22.4% in 2000 (Quarraisha et al., 2002).

In 2021, there were an estimated 210,000 (95% CI 190,000-230,000) new HIV infections in South Africa. In addition to that, adults aged 15-49 were disproportionately affected by new HIV infections, with 180,000 (95% CI 160,000-190,000) individuals contracting the virus as seen in Table 1 (UNAIDS, 2022) . Also, women and girls are disproportionately affected, accounting for 63% of the region's new HIV infections in 2021. New HIV infections are three times higher among young women ages 15 to 24 compared to males of the same age. Another study showed that the gender dynamics of HIV infection could be traced back to the first national HIV survey conducted in the year 2002, resulting in differential infection rates by gender with significantly higher prevalence among females (17.7%) than males (12.8%) (Mobaso et al., 2021). However, while the numbers remain high, there has been a 50% decrease in new HIV infections since 2010.

About 45% of all deaths in South Africa can be attributed to HIV. As of 2021, when looking at AIDS-related deaths, there were 51,000 (95% CI 44,000-63,000), with the majority occurring among adults aged 15-49 with 40,000 deaths (95% CI 32,000-49,000) (UNAIDS, 2022).

According to recent reports by Saifaddin Galal, the estimated number of deaths in 2022 from AIDS in South Africa was around 86,000. Again, while the numbers remain high, there has been a 73% decrease in AIDS-related deaths since 2010. Another key aspect the HIV/AIDS epidemic in South Africa is the persistence of gender and racial disparities. Numerous studies and surveys demonstrate a persistent pattern in which HIV disproportionately impacts Black South Africans in comparison to white South Africans. In all four national HIV surveys, Black Africans, particularly women, had the highest overall HIV prevalence compared to other racial groups.

According to one study, Black African males had an overall HIV prevalence of 16.6% (95% CI: 15.0-18.4), and females had a prevalence of 24.1% (95% CI: 22.4-26.0), which was substantially higher ($p < 0.001$) than that of people of other races (Mabaso et al., 2012).

Table 1

UNAIDS South Africa HIV Epidemiology

| South Africa's HIV Epidemiology (2021) | | | |
|---|------------------------------------|------------------------------|----------------------------|
| AGE | LIVING WITH HIV | NEW HIV INFECTIONS | AIDS RELATED DEATHS |
| CHILDREN 0-14 | 270,000 (210,000-370,000) | 10,000 (7,900-21,000) | 2,800 (1,900-5,200) |
| YOUNG PEOPLE 15-24 | 570,000 (300,000-820,000) | 67,000 (39,000-84,000) | 5,700 (3,700-8,600) |
| ADULTS 15-49 | 5,800,000 (5,000,000-6,500,000) | 180,000 (160,000-190,000) | 40,000 (32,000-49,000) |
| AGED 50+ | 1,400,000 (960,000-2,000,000) | 25,000 (14,000-38,000) | 8,800 (6,100-13,000) |
| GENDER | | | |
| MALE | 2,600,000 (2,300,000-2,800,000) | 75,000 (65,000-38,000) | 24,000 (20,000-32,000) |
| FEMALE | 5,000,000 (4,600,000-5,400,000) | 140,000 (14,000-38,000) | 27,000 (22,000-32,000) |

Multiple studies and surveys have been conducted to identify factors contributing to the ongoing HIV/AIDS crisis in South Africa. Most studies have indicated that various social, economic, gender, and health-related factors may facilitate HIV risk and similarly limit the impact of prevention efforts. Many of these factors include high teenage pregnancy rates, gender-based interpersonal violence, high rates of sex work, lack of quality education, widespread poverty, unemployment, and high rates of coinfections with Tuberculosis and non-HIV sexually transmitted infections (STIs). Additionally, the epidemic has been exacerbated by sexual assault, gender power imbalances, and local views regarding HIV/AIDS, including low

awareness surrounding HIV transmission and knowing if one is living with the virus or not. Furthermore, due to a lack of education and awareness initiatives implemented in townships, the transmission of the illness there has been exacerbated by incorrect cultural and traditional ideas about HIV/AIDS in South Africa (Uwah, 2013).

Chapter 2: Current Mediators and Prevention Strategies

As stated in public health, the ultimate goal for prevention and intervention strategies is to reduce risk factors and increase protective factors. Current prevention methods have focused on treatment, education, and behavioral change interventions. When looking at mediators of HIV incidence in South Africa, the primary focus has been on poverty, age, socioeconomic status, education, and gender. The United Nations established a 2030 aim to eradicate AIDS as a public health issue in response to the HIV epidemic worldwide, particularly in Africa, which prompted them to establish a new set of 95-95-95 targets in December 2020 to be accomplished by the year 2025. This program focuses primarily on testing and treatment, which are the primary objectives of preventative and intervention programs. By 2025, the "95" objectives stipulate that 95% of all people living with HIV will be aware of their infection, 95% of all individuals with an HIV diagnosis will be getting sustained antiretroviral treatment, and 95% of all individuals receiving antiretroviral therapy will have viral suppression (Frescura et al., 2022). Current progress as of 2021 can be seen in table 2 below (UNAIDS, 2022)

Table 2

United Nations 95-95-95 targets 2021 statistics

| UNITED NATIONS 95-95-95 TARGETS | |
|--|-----------|
| People living with HIV | 7,500,000 |
| People living with HIV who know their status | 7,000,00 |
| Percent of people living with HIV who know their status | 94% |
| People living with HIV who are on ART | |
| People living with HIV who are on ART | 5,500,000 |
| Percent of people living with HIV who are on ART | 74% |
| People living with HIV who have suppressed viral loads | |
| People living with HIV who have suppressed viral loads | 5,100,000 |
| Percent of people living with HIV with suppressed viral loads | 67% |

Poverty-ART Delivery Program

Previous efforts to combat the HIV epidemic in South Africa were primarily disregarded, notably by former President Thabo Mbeki, who outlawed antiretroviral therapy (ART) during his term. ART treats people infected with HIV using anti-HIV drugs, known as highly-active antiretroviral therapy, that suppresses HIV replication. ART also reduces the individual's viral load to an undetectable level, which prevents sexual transmission of HIV (known as Undetectable = Untransmittable or U=U). The decision by Mbeki ultimately resulted in 333,000 AIDS-related fatalities and the HIV crisis spanning several decades. With increased support from the South African government, which funds 80% of the prevention efforts, South Africa has the largest HIV treatment program in the world. Today alone, South Africa can boast of close to 3 million people on ART, which is also the largest number in the world. Since 2004, the S government has rolled out free ART at public health care facilities nationwide.

However, there are structural barriers that reduce ART initiation, adherence, and viral suppression. One of those main barriers is poverty, which affects low and middle-income countries, and health officials characterize this by several deficits in environmental

infrastructure, notably inadequate transportation. Most patients who attend public health clinics do not have private transport, and they rely chiefly on public means, which in many cases are expensive, unsafe, or simply unavailable. Studies have shown that implementing differentiated service delivery may help reduce this barrier by moving treatment and care out of HIV clinics and directly into the communities. In order to test this hypothesis, public health officials created ART delivery programs. Numerous research and in a study called the DO ART (The Delivery Optimization of Antiretroviral Therapy) study in which they offered ART initiation, monitoring, and refills in communities to clinically adults living with HIV and not taking ART at the time of enrollment or within the previous three months. Results across each study for DO ART have been constant and the same. One study reported that in South African communities with high and medium HIV prevalence, community-based ART delivery significantly increases viral suppression compared to clinic-based ART (Barnabas et al., 2020).

Education-Informed Motivated Awareness and Responsible Adolescents and Adults

Numerous reports and based on the data above by UNAIDS, South African adolescent girls and young women (AGYW) acquire HIV at twice the rate and, on average, 5-7 years earlier than their male partners (Lewis et al., 2022). AGYW HIV disparities are explained by multiple social and structural inequalities (e.g., education) that shape and constrain HIV-risk behaviors and continue to drive incident infections in South Africa. In South Africa, far more boys attend school than girls due to many reasons, including but not limited to: the patriarchal nature of the South African society, which makes women occupy lower social status than men and are socialized to work in the home and be mothers, and sexual harassment and assault against girls in school creates fear of attending school and ultimately dropping out altogether (Mshweshwe, 2020). Moreover, racial disparities exist affecting Black South African girls putting them at a

significant disadvantage in attaining quality education due to poverty, with Black South Africans' poverty rate being much higher than White South Africans.

However, poor education has a strong linkage to HIV transmission. Research has shown that educating young people about HIV transmission and prevention practices effectively reduces social and economic vulnerabilities that increase HIV incidence among AGYW. In addition, research has shown that female caregivers are an untapped source for not only HIV but STI prevention, and these female caregivers offer a novel opportunity to strengthen AGYM prevention efforts. In order to help combat this problem, the Informed Motivated Aware and Responsible Adolescent and Adults (IMARA) program is a family-based HIV intervention program that aims to reduce the incidence of HIV in Black South African female communities by educating both the teen and female caregivers during a two-day workshop. During the workshop, both the teen and mother are educated on strengthening their mother-caregiver relationship along with improving their romantic partner communication skills, how to decrease sexual risk for HIV, the importance of healthy peer and partner relationships, increasing HIV and substance use knowledge, addressing adolescent STI/HIV risk behaviors and safer sex knowledge. Numerous studies have shown the effectiveness of IMARA. One highlights that among girls who provided STI data at both time points, the risk of a new STI and HIV transmission was 43% lower for IMARA participants than for health promotion control participants (Donenberg et al., 2020).

Behavioral-Couples' Health CoOP

In South Africa, the leading cause of HIV transmission is through heterosexual sex, including commercial sex. In South Africa, there is a high prevalence of sexual behaviors that increase the risk of HIV infection, such as condomless anal or vaginal sex, preference for dry sex

(i.e., without added lubricant), and multiple concurrent partnerships. In poor communities in South Africa, women in relationships are more likely than their male partners to acquire HIV. Even in areas where condoms are highly accessible, condom use is low among heterosexual couples, with only 12% of South African couples reporting consistent condom use (Wechsberg et al, 2015). The low socio-economic status of women reinforces the unequal gender power structure and increases HIV risk through forced sexual relationships, such as intergenerational sex (Arije et al, 2023). Moreover, in South Africa, heterosexual couples are at risk for HIV infection and transmission due to substance use, gender, roles, and sexual risk behaviors such as having multiple partners and condomless sex.

In order to help combat this, an effective intervention strategy for HIV prevention in South Africa is behavioral change. The Couples' Health CoOp is a couple-based HIV prevention intervention that targets men who use alcohol and other drugs and engage in condomless sex with their leading female partner. The program's primary focus is to address how alcohol and other drug use is a significant risk factor in HIV/STI transmission. The program also addresses gender roles, gender-based violence, and communication skills, and helps promote healthy relationships. The ultimate goal is to modify traditional gender roles by increasing safer-sex behaviors and reducing HIV sexual risk factors. Numerous studies have examined the effectiveness of the Couples' Health CoOp, with those in the intervention arm more likely to report an increase in relationship control and gender norms supporting female autonomy in relationships, which are important risk factors for HIV infection among women.

Chapter 3: Overlooked Mediators and Proposed Interventions

As shown, there have been multiple interventions placed in South Africa to try to reduce HIV transmission rates and improve HIV outcomes among people living with HIV. However,

despite the constant efforts, South Africa's HIV/AIDS epidemic is still one of the world's most significant public health problems. This fact has led to public health officials questioning what they are missing and how to fill that gap to see changes in South Africa's rates. One proposed reason could be the differences between the epidemiology of HIV/AIDS cases in Africa and that in Western Societies such as the United States. With that, public health officials have taken an international response and approach rather than dealing with risk factors and mediators unique to South Africa and its epidemic. These unique mediators are often overlooked because they do not transmit HIV at a fast rate and only affect smaller populations. These mediators include stigma, social norms, and culture and must be taken to account in that they still account for a percentage of transmission and if left unaddressed may account for a larger percentage.

In public health, prevention interventions and programs aim to reduce risk factors and increase protective factors. Risk factors are linked to an increased risk of an adverse outcome or, in this instance, of HIV transmission. On the other hand, protective factors are characteristics with a lower likelihood of adverse outcomes or that reduce a risk factor's impact. To create effective intervention strategies, the Social Ecological Model of Health is a useful framework to understand the complex set of factors (including individual behaviors, community viral load, and social and cultural factors) contributing to HIV transmission in South Africa. The CDC states that the Social-Ecological Model of Health demonstrates how health is affected by the interaction between the individual, relationships, the community, and societal factors. Primary prevention strategies that work across these levels and include multi-level interventions are the most effective in changing behavior (CDC, 2015).

Interventions proposed in this papers uses a modified version of the Social-Ecological Model to consider biological and behavioral risks in the context of HIV infection. Baral et al.

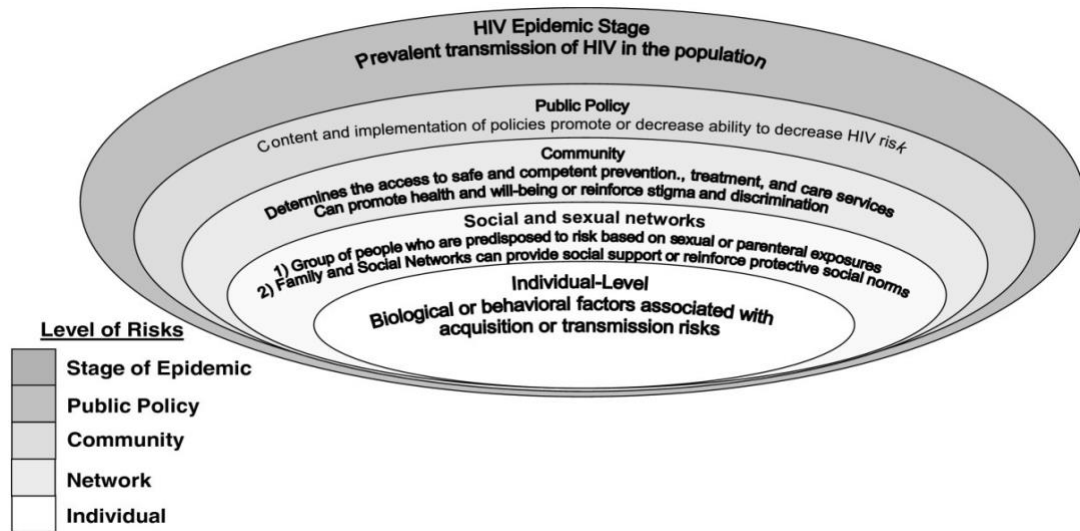
created the Modified Social Ecological Model (MSEM), shown in figure 2, for HIV risk in vulnerable populations, which is composed of five layers for risk of HIV infection which include individual, network, community, policy, and stage of the HIV epidemic (Baral et al., 2003). When discussing intervention strategies for these South African stigmas, social norms, and cultural mediators, efforts will focus primarily on the individual, community, and law and policy levels.

The individual level of the MSEM considers the biological or behavioral characteristics associated with the vulnerability to acquire or transmit the virus. When looking at the risk factors for HIV acquisition at the individual level, it is essential to highlight poor education, poverty, gender, and age. On the other hand, protective factors at this level include quality education and stable income. Prevention strategies at the individual levels are most effective when they increase and promote healthy attitudes, beliefs, and behaviors that prevent the acquisition of HIV. The community level of the MSEM considers how communities and environments can promote health and well-being or be a source of stigma. At the community level, risk factors include violence, stigma, poverty, lack of informal support, and lack of safe housing and community. Contrarily, protective factors include being a part of a safe and stable community, having access to support services and healthcare, and accessing employment services. Last, the laws and policy level of the MSEM consider how policies or laws either promote or decrease the community's ability to provide preventative services or increase protective factors by making such actions legal or illegal. It is essential to highlight that laws and policies provide the general framework for shaping the risk of marginalized populations as well as the general population. The significant risk factors at this level include societal norms, a government system that considers women less than men, and poor laws and policies allowing the child and forced

marriages. On the other hand, protective factors at this level include laws that protect young women from marriage, norms that are favorable and protect young women, and criminalization of such acts.

Figure 2

Modified Social Ecological Model for HIV Risk in Vulnerable Populations



Past and current research has focused on the age, and sex distributions of HIV/AIDS cases in Africa, leading to further research and prevention methods focusing heavily on sexual transmission and factors influencing sexual transmission, such as education and poverty. In addition, prevention has focused on biomedical interventions such as ART treatment for people living with HIV and pre-exposure prophylaxis (PrEP) for people at increased risk for HIV infection. However, to fully capture the true HIV/AIDS epidemic in South Africa, other non-sexual transmission factors must be included when researching the rise of HIV in South Africa. As stated above, these factors include stigmas, social norms, and cultural practices and rituals that, while not transmitting HIV at a fast pace like sexual transmission, still is a large percentage of transmission especially within certain vulnerable populations and must not be ignored (Hrды, 1987).

Stigma-Albinism

Stigma is defined as the disapproval of or discrimination against an individual or group based on perceived characteristics that serve to distinguish them from other members of a society. Within South Africa, many of the stigmas, myths, and superstitions have existed for centuries, including those created by traditional healers who account for as many as 200,000 individuals compared to 25,000 doctors trained in Western medicine (Truter, 2007). Stigmas are important mediators in the incidence of HIV in South Africa because HIV/AIDS related stigmas often threaten to undermine interventions that prevent and control HIV/AIDS in South Africa. Stigmas surrounding South Africans living with albinism shows how this unique mediator increases the risk and incidence of HIV in South Africa due to the assault, mutilation, and rape of people in this community.

The United States National Institute of Health defines albinism as a genetic and inherited disorder that results in little to no melanin production. In South Africa, approximately 1 in 4,000 individuals have Albinism – and up to 1 in 1,000 individuals in higher prevalence regions (Kromberg, 2022). Threats to albinos' lives are compounded by exclusion, stigmatization, and denial of fundamental rights such as education and health. It is said that, within South Africa, people living with albinism have supernatural powers and bring misfortunes to a family. Moreover, some people living with HIV may seek out sexual partners with individuals living with albinism, due to the incorrect cultural belief that this will cure their HIV infection. These sexual encounters are often forced or coerced and result in increased rates of HIV exposure among people with albinism (Cruz-Inigo et al., 2011). As with much violence, and especially violence within third-world countries, reports of rapes and killings of South Africans living with albinism are often underreported. Between January and May 2016, reports show that six people

living with Albinism were murdered, and since 2006 there have been 800 cases reported. In addition to that, criminalization of these attacks and killings is very low with the most recent report showing that in 2021 the South African court sentenced a traditional healer to life for raping and murdering a 20-year-old woman living with albinism. Moreover, this community in South Africa is often overlooked and ignored with the South African government stating that they have no notable statistics on HIV cases set aside for people living with albinism. As a result, the true scope of this problem is still unknown.

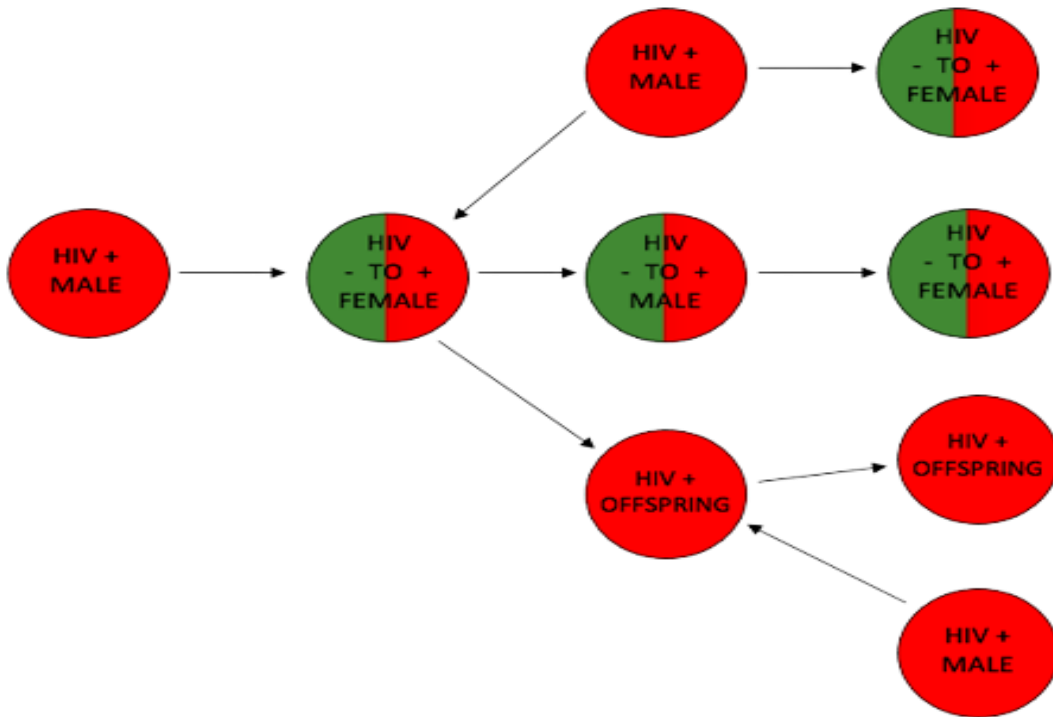
Due to the numerous stigmas currently existing in South Africa surrounding people living with albinism, there is a strong connection between albinism and HIV risk in South Africa. First, the body parts of women and girls living with albinism are said to bring good fortune and good health. As a result, the body parts of albino women are sometimes chopped up and sold to witch doctors. An albino human corpse can sell for up to \$75,000, and an arm or leg can sell for up to \$2,000. If these women were previously exposed to and are now HIV positive, the mutilation of their body parts exposes the attacker and others to the contaminated blood of the woman or child. Individuals perpetrating these violent acts may be at increased risk for HIV infection and ultimately onward transmission to future sexual partners (consensual and non-consensual) and other victims of violence.

Next and most important is the rape of albino women and girls by men who believe it will cure their HIV/AIDS. After the rape, and now believing that they are cured of HIV/AIDS, and without proof of testing, these men may affect other women and individuals, increasing their risk of transmitting HIV. For women, due to the lack of knowledge and testing resources in South Africa, many women and girls find out about their HIV status after falling seriously ill. On the other hand, if they do know they are HIV positive they may refrain from disclosing this

information due to intersectional stigma and discrimination. In addition, there are numerous barriers to accessing public health facilities for HIV medical care, which could increase the chance of secondary transmission of HIV to their offspring or to other male partners through sexual exposure. This cycle will continue to pass from one male to female, one female to male, and from generation to generation in a rapid, constant cycle, as shown in figure 2.

Figure 3:

HIV Transmission Cycle and the influence of the Stigma Surrounding Albinism



After reviewing the apparent link between the stigmas surrounding albinism in South Africa and HIV transmission, it is also important to note how albinism alone can act as a risk factor and mediator for HIV transmission. As stated above, being born or living with albinism in South Africa is believed to bring misfortune to a family. With that, people living with albinism,

especially women and girls, may be rejected by their husbands and family, as well as their communities. As a result, this confines them to poverty and further exposes them to attacks and other forms of violence and discrimination. Moreover, these women and girls live in constant fear for their lives and tend to drop out of school, isolate themselves, thus never receiving a proper education. Research has shown that poverty and education are critical risk factors for sexual violence and the continuous spread of HIV, especially within and outside the community of people living with albinism. (Bradbury et al., 2019).

Safe Places for People Living with Albinism

Interventions at the community level are one possible way to address stigmas in South Africa. For example, decreasing albinism-associated stigma in the community would prevent violent acts associated with HIV transmission. Potential interventions include community-wide awareness and education campaigns, combating witchcraft practice, establish community task forces and watch committees, hotline for reporting and victims, ensure the promotion of women's rights, and free and accessible health and social care to name a few (Amnesty International, 2021). Further research is needed to develop effective interventions, but urgent action is needed now to protect people living with albinism from discrimination, harassment and violence.

In interviews conducted with people living with albinism, it showed that they expressed concerns dealing with difficulties obtaining equal rights to physical, psychological, and environmental health. This includes limited access to health care, education and employment. In addition, fear for safety, financial insecurity, and disability rights concerns were also common among people living with albinism (Anshelevich et al., 2021). Research has shown that schools and camps designed for children living with albinism is one way to prevent attacks now and has

shown to increase security but raises concerns surrounding overcrowding, child abuse, and family abandonment (Franklin et al., 2018). In order to help fill in those gaps and address the concerns expressed by people living with albinism, implementing guarded safe communities for people living with albinism could be placed in South African communities with high rates of people living with albinism. Unlike the current schools and camps, these communities will provide all the health and resources they would need without going outside the guarded gates. These communities will include schools, jobs, healthcare facilities, and safe housing, allowing people living with albinism to be protected from their prejudiced community out to harm them, decrease poverty rates among them, and decrease their mortality rates. Another important aspect of these communities is that they will be for all individuals living with albinism and not just children. There will also be multiple community places throughout South Africa to avoid overcrowding. As a result, there should be a significant decrease in the attacks on people living with albinism, especially young women and girls. Without access to people living with albinism this should lead to a decrease in HIV transmission due to the stigma surrounding them.

Social Norms-Child/Forced Marriages

Social norms are defined as shared standards of acceptable behavior(s) by groups. Social norms, especially ones surrounding age and gender are important mediators in the incidence of HIV/AIDS in South Africa, because they promote male authority over female behavior making women and girls more vulnerable to violence and restricting their ability to negotiate sex. In addition, within South Africa, there are numerous gender-based social norms surrounding women's sexual purity, protecting family honor over women's safety, and men's authority to discipline women and children that negatively affect women and adolescent girls increasing their chances of acquiring HIV (Perrin et al., 2019). Specifically social norms surrounding South

African child marriages shows how this unique mediator increases the risk and incidence of HIV in South Africa due to social isolation and coital frequency. However, there is a major disconnect in terms of how research, policies, laws, and programs respond to the problems.

The United States Citizens and Immigration Services defines *forced marriage* as a marriage with one or more elements of force, fraud, or coercion, where one or both parties cannot consent to the marriage. In South Africa, ukuthwala is the practice in which men abduct a young girl and force her into marriage with her parents' consent. Approximately 4% of girls in South Africa are married before the age of 18 and 1% of both girls and boys are married before the age of 15 with the youngest being reported at 7 and 8 years old. In addition, the United Nations estimates that around 37,000 girls under 18 are married. On the other hand, a 2016 Community Survey presented by Statistics South Africa estimated that there are more than 91,000 girls between the ages of 12 and 17 who were in civil or customary marriages, divorced, separated, widowed, or living with a partner. It is important to note the inconsistencies within the rates of child marriages within South Africa to note how this rate could be higher as child marriages are rarely officially registered, undermining the true scope of the issue. Overall, research has shown that married women, aged 15-24, are five times more likely to have HIV than those who are not married. Young married women are 50% more likely to have or contract HIV than unmarried young women. Moreover, UNICEF estimates that if no change occurs, the rate of child marriages in Africa alone may double by 2050. Despite numerous regional and international responses to this problem, research still shows no change or decrease in the incidence of child marriages (Ghosh, 2011).

Overtime due to social and cultural factors child marriage has become a standard act within South Africa. There are numerous reasons for child marriage in South Africa, with the

main two being gender inequality and poverty. Pertaining to gender inequality, deep-rooted patriarchal beliefs limit girls' ability to obtain education and work, forcing them to be housewives and mothers. Even if opportunities were made available to them, social norms placing low values on girls over boys, made parents not invest in their daughters' education. In addition, younger wives are often sought after because of men's desire to control women and children are considered more obedient than older women. Last, it is closely linked to female genital mutilation, as it is considered necessary for marriage, to promote premarital virginity and marital fidelity. Pertaining to poverty, most child marriages occur in poverty-stricken areas where families consider daughters to be economical and financial burdens. For these families this means one less child to feed, cloth, and educate. Also, in many cases there is a financial aspect due to dowry practices and bride price traditions in which money or gifts are given to the parents (Nour, 2006).

Research has shown that high rates of child marriage correlate with high rates of HIV infections. Reports by UNAIDS have shown that globally in 2017, 7,000 girls between 15 and 24 years old are newly infected with HIV every week. Moreover, girls account for more than 80% of all new HIV infections among adolescents and that married adolescent girls in urban centers in Kenya and Zambia have higher rates of HIV infection than do sexually active unmarried girls. Several factors alone increase the risk of infection for girls and these factors are exacerbated when adolescents become married. Some of these factors include age disparity (i.e., men may expose their younger brides to HIV), power imbalance, condomless sex frequency, and rape. First, it is believed that child marriage protects girls from promiscuity and disease. Contrarily, due to previous sexual activity and injection drug use, these husbands are three times more likely to be living with HIV in comparison to unmarried girls. Studies have shown that not only is

marriage by the age of 20 a risk factor for HIV infection for young and adolescent girls, but the age difference between men and their wives was also a significant risk factor for HIV and that all girls were being infected by their husbands (Boileau et al, 2009). Also, these young girls are under intense pressure to prove their fertility to their husbands and have more condomless sexual intercourse (Nour, 2006). As a result, there is a high chance of transmission along with pregnancy that not only may continue the cycle of transmission to their children during birth but create a future child bride as well. Moreover, 48% of child marriages are likely to divorce within ten years, leading these individuals with HIV to possibly remarry and have kids, thus continuing the transmission of HIV across South Africa.

Last, it is suggested that girls may be physiologically more prone to HIV infection because their vagina is not yet well lined with protective cells, and their cervix may be more easily eroded. The risk for HIV transmission is also heightened because hymenal, vaginal, or cervical lacerations increase the transmission rate. Many of these young girls lose their virginity to husbands who are already living with HIV. Also, STIs such as herpes simplex virus type 2 infection, gonorrhea, or chlamydia enhance girls' vulnerability to HIV (Nour, 2006).

Child Marriage Act of 2023

Interventions at the law and policy level are one possible way to help combat social norms in South Africa. For example, decreasing age and gender social norms in South Africa would prevent age and gender-based violence associated with HIV transmission. Potential interventions include improved enforcement and remedial measures, promoting and coordinating continental efforts to prevent child marriage, and increasing the African Union role in promoting and protecting women's rights and development across the continent. Most important law reform in that existing and new laws prohibits child marriage and criminalizes these acts (Centre for

Human Rights, 2018). Further research is needed to develop effective interventions, but urgent action is needed now to protect young girls from abduction, marriage, and rape.

The international Center for Research on Women conducted a systematic review of programs that measured a change in knowledge, attitudes and/or behaviors related to child marriage. With that, they identified effective programmatic strategies used to delay or prevent child marriage, with one being encouraging supportive laws and policies. Countries with high rates of child marriage have passed laws that enforce a legal minimum age for marriage. In addition, advocating for the implementation of such laws and raising awareness among government officials and community leaders seem to help strengthen and better enforce these laws (ICRW, 2013).

There are currently two laws regarding child marriages in South Africa, but many exceptions still allow young girls (12 years or older) and boys (14 years or older) to marry in both policies. Those policies are the Marriage Act which states that “no boy under the age of 18 years and no girl under the age of 15 years is capable of contracting a valid civil marriage” unless there is consent from the boy or girl, their parents, and the Minister of Home Affairs (du Toit, 2011). The second policy, The Recognition Act, deals with customary marriages, which allows polygamy and states that “a customary marriage is valid when the prospective spouses are above 18 years old and both consent to be married to each other.” Again, there are exceptions to this policy which allow a customary marriage to be valid with the consent of the boy or girl, their parents, and the Minister of Home Affairs (Chidoori, 2009).

While these laws were created to prevent child and forced marriages in South Africa, they are limited in several ways, including exceptions, poor policing and monitoring of the laws, and limited court access. With that, one proposed intervention is “The Child Marriage Act of

2023”. This policy fills in the age gaps of the previous two policies and excludes the exceptions. It will state that “no boy or girl under 18 years can contract a valid civil marriage or customary marriage even under consent from their parents and the Minister of Home Affairs”. In addition, to help enforce these laws, there will be strict law enforcement and criminalization of any persons who violate these laws.

While there is no current data or research to support such laws and their efficacy in reducing HIV rates and transmission in South Africa, the existing evidence suggests that supportive laws and policies are necessary to effect change. This can be seen in The Uganda 2014- 2020 Strategy To End Child Marriage And Teenage Pregnancy and Malawi’s National HIV prevention strategy 2015-2020. Thus, eliminating child marriages would decrease the number of young women at risk of contracting HIV, decrease the likelihood of HIV transmission from men to young women, and decrease the risk in young men who are often overlooked but rapidly spreading the virus as well. (Shisana et al., 2016).

Culture: Non Sexual Rituals

Culture is defined as the customs, arts, social institutions, and achievements of a particular nation, people, or other social group. South Africa's culture is one of the most diverse cultures in the world today. South Africa currently has 11 official languages and eight other recognized languages. The Black population, which makes up most of the South African population at 80.7%, is divided into four major ethnic groups. Each ethnic group and sub-groups within these cultures bring diversity and style to the country. Culture is an important mediator in the incidence of HIV in South Africa due to the high exposure to contaminated blood in which many of their rituals involve direct contact with blood. Alone direct blood-to-blood contact dramatically increases an individual chance of acquiring HIV. Moreover, many of these rituals

are held and performed without the knowledge of the associated health risks or means to prevent exposure to infectious diseases.

South Africans define themselves through their cultural ceremonies, traditions, and rituals. Within South Africa, the most important ceremonies and rituals involve rites of the life cycle, such as birth, marriage, and death. In addition, many South Africans aim to secure the spiritual well-being of the individual partaking in the ritual and community. These rituals are also a means to negotiate a responsible relationship in the human community with the ancestors, spirits, divinities, and cosmos. African rituals are reflexive strategies seeking practical ends: they establish identity, elicit revelation, access divinity to foster empowerment, and effect transformation (Ohaja & Anyim, 2021).

Two practices/rituals highlighted in the South African culture that possibly transmit HIV are Bloodletting and Blood Brotherhood. In South Africa, Bloodletting is the practice of using an instrument such as a razor blade, knife, or cow horn to make deep cuts enough to allow blood to flow freely out of the body. In the end, the person performing the practice takes a mixture of ashes and rubs it directly into the wound to stop the bleeding (Hrdy, 1987). This practice typically involves a practitioner, but in South Africa, it can be anyone for medicinal purposes. Bloodletting, which can be done at least five times a year or, in extreme cases, more than 100 times a year, is thought to be a method for getting rid of contaminated fluids in the body in order to treat a variety of ailments. Moreover, it is believed that some people think bloodletting would get rid of HIV.

In South Africa, Blood Brotherhood is a ritual where men not related by birth, establish relations of trust, reciprocity, and loyalty through the exchange of blood. Blood brotherhood has been practiced within South Africa for decades dating back to 18th century and can also take the

names of blood oath and blood ritual. During the ceremony, two men met at a predetermined time and each starts by making a small cut normally on the hand. Each man is then offered the other man's blood either on an espresso berry, nut or straightforwardly from his hand. The blood is drunk or eaten, and only then were the two declared blood brothers (White, 1994). While the practice is most common among males, it has been researched and reported that some females have become "blood brothers" and that a male or female can become blood brothers with several people.

Although these practices have decreased in recent years and there is little to no research on how prevalent these practices are today, the fact that they were very popular and of tradition years ago, makes it possible that some populations still uphold these traditions. With that, not only do these practices increase HIV exposure but a lot of other cultural ceremonies within South Africa such as scarification, male circumcision and genital tattooing (Sovran, 2013) increase chances of exposure as well. First, for both Bloodletting and Blood Brotherhood, along with the other cultural ceremonies, the risk of HIV transmission is extremely high due to direct blood-to-blood contact involved. Also, Hepatitis B Virus (HBV), which is also in high prevalence in South Africa, could be transmitted by these rituals, and HBV is a vital risk factor for HIV acquisition. As with most reports in South Africa, there are little to no reports of HIV being transmitted by either Bloodletting or Blood brotherhood. However, there have been two reported cases of HIV and HPV by Blood Brotherhood rituals (Leblebicioglu et al., 2003). Next, many of these rituals are held and performed by many untrained traditional healers or South Africans believed to be practitioners who lack the proper knowledge on HIV or any virus transmission along with important safety measures to prevent and control them. In a research setting, a medical practitioner was observed completing multiple procedures on multiple patients and only

rinsed his knife with water after each, possibly contaminating the next with the previous bodily fluids (Sovran, 2013). Last, besides the patients and participants of the ceremonies, the traditional healers and practitioners themselves may be HIV positive and act as a source of infection if they have open wounds.

Traditional Healers Education Program

Interventions at the individual level could address cultural barriers in South Africa that prevent a decrease in HIV incidence. At this level, education is the primary and most efficient intervention strategy thus far. For example, by equipping individuals with the capacity to process and comprehend risks associated with the HIV/AIDS pandemic as well as HIV/AIDS preventative measures, education is a significant contributor to population health improvement (Bhatta et al., 2013). Potential interventions include school-based health education programs, training of healthcare providers on HIV transmission, prevention, and control and risk reduction counseling to name a few. However, the focus of education has been heavily on the population itself, along with South African physicians who are not only in small numbers in South Africa but are not trusted by the South African community. Urgent action is needed now to help educate this population in a way that they will understand and by who they trust to see change.

With that, one proposed intervention is providing HIV education not only to the people in South Africa but, more importantly, to traditional healers and people who officiate the cultural ceremonies. This intervention places heavy emphasis on traditional healers because data suggests that 80% of the Black African population consults traditional healers for most of their health care needs in South Africa due to many reasons, including a shared sociocultural background and that certain traditional healer practices could contribute to the spread of HIV/AIDS. However, studies

have shown that traditional healers' knowledge of HIV/AIDS was not as high as expected and indicated that a training workshop increased the knowledge of HIV/AIDS (Sorsdahl et al., 2009).

In addition, to gain more trust by this population and make this intervention more effective, the program could be taught and run by traditional healers who are already equipped with this knowledge and can deliver it in a way that their population will connect with. It is important to note that this intervention aims not to change their rituals because it is their culture, but aims to help safely carry out these practices and rituals while safely educating the population. This intervention hopes to result in a decrease in practices and rituals involving direct blood-to-blood contact and other high-risk behaviors, increased testing, and increased HIV treatment and prevention. All of which should help decrease the HIV transmission rates in South Africa and decreasing HIV/AIDS incidence.

Chapter 5: Discussion and Conclusion

South Africa has made progressive strides toward combatting HIV, especially in terms of the 90-90-90 targets. In 2018, South Africa achieved the 90% mark in diagnosing people living with HIV, and it was projected that they should have met all targets by 2022 (Jardim et al., 2022). However, this was not the case and even with numerous HIV prevention and intervention strategies in place, the country still has one of the highest HIV incidence rates in the world today. Through numerous research, many of the interventions and programs today have focused on HIV prevention through education and training, sexual behavior change, and treatment for people with HIV or PrEP for people at risk of acquisition. While these interventions have helped tackle some mediators that contribute to HIV incidence in the country, such as poverty, access to healthcare, poor education, and domestic violence, they have failed to address critical mediators

unique to South Africa that contribute to HIV transmission and acts as barriers to prevent and control transmission.

This paper examined and highlighted those unique mediators that are often overlooked, yet contribute to the spread of HIV in South Africa. Those unique mediators to South Africa included stigmas such as the ones surrounding people living with albinism, norms such as child and forced marriages, and cultural rituals such as bloodletting and blood brotherhood. It has been demonstrated that each of these mediators correlates with HIV transmission, particularly in South Africa within their vulnerable populations. First, first-hand documentaries and research have shown that people living with albinism in South Africa are targeted due to stigma. Girls and women, in particular, are targets of sexual violence due to the stigma stating that sex will cure HIV/AIDS. Next, common knowledge, research, and studies have shown how child marriages increase the risk for HIV exposure and young married women have greater HIV prevalence than young unmarried women. Last, South Africa's rich culture is home to many tribes and rituals involving indirect and direct blood-to-blood contact, known as a high-risk exposure transmission method. While specific examples of each have been noted, it is essential to highlight that there are numerous other stigmas, social norms, and cultural practices that exist within South Africa and contribute to the transmission of HIV. Other notable examples include that many people in South Africa denied the entire existence of HIV, HIV is not a disease in the heterosexual community, wife stealing, potency test before marriage, and partaking in sexual cleansing and virginity testing.

However, thorough research has shown that the response to these factors is limited or just in the works with little to no evidence or results. Moreover, the efforts and attempts to respond to these factors are often undermined and unsuccessful due to South Africa's patriarchal society

and poor law enforcement system that fails to enforce laws and criminalize offenders. In addition, the intervention strategies in place such as the education programs and laws still have numerous gaps that allow the HIV epidemic to persist. The proposed interventions Safe Communities for People Living with Albinism, the Child Marriage Act of 2023, and the Traditional Healers Education Program, all aim to not only tackle the stigmas, social norms, and cultural barriers to HIV prevention and transmission but fill in the gaps of the interventions and laws in place to make them more effective. Thus, by first acknowledging that these factors exist and understanding their substantial contribution to HIV transmission in South Africa, effective interventions can be made to reduce these barriers and stop HIV prevention. As a result, HIV transmission could decrease, particularly among vulnerable and marginalized communities disproportionately burdened by HIV in South Africa.

Future Direction

The future direction of this significant public health crisis in South Africa should address enhancing reporting measures and better policing, in-depth research on these mediators, and universal education. While albinism is linked to high murder and sexual violence rates in South Africa, there is little to no reporting on it, as with any violence happening in South Africa. Better reporting measures will allow officials to get an accurate scope of this problem and not just reports from speculation, hopefully allowing them to address the issue now and take it more seriously. Based on that, officials could introduce better policing measures that equally protects all citizens and their rights and a system that enforces laws and criminalizes illegal acts and offenders. Next, initiate in-depth research on these mediators, with the aim to understand the true epidemiology and prevalence of each issue within South Africa. In addition, test and alter proposed interventions to see how effective or not they are and ways to improve them as well as

the current interventions in place. Last is universal education, which targets their government, health officials, politicians, and the entire South African population. With universal education it is important to include those small, overlooked populations that don't receive any interventions programming because health officials believe that they are either not transmitting HIV or slowly transmitting HIV to where they do not need to be addressed at this moment. Two of those populations include young boys and adolescents and low-exposure communities.

Conclusion

Overall, to decrease the HIV incidence in South Africa and help prevent and control the spread of HIV, the significant factors must not be the only factors researched and addressed. The small and often overlooked factors must be researched and addressed as well, as they all play a vital role in the transmission of HIV within South Africa. Without the proper recognition and research, the true impact of these mediators may be more significant than what was speculated and if left unaddressed could be a serious problem in the near future.

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