A Comparative Analysis of HIV Policies for Adolescent Women in South Africa

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ABSTRACT

A Comparative Analysis of HIV Policies for Adolescent Women in South Africa

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This paper examines the effectiveness of two types of programs aimed at reducing HIV prevalence among young South African women. Adolescent women in South Africa are up to six times as likely to have HIV as their male counterparts ("Understanding the Impact of Apartheid on South African Social Investment", 2015). Therefore, it is critical to explore the impacts of these programs in terms of the needs of this group specifically. This paper will consider the impact of Life-Skills Education programs, as put forth by the South African government, compared to that of basic financial assistance interventions. Life-Skills Education programs assume that lack of education and information drives HIV transmission, while financial assistance interventions consider poverty the driving force. A comparison of the two helps to elucidate whether addressing information or poverty is a more promising avenue for preventing HIV in young women. The paper finds that increased HIV-knowledge did not have the anticipated impact on adolescent women. Instead, small financial assistance programs resulted in significant behavioral changes that ultimately reduced HIV-risk among participants.
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INTRODUCTION

Despite dramatic advancements in prevention and treatment, HIV continues to plague much of the developing world, particularly Eastern and Southern Africa, which currently accounts for an estimated 53% of the global HIV burden ("Fact Sheet – World AIDS Day 2018." UNAIDS, 2018). The concentration of HIV among these regions encouraged many to assume that the substantial rise in the epidemic was a consequence of poverty, and that increasing access to education and health services would provide those at risk with the necessary information to avoid infection (Parkhurst, 2010). However, increased access to HIV information and dedicated facilities for testing and treatment have still failed to produce universally positive results among the most at-risk populations ("Mapping HIV Services and Policies for Adolescents: A Survey of 10 Countries in Sub-Saharan Africa." 2013).

The weaknesses in these efforts are particularly apparent and devastating in South Africa, where the number of people living with HIV has reached approximately 7.2 million, or 19% of the global infected population ("South Africa." UNAIDS, 2018). Moreover, it accounted for 15% of all new infections in 2016 ("South Africa." UNAIDS, 2018). While there have been significant signs of improvement, such as prolonged life-expectancy attributed to the universal antiretroviral therapy program established in 2004 (HIV Drugs ‘Boost South African Life Expectancy’.” BBC, 2014), certain high-risk populations are not receiving adequate or appropriate attention. 37% of all new HIV infections in 2016 occurred in young women (aged 15-24) - a population at least four
times more likely to contract the virus than their male peers (“HIV and AIDS in South Africa.” Avert, 2018). This reveals a critical gap in the current approaches to curb this epidemic, leaving certain populations significantly more at risk than others.

The failure of these programs, such as the limited improvements despite increased access HIV information and testing, has motivated researchers and policymakers to consider concepts of poverty that are more nuanced. This includes examining how conditions of poverty affect individuals’ capacity benefit from these lessons, or investment in avoiding risk-associated behaviors (Mbirimtengerenji, 2007). Therefore, this paper will consider two types of HIV response programs, the first being those that promote HIV-education among adolescents, specifically the Life Skills Orientation curriculum as put in place by the South African Department of Education and also similar peer-led programs. These programs are intended to provide young men and women with the information and tools needed to lead healthy lives. It is often assumed that much of the risk-behavior in which adolescents are engaging is the consequence of a lack of appropriate and necessary education.

This will be compared to the effectiveness of interventions that seek to provide young men and women with financial support, either through school related subsidies or small cash-transfers. This largely rejects the theory that the epidemic is fueled by a lack of information, and instead believes that it is the consequence of limited options and capacity. These programs are meant to provide recipients with the stability necessary to be able to and interested in investing in their futures (Sswamala et al., 2010).

The influence of HIV-education and economics are fundamental in our understanding and fight against the HIV epidemic among young women in South Africa. In order to examine the
potential of these two types of programs, this paper will analyze the findings of fifteen peer-reviewed studies, some looking into the effectiveness of HIV-education programs and others examining the success of financial support programs, all of which were conducted in sub-Saharan Africa and published from 2005 onward. The comparison of their results, and analysis of each’s successes and shortcomings, will provide invaluable insight into the potential of each and the next best course of action.

**HISTORICAL AND POLITICAL CONTEXT OF SOUTH AFRICA**

To fully analyze the underlying political and socio-economic conditions considered responsible for fueling the HIV epidemic in South Africa, it is imperative to understand the country’s unique history. Among these, the events that created extreme poverty among a significant portion of its populations, and important events that coincided with the rise of the epidemic are of particular importance. Therefore, this section will seek to illustrate the various aspects of South Africa’s history and as well as the current conditions that have contributed to the rise of HIV throughout the country.

*The Legacy of Apartheid*

In response to the relaxing of pre-existing segregationist laws during World War II, and the overwhelming influx of South African blacks to the city centers - due to the economic boom following the war and rise of industrialization - the Nationalist Party developed a platform of “apartheid,” or Apartheid. It was through the legalization of this racial isolation that the Afrikaners hoped to maintain the white minorities’ stranglehold on land, jobs, and resources. The
1948 election cemented this “idealism”- allowing the very small white community to force the black and colored majorities off the most desirable lands and out of the most profitable industries, and limit their access to public services, only allowing access to smaller, underfunded schools, hospitals, and other critical resources (Kon and Lackan, 2008).

Among the most damaging legislations was the Bantu Act in 1953, which centralized all black South African schools and required funding come solely from taxes paid by black South Africans ("Bantu Education And The Racist Compartmentalizing Of Education", 2016), gravely reducing resources to about one-fifth of the nation’s total financial support (The Economist, 2017). Furthermore, these schools were forced to provide only the most basic education, a restriction that was extended to “non-white” universities in 1959, forcing black South Africans to rely on unskilled work and manual labor, ensuring their economic and political inferiority (Clark and Worger 2004).

A lack of qualified teachers further exacerbated the problem and left little way that these schools could provide a more advanced education. It is estimated that, in 1961, only 10% of black teachers among these schools had themselves finished high school ("Bantu Education and the Racist Compartmentalizing of Education" 2016). Therefore, there was essentially no way that black South Africans could effectively participate in the economy, as they did not have the education or opportunity to secure more significant roles, further cementing their poverty.

Black South Africans were also at a significant disadvantage due to the jobs that were made available to them. As there were few opportunities, mining and migrant work became prominent sources of income, which left many women, as well as children and the elderly living on “reserves,” while the men went to the various mining and urban centers for work. This
arrangement had profound and damaging impacts on the family structure in South Africa, which put many at increased risk of HIV. First, men who were often away from home were increasingly exposed to sex workers and, therefore, at a significantly higher risk of HIV and STIs (Corno and de Walque, 2012). These men then also risked exposing their wives upon returning home. Additionally, this uprootedness let to a significant decrease in marriage rates, and there is a strong correlation between non-marriage and HIV rates (Hunter, 2010).

The Rise of the African National Congress

It wasn’t until nearly 50 years later, in 1990, that the South African government took the first steps to dismantle racist legislations, finally dissolving Apartheid in its entirety in 1991. This change was further cemented by the election of Nelson Mandela as President in 1994, bringing forth a new era of a black government representing their peers. Unfortunately, this representation did not translate into the transformation many South Africans had hoped and expected.

These disadvantages were further aggravated by the complexities of free-trade, and decades of sanctions and disinvestment by foreign powers which had left the economy floundering. Furthermore, the African National Congress (ANC) was determined to promote inclusion throughout South Africa and did not want to disrupt the current structures in any way that might undermine progress on the political front (Breslow 2013). Rather than redistributing wealth and property, providing a platform for more equality between the races, the ANC prioritized assimilating back into the world market (Goodman, 2017), fearing such disruption would encourage capital flight and undermine the nation’s capability to rebuild (Breslow 2013).
Therefore, many of the damaging or disparate institutions were left untouched, and white South Africans remained largely in control of the nation’s economy (Alessi, 2013).

Instead, the ANC pursued ill-conceived projects to “support” the Black population, such as using their newfound access to resources to build new housing structures in townships (Farmer 2005), deepening the scars of Apartheid by promoting the division between black South Africans and the whites who continued to prosper from living in urban areas. Those living in townships were, and continue to be, effectively removed from access to all the benefits of the cities, including the proximity to proper health services and well-paying employment.

The ANC also failed to repair the education system, which remains in shambles – a 2015 study launched by the Organisation for Economic Co-Operation and Development ranked South Africa’s education 75th of 76 of the world’s wealthiest nations (The Economist, 2017). A clear contribution to the failure of South African schools is the rampant mismanagement and corruption, in which teachers who rarely, if ever, appear for class are able to keep their jobs (Dugger, 2009).

Additionally, decades of the Bantu Act left a majority of South Africans without the most basic skills required to provide a proper education to the next generations (Dugger, 2009). Even by 2007, there was little evidence that there were any improvements in the quality of teachers throughout the country, as a study revealed that only 21% of South African math teachers were able to correctly answer test questions expected of their 11 to 12-year-old students (The Economist, 2017). Another found that over half of the teachers of third-grade literacy failed tests designed for sixth graders (Dugger, 2009).
Therefore, whether due to lack of opportunity or insufficient education, more than half of eligible South Africans are currently unemployed (Goodman, 2017) and while the average black South African household saw their total income increase by 169% over the last ten years, these improvements are dwarfed by the fact that the average white households earns six times more ("Understanding the Impact of Apartheid on South African Social Investment", 2015).

Additionally, pre-established health and medical services were immediately overwhelmed when they became suddenly responsible for the country’s total population, rather than prioritizing solely the white minority. In 1990, it is estimated that only 5.5% of the country’s doctors were accessible to the black majority – resulting in about 1 doctor for every 20,000 rural South African, as opposed to 1 for every 500 whites living in urban areas (Savage, 1990). Therefore, there was no simple way to redistribute access to primary care among South Africans, and many consider this lack of services to be a contributing factor to their susceptibility to HIV during the early years of the epidemic.

Access to health care still remains remarkably low across the country. Today, 44% of all health care expenditure in South Africa is within the public sector, which is responsible for about 85% of the South African population. This is in contrast to the 15% of the population benefitting from private insurance and accounting for 56% of expenditures within the private sector (Pillay, Birn and Holtz, 2008). Despite serious investments by the South African government, including implementing free access to all primary health clinics, as well as the creation or expansion of about 16,000 facilities since 1994 (Brink and Koch, 2014), studies have found that there has been little to no improvement in the likelihood that the nation’s most vulnerable are accessing these
services. In fact, it is estimated that these numbers remain relatively the same as those seen directly at the end of Apartheid in 1994 (Koch, 2012).

The long-lasting effects of decades of racism are apparent across the country. According to the World Bank, South Africa is ranked among those with the highest GINI coefficients in the world (“GINI Index (World Bank Estimate)”). This inequality seeps into virtually all aspects of daily life for many, undermining their efforts and ability to better themselves and their communities. With much of South Africa’s population only receiving minimal education and employment opportunities, there are many aspects of the current conditions that likely contribute to the rise of the HIV epidemic.

*The Rise of AIDS Denialism*

Another significant policy, or lack thereof, that gravely affected the outlook for many South Africans was the rise of AIDS denialism, followed by years of misinformation from leading government officials. When Nelson Mandela became president in 1994, he was faced with a torn society and a crippled economy, both in desperate need of repair. Therefore, much of his efforts were committed to reunifying a country that had been separated for decades, as well as maintaining the hope and respect of the people (Breslow, 2013). Additionally, he needed to reinvigorate the economy after many developed nations had ceased to engage in trade or investment with South Africa in protest of their previous racist policies (Carmody, 2002).

The need to mend these rifts among parties and people, as well as promoting South Africa as a once-again viable business and financial partner, led to the prioritization of economic and social policies, such as the which took precedence over combating the rising HIV/AIDS crisis
(Breslow, 2013). Therefore, it wasn’t until 1998 that the South African government instituted programs in schools aimed at promoting condom use and safe sex (Gellman, 2000).

Unfortunately, Thabo Mbeki replaced Mandela as president in 1999, and became infamous for decades of spreading misinformation and encouraging damaging policies. While Mandela had remained silent on the impending crisis, Mbeki was outspoken, condemning the scientific community and claiming that AIDS was not caused by a viral infection, but was instead the consequence of poverty (Forsyth et al., 2008). He rejected assistance from the United States and other countries, refusing their offers for reduced antiretroviral therapy (ART) prices in order to combat the epidemic (Gellman, 2000). This significantly delayed any pursuit of medical response within the government, and millions were unable to access critical antiretroviral therapy.

For example, it wasn’t until July of 2000 that the South African government first provided ART to pregnant women in an effort to prevent mother-to-child transmission. However, these services were restricted to only two pilot sites in each province until it was further rolled out three years later (Boseley, 2008). Boseley (2008) continues that only 23% of HIV patients were receiving coverage by 2005, compared to rates such as 71% and 85% in Namibia and Botswana respectively. It has been estimated that Mbeki and his government are responsible for more than 365,000 avoidable deaths due to their unwillingness to deal with HIV epidemic (Chigwedere et al., 2008).

This was aggravated by the persistent myths and misinformation disseminated by Mbeki and his government. Among these, famously, was when his Minister of Health, Dr. Tshabalala-
Msimang, suggested that eating garlic, beetroot and lemon could serve as home remedies for preventing HIV, among other false and potentially dangerous claims (Blandy, 2006).

Such insinuations, as well as damaging and stigmatizing language, additionally undermined South Africa’s ability to overcome the growing number of HIV infections. Years of silences, followed by nearly a decade of misinformation, gravely undermined any progress for many in the South African public (Boseley, 2008). This has encouraged many researchers and policymakers to rely on increased HIV information to combat the epidemic, operating under the assumption that many South Africans do not have the information required to lead safer lives and make wiser decisions in their sexual activities (“Young People, HIV and AIDS”, 2018).

**HIV TODAY**

*HIV in South Africa*

It is estimated that nearly 7.2 million South Africans are living with HIV, comprising 19% of all HIV-infections in the world (UNAIDS, 2018). In 2004, the South African government launched what is now the largest antiretroviral therapy program in the world, providing ART to over 4.4 million HIV-positive South Africans in 2017 ("HIV and AIDS in South Africa", 2018). Since the introduction of this program, South Africa has seen a dramatic decrease in AIDS related deaths, steadily lowering from 260,000 in 2005 to only 100,000 in 2016 (UNAIDS, 2018). The HIV Counseling and Treatment (HCT) program launched in 2010 has provided increased access to testing and preventative measures, and approximately 35 million have since been tested for HIV ("Annual Report 2015", 2015). The government also began efforts to extend this program to include pre-exposure prophylaxis (PrEP) in 2016, to protect those considered high-risk, as regular
use of PrEP can significantly reduce an individual’s risk of contracting HIV by up to 92%

However, despite these efforts, HIV remains a significant threat to the health and
wellbeing of the South African population. It was estimated that there were approximately
270,000 new infections in 2016 (UNAIDS, 2018). Prevalence among sex workers ranges from
39.7% in Cape Town to as high as 71.8% in Johannesburg ("Let Our Actions Count", 2019). Men
who have sex with men (MSM) are also at a particularly high risk, at around 26.8% (UNAIDS,
2018). Much of this can be attributed to the immense stigma and human rights violations
encountered by these groups, leading them to be less likely to seek testing and treatment
(Forsyth et al., 2008). This and inaccessible facilities might account for why only about 60% of HIV
infected individuals are currently taking part in the ART program ("Launch of the South African

Additionally, though the ART program has helped millions of South Africans receive
necessary treatment, the delay in rolling out the program left many infants susceptible to HIV
between the beginning of the epidemic and 2004 (Zanoni, et al. 2016). While this can account for
some of the HIV rates among adolescents (age 15-24), the prevalence rate among adolescent
women are staggeringly high and suggest a much more critical issue.

Adolescent HIV in South Africa

Adolescents in South Africa are experiencing tragically high rates of HIV – it is estimated
that 867,283 children and young adults, aged 15-24, are HIV positive (Zanoni et al, 2016). The
current prevalence rate in this age group has remained steady, and is even suspected to have
increased despite the introduction of the ART and HCT programs. The South African Nation HIV Prevalence, Incidence and Behavior Survey estimated that only 14% of HIV infected adolescents were receiving the ART, despite the government’s best attempts to increase enrollment across the country (South Africa, 2012).

Unfortunately, high HIV rates among adolescents are not a problem unique to South Africa – approximately 2.15 million adolescents are HIV positive around the world and about 41% of all new infections in sub-Saharan Africa occur within this age group (Merwe, 2017) (Fox et al. 2013). Some of this has been attributed to a Youth Bulge, which is a condition found in developing countries in which infant mortality decreases and birth rates slow, the proportion of the population within the adolescent age bracket increases ("The Youth Bulge and HIV" 2018). This would mean that adolescents currently make up a larger portion of the global population than previously observed, which could misrepresent the current issue, but also indicates a widening challenge for HIV prevention programs.

While the proportion of adolescents in developing nations continues to increase, attempts to curb HIV transmission and deaths have proven largely unsuccessful. Between 2005 and 2017, the global rate of AIDS-related deaths decreased by 48%, but it has been estimated that they increased by as much as 50% among adolescents (Govender et al. 2018). This staggering disparity shows that there are major gaps in the current understanding and processes laid out to prevent HIV among the young men and women around the world.
**HIV and Adolescent Women in South Africa**

While both adolescent men and women are experiencing alarming rates of HIV infection, it is estimated that 1,000 young women contract HIV every single day around the world (Merwe, 2017). Nowhere is the disparity more apparent than in South Africa, where approximately 30% of all new infections occur in young women (15 to 24 years old), resulting in about 113,000 new cases a year (“SA Youth Aids Mortality Has Doubled with Girls Most at Risk”, 2016) (Deller et al., 2015). Most estimate that young women are 4 times more likely than their male counterparts to be infected by HIV, though some put this number has high as 8 times (“SA Youth Aids Mortality Has Doubled with Girls Most at Risk”, 2016). Therefore, it is critical to understand why these young girls are significantly more at risk than their male counterparts.

First, young women are biologically more likely to be infected with HIV if exposed during sex, as early sexual debut puts them at a much higher risk for tears in their mucosal epithelial lining, which increases the opportunity for transmission. This is important because, while only about 14.2% of females reported having sexual intercourse before the age of 15, compared to over twice as many males, 38.2%, the increased opportunity for infection greatly intensifies their risks of HIV (Richter et al., 2015).

Another contributing factor is a lack of HIV education and understanding among young women. A recent study run by UNICEF found that only 34% of young women exhibited a “comprehensive knowledge of AIDS” (“HIV and AIDS”). Additionally, this UNICEF poll found that only 23% of adolescent women reported being tested and receiving the results within the last year ("Adolescent HIV Prevention"). This is particularly dangerous considering that only 48% of
sexually active young adults reported using condoms with their most recent partner in the last year (SA Youth Aids Mortality Has Doubled with Girls Most at Risk”, 2016).

Therefore, there has been a significant focus on integrating HIV education within schools throughout South Africa, particularly programs geared towards young women. A main motivator is that there is a negative correlation between education and HIV risk – meaning that young girls who stay in school are significantly less at risk of HIV infection (Pettifor et al., 2008). This is because they are less likely to become pregnant and more likely to have positive economic and employment opportunities, both of which allow them to delay marriage (“Zimele Project: Launch”, 2019). Additionally, these programs seek to decrease the stigma many fear when discussing HIV and pursuing necessary treatment and preventative measures, by encouraging discussions and understanding, which is a key challenge to promoting healthier decisions among young women (“Prevention”, 2018).

However, economics also plays a critical role in women’s access to education and their ability to make healthy decisions for themselves and pursue healthy relationships. Currently, lack of economic resources is the driving force behind young women dropping out of school, even more so than those who are forced to leave due to pregnancies (Pettifor et al., 2008). With only limited resources and education, many young women are in a very dangerous situation that encourages them to rely on older men for economic support. This type of relationship, in which there has been no formal agreement of payment, but it is assumed that a sexual relationship is exchanged for gifts and financial support, is known as transactional sex (Ranganathan et al., 2016). Transactional sex may explain why the age at sexual debut is markedly lower among young women living in poverty, and particularly among those “who have experienced an economic
shock, a death, illness or job loss” (Gillespie, Kadiyala and Greener 2007). Adolescent women may seek out these relationships as a way to support themselves and their families (Gillespie, Kadiyala and Greener, 2007).

When young women seek out “sugar daddies”, they are significantly increasing their potential for HIV infection, for a number of reasons, and studies show that men at least 5 years older than their female partners, considered age-disparate, are significantly more at risk than younger boys (Govender et al., 2018). This is because older men have had more sexual experiences since their sexual debut, which increases the time and opportunity for potential exposure. Additionally, they often have more than one sexual partner at a time, which also puts them at a significantly higher risk for HIV infection (Ranganathan et al., 2016).

This type of relationship, in which young women are exchanging sex for financial security, means that they also often lose a great deal of negotiating power that may otherwise protect them in a more traditional partnership (Ranganathan et al., 2016). As they are not married to these older men, they cannot demand a monogamous relationship, as previously mentioned. This is particularly dangerous when they are also less likely to be able to demand the use of condoms. Studies suggest that this imbalance is even greater than that among sex workers, who are often able to negotiate terms and expectations before sexual intercourse (Ranganathan et al., 2016). Young women in transactional sex relationships also are more likely to be victims of gender-based violence (“Prevention”). Therefore, transactional sex can increase a young woman’s risk of HIV by nearly 300%, even after controlling for other factors (Ranganathan et al., 2016).
SEARCHING FOR A SOLUTION

The influence of behavioral and structural conditions is fundamental to combating the HIV epidemic among young women in South Africa. Therefore, this paper will examine two prevalent programs, which are derived from conflicting theories regarding the source of the HIV epidemic. The first type of program, which I categorize as life-skills education, strives to provide HIV education and essential tools for adolescents and is meant to fill the information gaps assumed to be responsible for many of the risk behaviors reported among young women. Such programs have been implemented throughout the South African school system by the government, though there has also been increased interest in the potential for peer-led programs.

I will compare these education programs to two forms of financial support interventions. The first program is school subsidies, in which all the costs that might otherwise prevent young women from attending school are completely covered. The other are those that provide supplemental grants to low-income households and adolescent women. Both are intended to combat the socio-economic conditions that have been linked to the HIV epidemic by removing some of the incentives that might lead to risky sexual behavior.

It is crucial that the South African government consider all forms of HIV-interventions that could reduce the current incidence among adolescence, as it is estimated that 867,283 South African youth are currently HIV positive, however only about 14% of them are currently on ART (Zanoni et al., 2016). It has also been estimated that, on average among sub-Saharan countries, only about 10% of young women and 15% of young men are estimated to know their status (Fox et al., 2013). Therefore, there are potentially more than 700,000 of HIV-positive adolescents who
are unaware of their status or are not adhering to antiretroviral therapy that could prevent transmissions to their partner, or even partners. However, as this crisis is particularly apparent among adolescent women, it is additionally important to examine interventions that assist them and their needs specifically.

Moreover, adolescents are at the highest-risk of infection at the very beginning of their sexual primes, which dramatically elongates the window in which they could potential expose others (Fox et al., 2013), as there are presumably decades in which they might be sexually active and could risk another’s health. Similarly, adolescent women are most at risk of contracting HIV while they are in their childbearing years, which therefore also put their children at risk (Ranganathan et al., 2016). Current treatment can reduce the likelihood of mother-to-child transmission to below 5%, however rates for those untreated are estimated to be as high as 45% ("Mother-to-Child Transmission of HIV", 2018).

Understanding how to curb the HIV epidemic among adolescent women in South Africa is critical and goes far beyond the needs and well-being of the individual. To better implement change, all options must be considered and evaluated, both as isolated programs and as a collaborative effort for a more substantial outcome.

**Why Life Skills and Financial Support Programs?**

Despite utilizing very different techniques, both life-skills and cash-transfer programs do have some theories regarding the importance of and appropriate approaches to promoting adolescent health and wellbeing in common. Studies have examined the impact of introducing critical skills and information early in life, and the long-term effects of such programs. During The
Panel on Transitions to Adulthood in Developing Countries, it was expressed that adolescence is a "period of momentous social, psychological, economic and biological transitions" and that the skills and information gained during this time influence much of an individual’s decision making going forward (Lloyd, 2005).

Therefore, researchers have analyzed the capacity for interventions to generate lasting impacts on participants. Among these programs are those that seek to influence the psychosocial growth of adolescents, such as research led by Cappa (2012) that examined early interventions’ impact on stereotyping and concepts of gender norms. Similarly, programs that promote strong foundations for emotional health and building self-esteem have been focal points among studies as well (Global Fund, 2017) (“Adolescent Girls and Young Women in High-HIV Burden Settings.” 2017). Another topic of interest is the understanding that there is a narrow window in which adolescent men and women are still easily accessible and influenced before a majority of them will face these critical emotional and behavioral decisions (Amo-Adjei and Tuoyire, 2017). Therefore, these each of these programs is constructed to achieve crucial outcomes during a critical time in young women’s lives.

*Life Skills Education Programs*

This narrow window has led many researchers to examine schools as a fundamental source and site for these programs, due to the assumed ease with which they facilitate implementation of these materials (Pettifor, McCoy and Padian, 2013) (United States. USAID, 2013). The South African government introduced school programs aimed at preventing risk-behaviors among students in South Africa in 1997. This program was updated in 2012 to integrate
basic health and HIV education, as well as life-skills training in its secondary schools (United States. USAID, 2012) and was streamlined again in 2015, including scripted lessons, in an effort to provide consistent information throughout the country (United States, 2017).

The initial rollout led to many studies analyzing the impact of these programs in the subsequent years. These looked into the efficacy of these interventions, such as behavioral changes, such those examined by Mavedzenge et al. (2013) and Kirby et al. (2007). Others have considered the socio-emotional impacts, such as self-esteem and perceived support (“Adolescent Girls and Young Women in High-HIV Burden Settings”, 2017). However, these rely on self-reported outcomes, and do not include HIV test results, which seems important for proving their efficacy. There has also been increasing concern of the effectiveness of these programs due to significant challenges in the South African education system. Therefore, others have researched the potential barriers for students to access fully implemented programs, and how progress might be undermined by the current system.

This attention to school-based interventions has since led to an increased interest in the effectiveness of similar peer-led programs. There are defined by the UN as "the process whereby well-trained and motivated young people undertake informal or organized educational activities with their peers (those similar to themselves in image, background or interests) over a period of time, aimed at developing their knowledge, attitudes, beliefs and skills, and enabling them to be responsible for and protect their own health.” (“Peer Education Training of Trainers Manual.” 2003). Therefore, many researchers have examined the impact of such programs and whether they achieve supportive psychosocial and social-learning environments (Swartz, 2012) by introducing these complex topics through adolescent peers (Kim and Free, 2008).
However, contrary to those that question the efficacy of life-skills education, studies have considered if these young leaders are, in fact, able to carry out the difficult charge of instilling critical life lessons among their classmates, or if teachers are better suited for this task (Sriranganathan et al., 2010). Additionally, there has been interest in whether these lessons translate into actual behavioral changes among adolescent participants (Burke et al., 2012). And yet, there have been very few studies examining the long-term effects of these programs (Swartz, 2012), and particularly few among South African students (Visser, 2007).

Supporters of both LSE and peer-led programs rely on the assumption that education and HIV information lead to significant behavioral changes among adolescent women. However, there has been some evidence that this might not be the case. As discussed by Sanyu Mojola (2014) and others, there is concern that young men and women do not avoid risk-behaviors, despite advanced HIV-knowledge and access to condoms. In fact, she described it as “they know but they ignore,” and that, instead, many prioritize having fun rather than turning this awareness into action (Mojola, 2014).

Similarly, by relying on schools for implementation, both life-skills education and peer-led interventions are ignoring young women who have dropped out, and who are therefore at a seriously increased risk of HIV (Gillespie, Kadiyala and Greener 2007). There was little evidence of research into the long-term effects of these interventions, and if they had any impact on young women after they have ceased to be a part of such programs. Additionally, there was little effort to distinguish the benefits of these life-skills programs specifically, disengaged from the inherent benefit young women attain by simply staying in school.
Another strategy that has been attracting increasing attention and consideration are various methods of cash transfer and financial support programs (Baird et al., 2019). These contradict the theories supporting life-skills programs, which suggest that the HIV epidemic is largely the consequence of low levels of information and relevant forms of protection. Instead, financial assistance programs are rooted in the belief that poverty puts young women in a situation that leaves them essentially incapable of carrying out these measures, despite largely understanding the information and risk factors associated with HIV (Rugalema et al., 1999). Therefore, it has been postulated that small financial incentives, considered asset-based social protection (Adato and Bassett, 2009) might be enough to upend the current environment, which currently contributes to a multitude of conditions and behaviors associated with HIV risk (Heise, 2013).

Among these circumstances is decreased access to education, and studies have examined the impact of providing school subsidies to low-income students, and how this affects attendance, enrollment, and some risk-behaviors among participants (Cho et al., 2018). Others have considered the effect of small cash grants on family structures and how and why this financial stability might encourage prioritizing a child’s education (Adato and Bassett, 2009).

Similarly, there has been interest in the physical and psychological effects of poverty on individuals, and how this affects their behaviors. Adato and Bassett (2009) illustrate the biological dangers by explaining that “food and nutrition insecurity increases susceptibility to HIV exposure and infection, and lowers resiliency to AIDS impacts, while HIV/AIDS intensifies vulnerability to food and nutrition insecurities.” Meanwhile, Ssewamala et al. (2010) and others consider how
the insecurities associated with poverty influence daily behavior and might encourage risk-behaviors, such as age disparate relationships and transactional sex.

However, there are many who believe that it is not poverty, but economic inequality that promote risky sexual relationships for young women. Gillespie, Kadiyala and Greener (2007) reference that it is not the most impoverished nations or regions that have the highest HIV-infection rates. Instead, it is those in which there is the greatest disparity between the highest and lowest incomes. It is possible that covering the most basic essentials for young women may not be sufficient enough to curb their influence of older men who can offer larger sums of money in exchange for a sexual relationship (Swidler and Watkins, 2007). However, many of these studies directly targeted low-income students or failed to make any socioeconomic distinctions.

Additional concerns include whether such programs can be considered ethical. Among these are that the conditionality aspect of some programs can be seen as “paternalistic and potentially manipulative” (Fiszbein and Schady, 2009). Others worry that such incentives would lead to “undue inducement” (Healy et al. 2017). This is the idea that providing cash incentives might distort the rationale behind the action, whether that is HIV-education or testing, and eliminate their true understanding of the various risks (Ballantyne, 2008).

Among the challenges analyzing the efficacy of such programs, there has not yet been extensive research examining the effects of financial security on the wellbeing of young women specifically (McCoy et al., 2010). There have also been few large-scale studies of cash-transfer programs in Africa, and therefore there is little detail regarding the effects of various cash amounts, as well as the length of time for which these are effective (Fiene and Leclerc-Madlada, 2014). Therefore, some are left to speculate the lasting impact of these programs, and if they are
in fact capable of creating long-term change or are, instead, more of a band-aid that cannot fully resolve the underlying issue (Krubiner and Merritt, 2017).

COMPARING LIFE-SKILLS EDUCATION AND FINANCIAL SUPPORT PROGRAMS

While both life-skills education and cash-transfer programs have shown significant benefits as well as shortcomings, there has been very little to compare their successes in relation to one another. Unfortunately, many studies examine the results of one specific strategy (Salam et al., 2016), rather than considering it in relation to another that might best or complement it. Therefore, this paper is intended to pit these two interventions against each other in order to weigh the results of each and better understand which, if either, is the more promising program, or how they may work together to produce the most success.

Methods

In order to explore these programs, I focused on published, peer-reviewed case studies using PubMed, JStor and GoogleScholar. The search was narrowed to those conducted in sub-Saharan Africa, as young women in this region are significantly more at risk than others. Search terms included “adolescent” and “young women,” “Life-Skills Orientation,” “HIV education,” “cash transfers,” “school subsidies,” and “peer-led intervention,” among others. I also chose to focus only on studies published after 2004, as the introduction of the ART program in South Africa has been attributed to a change in the public’s perception of the epidemic (Austin-Evelyn, 2011).

It became very clear that a comparison of these two programs in a single case study was not readily available. Therefore, I chose to also include those that examined various forms of
these tactics. For health education programs, I looked into those that were peer-led as well as those that were run and taught by public schools, while a majority of the case studies on cash-transfers focused on the efficacy of conditional versus unconditional programs, and the potential for covering school fees and associated expenses.

Once I removed programs with fewer than 100 participants, only five articles remained. Therefore, I chose to look at those that focused on young women or adolescents as a whole. I did not utilize any studies that worked with adult women, as they would not be included in those studies that focused on education programs, and their risk factors are significantly different than their younger counterparts. Therefore, I only included studies that worked with adolescents and young adults between the ages of 12 and 22.

Additionally, I chose to include studies that compared all behaviors associated with HIV risk rather than solely HIV status, as this among adolescents was not widely researched or readily available. Therefore, research that monitored sexual behavior linked with high infection rates, such as sexual debut, more than one partner, and age-disparate relationships with those five or more years older, were considered equally relevant. Additionally, those that evaluated school retention rates, delayed marriages and pregnancies were also incorporated, as well as STI infection rates, which are considered to be cofactors (Pettifor et al., 2008) (Guttmacher Institute, 2006) (Watson-Jones et al., 2007).

Methodological Challenges

The first challenge collecting the studies necessary for this analysis was that many interventions were directed at children who were significantly below the average age of sexual
debut, and therefore did not produce much data on any impact in sexual behavior. A survey of 5,708 adolescents found the median age of sexual debut for both boys and girls to be 18 years old (Zuma, Mzolo, and Makonko, 2010). However, some studies evaluated the effectiveness of programs for children much younger than that, which potentially undermined their findings, leaving them with limited results from which to derive their analysis.

There were also surprisingly few studies on the efficacy of life-skills programs conducted during or after 2005, despite the improvements in treatment options (HIV and AIDS in South Africa, 2018), and increased access to information (Chan and Tsai, 2018). Instead, many seemed to be published in the years directly following the introduction of programs. This was surprising, as changes in public opinion and their understanding of the HIV epidemic and associated risks may have greatly impacted the success of these programs.

An additional roadblock was that many of these did not provide sufficient, or any, quantitative results to analyze. After removing all those with only minimal data collection, or those that did not directly or sufficiently indicate a potential impact on HIV risk, as well as inconclusive results, there were only thirteen remaining studies.

There were multiple challenges to finding detailed analysis on HIV information programs lead by teachers and adults in sub-Saharan countries. Very few recent studies explored the effect of life-skills programs on adolescent women specifically. Similarly, these studies examined the effect of school programs, and there were very few examples of studies looking at the effect of out-of-school interventions, which made it difficult to distinguish the impact of the program and the established link between education and healthier life decisions by young women (Pettifor et al., 2008).
Life-Skills Education (LSE) Programs

School Based Interventions

All of these studies took place in South Africa and had both male and female participants. Each analyzed the impact of, the Life-Skills and HIV information programs implemented by the Departments of Health and Education of South Africa beginning in 1995. The primary objective of this course is to reduce the students’ potential for partaking in risky behavior.

In order to do so, this program focused on “dissemination of information development of cognitive and behavioral skills and aims at changing social norms related to sexual behavior among young people” (Visser, 2005). These include lessons in the biology of the disease, including modes of transmission and methods of prevention, and shifting current attitudes toward those living with HIV and gender norm, as well as working to normalize condom use and other safer behavior (James et al., 2006). It is intended to provide young men and women with the skills necessary to better navigate their relationships and decision-making and diminish the opportunity for infection (World Health Organization, 1992).

Supporters of life-skills programs consider it critical to focus on individuals while they are still young students because the beginning of their sexual maturity coincides with when they are still likely to be in school, but that attendance begins to rapidly decline shortly after. About 71% of students between the ages of 10 and 14 are still regularly attending school (Bankole et al., 2007), while the average young woman in sub-Saharan Africa has her sexual debut around 16-years-old (Amo-Adjei and Tuoyire, 2017). This means that there is a narrow and important window in which these skills or information must be promoted before potentially risky behaviors can form into habits.
The Studies

One study, published by Maretha Visser in 2005, conducted pre- and post-intervention surveys to quantify the impact of this program on 667 children, ages 14-19, over a two-year period. A survey inquired about basic demographics, but also the students’ knowledge regarding protective measures against HIV, their attitudes towards those living with HIV/AIDS, and their behavior which might put them at a higher risk for HIV infection.

James et al. (2006) ran a similar study but compared the HIV and life-skills intervention to a more general HIV education program. The control group was enrolled in non-structured courses that focused on the most basic HIV and AIDS education points, without discussing or promoting the life-skills associated with safer behavior. Those placed in the intervention group were given similar instruction as that in Visser’s 2005 study. Surveys were conducted before the courses were implemented, at the end of the 10-month academic year, and then again, 6 months later.

A 2010 study published by John B. Jemmott et al. (2010) compared the impact of HIV-information and life-skills programs to those that focused on general health concerns in South Africa. While the intervention group was enrolled in a similar program to those previously mentioned, the control group was instead informed about the lead causes of morbidity and mortality in South Africa, including “heart disease, hypertension, stroke, diabetes and certain cancers,” and behaviors to reduce the associated risks (Jemmott et al., 2010).

This study was conducted over a 13-month period and included surveys before the commencement of the program and every three months after that. 1057 students with a mean age of 12.4 were enrolled, with the anticipation that early integration might have a more
influential and lasting impact than introducing these concepts post sexual debut (Jemmott et al., 2010).

Each of these studies constructed surveys intended to measure the interventions’ effects on HIV knowledge and current risk behaviors, including condom use, sexual debut, and those in multiple or age-disparate relationships. Both James et al. (2006) and Jemmott et al. (2010) evaluated potential attitudinal changes among the students. However, none of these studies examined the impact on marriages, pregnancies, HIV testing or HIV prevalence.

Discussion

It was particularly challenging to parse out the success, or lack thereof, of school-based HIV and life-skills education programs mostly because there was little research reflecting the current conditions today. Therefore, there were too few studies to reach any strong conclusions.

School settings are prioritized largely because they allow educators to engage with a large number of adolescents at once (Pettifor, McCoy and Padian, 2013). Researchers have also speculated that students are more susceptible to absorbing and understanding new concepts in environments they already associate with learning (United States. USAID, 2013). It is anticipated that keeping these lessons within the school setting encourages students to prioritize and process the information much the same as they do the standard curriculum.

This was supported by these studies, all of which reported increased HIV-knowledge among intervention participants. This would initially seem to support the expected outcomes, that these programs were making a significant difference in the information to which adolescents were being exposed and would ultimately impact their behavior (Mavedzenge et al., 2013).
However, while these interventions showed a significant increase in HIV/AIDS knowledge, neither appeared to make any impact on the students’ condom use or sexual debut and activity.

This disconnect was attributed to serious gaps in the information and class regularity among schools. Upon further investigation, Visser (2005) found that these programs were not being uniformly implemented among the schools, and some teachers were not fully executing the material in the program, for various reasons. Among them, this study found that instructors did not think it was appropriate to discuss sexual behaviors with students. Previous, though few, studies examined the many factors that can discourage or inhibit an instructor’s ability to provide thorough sexual health guidance. Among them, some teachers reported resenting that they were left to discuss these sensitive and uncomfortable topics, frustration with undisciplined students, and a general lack of time and resources (Ahmed et al., 2009). Others did not agree with the message and information being disseminated in these programs, and instead taught abstinence and other lessons that aligned with their religious beliefs (Visser, 2005).

There is has also been previous research that has found that many teachers do not have the level of training, or understanding of the HIV epidemic and relevant information to fully provide this course to their students (Ahmed et al., 2006). This directly contradicts one of the more popular concepts supporting these programs, which is that in-school instructions are considered among the most efficient responses to the HIV epidemic, as they require minimal resources. UNICEF estimated that only about 14 hours of preparatory work once a year is sufficient for providing students with productive guidance (UNICEF, 2017). However, the findings of these studies indicate that teachers were unable to provide critical skills to their students, gravely undermining the efficacy of these programs. There were additional reports that some
teachers failed to run the course every week, despite this being mandatory for the program (Visser, 2005). Dugger (2009) had shown that faculty attendance and overall quality is a serious, system-wide problem in South Africa. This poses real concern when deploying this as a nationwide program, when there is little supervision, leaving some students without the complete lesson required to positively influence their futures.

Once accounting for this and separating the results between those who had received full and partial program implementation, Visser (2005) was able to detect some additional positive impacts. Fully implemented courses were those that maintained regular classes and adhering to the approved course materials. Surprisingly, HIV-knowledge did not differ between those enrolled in full or partial interventions. However, those in the full-implementation were less likely to report engaging in sex in the past six months and more likely to report using condoms.

Therefore, it seems that these programs can only have the desired effectiveness, as proposed by Kirby et al. (2006) and others, when these programs are conducted regularly and include the complete lesson provided by the Department of Education. Kirby et al. (2007) found that 65% of programs had a positive impact on at least one indicator, and overall successes included increasing condom use among students by 48% and reducing the frequency of sex by 29%, only in properly implemented programs.

In fact, further investigation found that there were no detectable differences in sexual activity between students who had been in the partial-intervention and those in the control group who were not given any comparable instruction. Unfortunately, this distinction was not further investigated in this study, but it would be very interesting to see what materials influenced this change in behavior, as it cannot be attributed to general HIV-knowledge.
Another challenge was that there were no significant improvements among students in the intervention group in surveys regarding their attitudes toward people living with HIV, perceived social support and outlook for their futures (James et al., 2006). This directly contradicts a Global Fund report that described life-skills education as an important tool in positively affecting students’ self-esteem, as well as their perceptions about people living with HIV and ideas about gender norms ("Adolescent Girls and Young Women in High-HIV Burden Settings", 2017).

However, there was evidence of progress in other studies (see table 1). For example, one found that those in the control group were 31% more likely to drop out of school than those in the intervention groups (James et al., 2006). Additionally, among those enrolled in HIV education and life-skills programs, 65% were less likely to engage in vaginal intercourse, and about 50% less likely to engage in unprotected sex and report having multiple partners than those compared to those who only learned of various other health concerns (Jemmott et al., 2010).

The latter intervention pitted the most elementary HIV-information programs against the more holistic approach presented in the Life-Skills Education program. This would seem to suggest that the basic information about the epidemic was as impactful as providing the students with the more advanced program, and again reflect that these programs are only accomplishing the most basic goals for this intervention.

Another concern is that, in studies that have been able to track HIV and STI incidence rates, there has been little impact despite an increase in self-reported use of condoms (Sani et al., 2016). This is surprising, as one would not expect to see a reduction in risk-behavior have little to no impact on HIV incidence. It would seem to suggest that gaps in HIV information are
not driving the epidemic, and that further steps must be taken to detect and reduce influencing factors for young women that are impacting their health.

**Peer-Led Interventions**

Contrary to studies exploring the efficacy of adult or teacher led life-skill programs, it seemed that peer-led interventions have been attracting increasing interest (Michielsen et al. 2012) and making studies easier to access. However, these too were largely conducted in schools, which may have impacted the results due to the correlation between education and reduced HIV-infection (Millennium Development Goals, United Nations).

**The Studies**

Maretha Visser (2007) also conducted a study on peer-led programs and included 4,086 students, ages 13 to 20 across 13 different schools. Students nominated members of their grade to become peer leaders, who were ultimately interviewed and selected by faculty. They were provided extensive training and assisted by one peer supporter and a teacher.

This intervention was compared to the efficacy of a life-skills program similar to those mentioned previously, serving as a control. Surveys were collected to assess psychological wellbeing, peer influence, school climate, reported high-risk behavior, and reported substance use, among other factors (Visser, 2007). These surveys were administered before the program to provide a baseline and again, 18 months later.

Michielsen et al. (2012), conducted a trial including three surveys - once to establish a baseline and followed by additional surveys collected six and twelve months later - among 1,950
young men and women aged 17 to 18, to observe the impact of peer-led HIV intervention in Rwanda. Leaders were again selected by the teachers and monitored by professional coordinators for assistance. The results were compared to those enrolled in a course led by teachers. The distributed surveys were similar to those previously mentioned, but did not include detailed self-esteem or attitudinal questions, despite the proposed correlation with peer-led interventions.

Mason-Jones et al. (2011) and Swartz et al. (2012) conducted similar trials that surveyed students for psychosocial and sexual health related behaviors for a baseline measurement and another follow-up 18 months after the intervention. The interventions were influenced inspired by the national program, “Rutanang,” meaning “learning from one another” (Deutsch, 2002) and created by the Human Sciences Research Council of South Africa (Swartz et al., 2010). It was, again, the hope that well-informed students could influence the behavior of their classmates and promote healthier behavior. These were held as a replacement for life-orientation courses being taught among the control schools. Surveys collected demographic information, sexual behavior, and goal-orientation, decision-making and future orientation (Mason-Jones et al., 2011).

There were some differences between the two studies. Mason-Jones was unable to attain a fully randomized study, as the Department of Education instead saw to it that the intervention be implemented within schools considered to have high-risk students. Additionally, it did not attempt to collect statistics on HIV education among the participants. Another difference was that Swartz et al. (2010) selected peer leaders who were two years older than the students in the intervention course.
Discussion

Many of the concerns previously mentioned were equally relevant among the peer-led interventions. These, too, were all conducted in schools, so while all but one were able to benefit from surveying large groups of students, there was also the potential that the results were impacted by the students’ current enrollment in school, rather than the course material itself. Additionally, these studies were conducted over relatively short periods, and could not account for any long-term effects.

Additionally, some of these studies were only implemented among the more impoverished schools, because the South African government considered them higher-risk and therefore a priority (Mason-Jones et al., 2011). This is problematic because Swartz et al. (2012) found that students with more financial security were much more likely to benefit from this program. Therefore, by only implementing this intervention among the poorest schools, the research in this study may have been undermined or compromised, and the socioeconomic condition of the students may have diminished their potential to benefit from the program.

There was also concern that the limited amount of resources for the peer-leaders and the instructors may have led to inconsistencies among the programs (Michielson et al., 2012). In order to provide a safe space for those enrolled in the peer-led intervention, researchers and teachers were not present during these sessions (Visser, 2007). It was not possible to confirm that all students were receiving the same information or level of care, and there were concerns that some peer-leaders might be promoting their own beliefs rather than that of the curriculum (Mason-Jones et al., 2011).
Peer-led discussions are intended to provide supportive psychosocial and social learning environments (Swartz, 2012) that allow students to discuss topics that they would otherwise avoid at school (Burke et al., 2012). Studies have shown that students are better able to absorb and utilize information they have been able to discuss, rather than the instructions given in more formal, lecture style courses, as are popular with the LSE programs (Swartz, 2012). Additionally, there is mounting evidence that authority figures, such as teachers and school counselors, are unable to affect behavioral change (Dickinson, 2009). This is attributed to the social and hierarchical distance between the two parties, leaving many more inclined to learn from those with whom they anticipate having the most in common (Sriranganathan et al., 2010).

However, Swartz et al. (2012) found that the learning was comparable in both the peer-led and teacher-led groups (see table 2). Influence remained remarkably uniform between both interventions in many other risk-behavior indicators as well, which seriously contradicts the anticipated success of such programs. Many student leaders also found it difficult to establish the necessary rapport with their classmates at the beginning and felt their reception to be not supportive or responsive (Visser, 2006). In fact, there was ample evidence that students did not want to use their peers as resources for this information. Michielson et al (2012) also found that adolescents reported that they do not seek out their friends for information.

This method has been considered particularly effective as it takes advantage of adolescents’ ability to influence one another (Kim and Free, 2008), and has proven to be particularly effective in confronting and dismantling widely held prejudices and stigmas, which are considered to be among the greatest impediments when combating HIV education and sexual health care (“Adolescent Girls and Young Women in High-HIV Burden Settings”, 2017) (Burke et
al., 2012). However, Visser (2006) found that the occurrence of sex with multiple partners increased comparably in both groups. Additionally, the same study found that, while condom use increased, there was no difference between the two groups. Mason-Jones (2011) and Michielson (2012) also did not detect any difference between the control or intervention behaviors, and their sexual activities were largely the same as it had been at the start of the study, including sexual debut and condom use at last sex.

However, previous research in youth education programs showed significant improvements in participants’ HIV and STD knowledge (Kim and Free, 2008), as well as a more comprehensive understanding of behavioral and sexual health information (Burke et al., 2012). Yet, other studies have found that these improvements do not seem to be translating into a reduction of risky behavior, and there is limited evidence that these programs affect HIV prevalence or pregnancy rates (Burke et al., 2012). This seems to reflect the findings in the previous studies – that increased HIV-information does not necessarily equivocate to a reduction in risk activities and refutes the assumed impact of HIV knowledge on risky-behavior among adolescents. Surprisingly, these studies largely did not include any data on HIV-knowledge, despite being considered a critical portion of the program material.

Mason-Jones (2011) found that those in the intervention were in fact 1.54 times more likely to have sex than those in the control group. There are some factors that may have contributed to the lack of positive response among the students. At the beginning of the study, student leaders reported quite a few challenges in implementing this program. Both peer leaders and participant students reported not feeling comfortable discussing these topics in the setting.
As such material had not been covered in school before, there was a level of uneasiness and embarrassment suddenly speaking about this formerly prohibited sexual issues (Visser, 2006).

Additionally, these peer-led programs demand significantly more resources than those run by school faculty. Students require significantly more training, including lessons in how to appropriately lead a class, and various techniques that a teacher would already be more likely to know (Sriranganathan et al., 2010). The peer-led setting also demands that there not be any adult supervision. This can be problematic, as it is therefore hard to monitor and ensure the accuracy and safety of the instruction that is taking place, and students may not be fully equipped to handle certain situations (Burke et al., 2012).

Fortunately, some studies showed positive and important evidence that the peer-leadership intervention had positively impacted the students. This included a decrease in risk-behavior among those in the intervention compared to the control group, including the occurrence of multiple sexual partners (Swartz et al., 2012) and an increased likelihood of getting tested for HIV. The same study also found that the number of sexually active students remained the same, rather than increased, over the course of the intervention (Swartz et al., 2012).

Another important element of the peer-led intervention was the opportunity to impact psychosocial behaviors among the students. It had been suggested by those in favor of these interventions, that such peer-groups provided a safe and influential space that could upend prevalent prejudices among the participants (“Adolescent Girls and Young Women in High-HIV Burden Settings”, 2017). Two of these studies did not find any evidence in stigma reduction towards those living with HIV (Michielson et al., 2012) (Jemmott et al., 2012).
However, there were clear improvements among students’ self-esteem and confidence in their future capabilities regarding their education and employment (Swartz et al., 2012). Visser (2006) and Swartz (2012) both found that students in the intervention were more likely to consider themselves a good resource for their friends, and felt that the course had given them skills that allowed them to better support their peers (Swartz et al., 2012). This study also found that the students were more likely to have stronger and more beneficial education and life-orientation goals than those in the control. This is important because adolescents are more likely to avoid risky-behaviors when they have a more positive attitude about themselves and the possibilities in their futures (Heise, 2013).

Overall, peer-led interventions were able to substantially impact the discussion surrounding the HIV epidemic and, in some settings, promote positive change in stigma reduction and each student’s sense of agency and potential. They were found to be equally successful in informing their classmates about critical HIV information when compared to teacher-led interventions. Unfortunately, this knowledge did not translate into risk-behavior reduction, and sexual activity associated with HIV risk remained largely unchanged.

The Conclusion

Pettifor et al. (2012) had posited that a benefit of conducting these programs in schools was that it would allow for the information to reach many young women at once. The large number of students represented in these studies, all but one analyzing over one thousand adolescents, supported this theory. The school clearly made finding study subjects much easier, as there was a concentration of young men and women easily accessible.
However, a concern is whether looking solely at adolescent students may have impacted the overall findings. Instead of looking at the impact of life-skills programs among adolescent women, one must also consider the respected correlation between increased education and reduced risk-behavior among young women (Pettifor et al., 2008). Therefore, it may not be fair to assume that any or all success was due purely to the interventions, and one must consider that those included in these studies were possibly already at a reduced risk of HIV. Similarly, these studies did not record if these programs had any impact on dropout rates among participants. High school completion and school attendance rates are considered critical indicators of a young woman’s HIV risk (Pettifor et al., 2016), and promoting sustained enrollment should be among the most important initiatives.

It would have been helpful if these studies had been more long-term and also considered the effect of these programs on young women who had dropped out of school. Had these follow-up surveys been conducted among all those who had been enrolled in the program, rather than only those still in school, it would have been interesting to see if there was a variation in its influence among current students and those who had failed to complete their education. This may have elucidated the impact of the program independent of the benefits of continued education.

An additional benefit of a long-term study would be to see if implementing these programs among very young adolescents had an increased impact on their risk-behaviors once reaching the age in which they were more likely to have sex. It is believed that exposing young men and women to critical information, regarding health, social norms and stigmas, as early as possible will have a greater and more substantial impact (Mavedzenge et al., 2013). Since these
programs only lasted two years at best, and did not distinguish among the age groups, it was not possible to see if this information truly impacted the youngest in the studies.

Financial Support Programs

Education Subsidies

Programs providing financial assistance covering school fees and the associated costs resulted in startling success. While there was no research into if these programs increased the recipients’ knowledge of HIV information, risk behaviors were still widely reduced among participants.

The Studies

Studies by Hallfors et al. (2011) and Cho et al. (2018) provided very clear examples of how even small cash assistance might affect a young woman’s health and well-being outcomes. These trials took place in Zimbabwe and Kenya respectively and examined the effects of eliminating the cost of school fees, uniforms and basic school supplies for orphan adolescent women. Orphans are considered a particularly high-risk group and are more likely to drop out of school, and have exhibited increased risk of early sexual debut, marriage, pregnancies, and STD and HIV rates (Gregson et al., 2005) (Thurman et al., 2006). Therefore, they provide excellent insight into the potential for such programs.
Discussion

As previously mentioned, young women’s access to education is considered critical in the fight against HIV (Gillespie, Kadiyala and Greener 2007) and, fortunately, both of these studies had a tremendous impact on the young women (see Table 3). In one study, adolescent women receiving school subsidies were six times less likely to drop out of school (Hallfors et al., 2011). Similarly, the other found that 4% of those enrolled in the intervention had dropped out during the study, compared to 12% in the control group. Those in the intervention were also much less likely to be absent (Hallfors et al., 2011), which is interesting because these school subsidies were not contingent on maintaining a certain attendance record.

This may have been because those in the intervention group were also more likely to have positive outlooks on themselves and their academic environments. They were more likely to report believing that they would finish school, that their teachers cared about them (Hallfors et al., 2011) and that their families cared about them (Cho et al., 2011). It is possible that this reflects the theories put forth by Heise (2013) that once these adolescent women are finally in a space of stability, they are more inclined to make decisions from which they will benefit in the long-term, rather than only investing in the present. Additionally, as those in the intervention group were significantly less likely to report being depressed or suffering from anxiety (Cho et al., 2011). These grants may have provided enough stability that they were able to finally feel comfortable investing in their futures.

This was also observable in the sexual behavior reported among the young women. In one study, the only pregnancies that occurred during the interventions were among those in the control group (Hallfors et al., 2011). The same study found that those in the intervention group
were three times less likely to get married. Avoiding marriage is important in preventing HIV, as those in early marriages are more likely to engage in early and frequent sex, and are less likely to be able to negotiate using condoms (Clark, 2004). All of these are considered serious risk factors, particularly among adolescent women. Similarly, it was found that 19% of adolescent women receiving school subsidies had had sex in their lifetime, compared to 33% in the control group (Cho et al., 2011).

This is important because of the strong correlation between education and reduced risk behavior among young women (“Prevention”). By providing them an opportunity to access an education, it is expected that they will be less likely to partake in activities that might increase their risk of HIV and other STDs, as well as early pregnancies (Pettifor et al., 2008). These studies provided useful insight into the effects of providing women with consistent opportunity for education.

**Cash-Transfer Programs**

Cash transfer programs were also significantly easier to find. These were largely constructed in one of three ways: covering school fees and related costs, and distributing funds to both the adolescents and their households, or sometimes solely to the young participants. An additional factor was whether these were conditional cash-transfers (CCTs), given based on certain conditions, or unconditional cash-transfers (UCTs), free of stipulations. While some of these studies simply looked at the effect of any financial incentives, CCT programs demanded certain positive behaviors, such as HIV testing or maintaining an acceptable school attendance record.
The Studies

Pettifor et al. (2016) ran a study providing young women in South Africa, aged 13 to 20, with R100 and their parents an additional R200 each month. These amounts were selected because they were comparable to that of the Child Support Grant. In order to be eligible, the girls had to be currently enrolled in school and literate, as well as not pregnant. Additionally, both they and their parent needed to have access to a bank account, to facilitate the transfers. These grants were dispersed on the condition that the girl maintained an acceptable school attendance record. Interviews and HIV, HSV and Audio Computer-Assisted Self-Interview (ACASI) tests were conducted every year for three years, or for as long as the girl was enrolled in school, to assess the impact of these cash transfers.

The Zomba Program in Malawi provided conditional cash incentives to both current students and dropouts (Baird et al., 2010). This evaluated the behavior of 3,805 young women between the ages of 13-22 who had never been married. The intervention group had all school fees and associated costs covered, as well as a $10 cash-transfer to the household on the condition that the girls maintained an attendance record of 75%. The effects of these transfers were compared to the behavior of young women who were not provided any financial assistance.

An additional study by Baird et al. (2012) also in the same region looked at the effects of varying cash-transfer amounts. The participants were separated into a conditional cash-transfer (CCT) group (a 75% school attendance rate), an unconditional (UCT) group, and a control, which did not receive any financial incentive. Those in both the CCT and UCT groups received varying amounts, from US$1 to $5, while their families were given between US$4 and $10 monthly.
Unfortunately, it was very challenging to find large-scale studies that directed cash-transfers directly to the participating adolescents, rather than covering school expenses or providing additional funding to the household. This seemed important to include, however, because it isolates the effects of the CTs on young women, independent of the influences of their households, or the additionally funding they might be receiving from them.

There was one conducted by Khoza et al. (2018) in South Africa that compared the effects of unconditional CTs as well as CCTs based on school attendance, and also a one-time cash-incentive for clinic visits on young adolescents. Though a smaller study, only including 120 adolescents between the ages of 16 and 18, and did not examine the many data points and the survey questions were largely qualitative, it did provide insight into how one might expect CT recipients to spend this cash when not also supported by household-based grants or essentially free schooling.

Discussion

The World Bank promotes conditional cash transfers as the most effective CT model for influencing young women to focus on their educations, especially in areas that suffer from low attendance rates (“Meeting the Challenge: The World Bank and HIV/AIDS.” 2019). However, these studies found that those enrolled in any type of cash-transfer intervention group were significantly more likely to prioritize schooling, regardless of any CT conditions (see Table 4). One study included adolescent women who had already dropped out of school and found that 61.4% of them reenrolled upon receiving unconditional cash transfers, as opposed to the only 17.2%
among young female dropouts not receiving any financial benefits in the control group (Baird, 2010). This study also found a 35% reduction in the dropout rate within the intervention group compared to the control. This is a significant result, as it has been found that those who maintain an 80% attendance rate are significantly less likely to have AIDS, or engage in other risk associated behaviors (Pettifor et al., 2016). Therefore, providing young women the opportunity to stay in school is critical to reducing the HIV incidence rates among them.

Young women prioritizing their education once enrolled in these programs suggests that financial conditions play a large role in adolescents’ inability to complete their schooling. It has been suggested that small household contributions can provide the stability necessary to allow families to invest in the wellbeing their children (Ssewamala, 2010). This was supported by the studies, one of which found that 30% of adolescent women reported having used a portion of their CT to pay for their uniform, while, among households, 18% used a portion for school fees, 17% put some of it towards school uniforms and 17% also used it for school supplies (Pettifor et al., 2016). This provided them the opportunity to invest in the future of their family by supplying extra, though small, financial support.

Therefore, cash transfer programs are considered an effective way to interrupt the poverty trap, as suggested by Adato and Bassett (2009). They propose that even small financial support can be enough to provide what is referred to as asset-based social protection. This is the idea that standard income for many living in poverty is often only enough to cover the most basic standard of living necessities, such as food and housing. Asset policies could provide the capital that would enable them to remove themselves from poverty altogether, by creating the opportunity to invest in their futures (Adato and Bassett, 2009). Therefore, these CTs proved to
be enough to allow these participating households to invest in their children, a decision which could, in turn, upend the vicious cycle of poverty.

This cycle has been attributed to increased risk-taking behavior, particularly among young women (Ssewamala et al., 2010), which can be linked to the psychological effects of this condition, but also strategic relationships intended to provide economic stability. Therefore, many, such as Baird (2019) and Ssewamala (2010), have shown that small grants that can effectively raise the income to a more sustainable level can prove to be an effective measure for allowing families to invest in their future and that of the subsequent generations.

Additionally, these funds can be used to maximize the health potential of the family. While poverty is linked to risky behavior, it also increases the potential for one to be in poor health, whether from malnutrition, lack of basic health information, or inaccessible medical care when necessary (Ssewamala et al., 2010). All of these can greatly increase an individual’s susceptibility to HIV, by some estimates as much as 20 times (CDC, 2017). Adato and Bassett (2009) illustrated the dangers of this by saying “food and nutrition insecurity increases susceptibility to HIV exposure and infection, and lowers resiliency to AIDS impacts, while HIV/AIDS intensifies vulnerability to food and nutrition insecurities.”

Young women are seen as particularly susceptible to the effects of poverty or financial dependence, and this seeks to disrupt structural and contextual environments presumed to be linked with the epidemic (Ssewamala et al., 2010) (Pettifor et al., 2012). Participants in these studies were more than half as likely to have sex on a regular basis (Baird et al., 2012), estimated to have reduced sexual activity among both young women who were enrolled in school at the baseline and those who had dropped out by 5.5 and 2.5 percentage points, respectively (Baird et
They were also more likely to report consistent condom use and less likely to have had sex over the previous year (Pettifor et al., 2016). While Pettifor et al. (2016) did not find a significant difference in HSV-2 incidence, Baird et al. (2012) found that HIV and HSV-2 among baseline schoolgirls in the CCT program were only 1.2% and 0.7%, respectively, compared to those not enrolled for whom the incidence rate was 3.0% for both HIV and HSV-2.

Baird et al. (2010), among others, found positive impacts on the sexual behaviors among CT recipients, and referred to the idea of opportunity cost, and that young women understand the benefits of school far outweigh any of partaking in risky sexual or relationship-based behavior (Duflo et al., 2006). This was not only among those enrolled in the conditional cash transfer programs, who might fear losing this financial support if forced to drop out of school due to pregnancies or illness. Instead, CTs impacted young women regardless of conditions or lack thereof.

It has also been proposed as more effective than other interventions because of the sense of independence and control it provides young women (Heise, 2013). This is important because it allows them to feel that they are solely responsible for and capable of affecting their futures, rather than programs that direct much of recipients’ lives. This also increases their sense of empowerment, which may also assist in steering them from age-disparate or violent relationships (“Adolescent Girls and Young Women in High-HIV Burden Settings.” 2017). Reports among young women confirmed this positive impact and that this program made them feel more confidence in themselves, and more likely to prioritize their education now that they felt more financially secure (Khoza et al., 2018).
Many of these adolescent women also confirmed the theory that providing small cash balances improved their self-esteem and ability to negotiate their sexual relationships (Khoza et al., 2018). This trend was apparent in the reduction of sexual debut, age-disparate partnerships and those with significant age gaps, even among girls who were no longer enrolled in school (Baird et al., 2009) (Baird et al., 2012) (Duflo et al., 2006).

A prominent focus among risk-behaviors is young women’s engagement in age-disparate relationships and transactional sex as a means to acquire financial stability and benefits (Ranganathan et al. 2016). There has been much interest in the impetus for these relationships, as well as its impact on participants, such as increased risk of sexual violence and exposure to HIV (Dunkle et al., 2004), and the means with which to discourage such behavior (Fiene and Leclerc-Madlada, 2014). By providing cash directly to young women, cash-transfer programs aim to make it less likely that they will enter into these age-disparate relationships (Pettifor et al., 2012) (Fiene and Leclerc-Madlada, 2014). This is particularly important because young women are less likely to be able to negotiate condom use in such relationships (“Adolescent Girls and Young Women in High-HIV Burden Settings.”, 2017). A study in Kenya was even able to find a correlation between the value of the financial transaction and the use of condoms (Gillespie, Kadiyala and Greener, 2007). Similarly, it has been found that women who rely on men for financial support are more likely to be at risk of sexual violence, which can put women at an increased risk for HIV (Dunkle et al., 2004).

Cash transfer studies have again found that there are similar results when financial incentives are provided to the household or directly to the young women. Regardless, young
women are able to renegotiate their relationships once they have more financial autonomy, effectively decreasing their potential exposure to HIV.

Fiszbein and Schady (2009) expressed their concern that these programs could be unethical and potentially paternalistic, however, while some young women reported being uncomfortable with the conditionality of attending the local clinic, they later reported that it ultimately alleviated much of the stress and stigma that had previously deterred them from going (Baird et al., 2012). Additionally, unconditional cash-transfers proved to be significantly successful as well, indicating that adolescent women are likely to be capable of making the right decisions without the instruction or influence of the researchers. This might alleviate some of the concern regarding paternalism, when studies have shown that the many do not require any additional guidance in order to make positive decisions.

It is also possible that these studies might not have the educational impact anticipated. Some studies have found that, while school attendance has been improved, this does not correlate to academic success. It is possible that many of the young women returning to school had dropped out due to failing grades, rather than finances. Bringing them back to school, therefore, does not necessarily mean they will they will achieve academic success and might not ensure future financial stability (Glewwe et al., 2008). This could mean that any health benefits associated with education might be nullified for these individuals, particularly those that rely on employment opportunities upon graduation.

Cash-transfer programs and the relevant studies did have several other limitations. As previously mentioned, these studies were also relatively short-term, and there is significant concern that the benefits might not carry through after the end of the interventions (Fiene and
Leclerc, 2014). Any reduction in risk-behavior might be too reliant on the assured additional cash, and without this security, there might be little to keep adolescent women from returning to their potentially risky previous behaviors or conditions. Therefore, additional research clearly needs to be carried out to see if and when it is appropriate to reduce and eliminate these transfers without undermining the initial improvements.

The Conclusion

While the studies that provided financial support to cover school costs were certainly compelling, it will be hard to consider its potential efficacy in South Africa, as there is already free primary schooling throughout the country. It is evident in the later studies that both adolescent women and their families did spend some of their CT on other school related expenses (Pettifor et al., 2016), but one cannot assume that the findings will be as influential as those in countries were tuition is not free, and making it all the more challenging for students to attend school.

Additionally, these studies often remarked on the increase of school enrollment and attendance by the participants. However, none took into account which, if any, life-skills programs were being run at the time and if they were of any substantial advantage for either those in the control or intervention groups (Cho et al., 2018). Therefore, there are external factors that may have influenced the students’ sexual behavior. Similarly, some of these studies were based in schools, which meant that it was not representative of all adolescent women as it did not include those who had dropped out of school. This is problematic, particularly because young women who have dropped out of school are often more likely to engage in risky behavior
and experience a significantly higher HIV incidence rate than their in-school counterparts (Stoner et al., 2017).

Life-Skills Education Compared to Cash-Transfers

As previously mentioned, a significant amount of the research dedicated to the analyzing the efficacy of life-skills courses was conducted years before the rise in interest in cash-transfer programs. Therefore, programs that compared these two approaches were very difficult to attain, as the timing of interest did not seem to coincide.

The Study

There was, however, one study (Duflo et al., 2015) that examined the efficacy of an HIV education and life-skills program compared to that of subsidizing school costs in preventing early pregnancies and impacting the adolescents’ understanding and tendency toward related risk-behavior. Data was collected over 7 years and included both adolescent boys and girls between the ages of 13.5 and 20.5. The intervention program provided free education and two school uniforms to students over three years. Those in the HIV education program, considered the control, were enrolled in the Kenyan national curriculum, which included similar general HIV-information to that of the South African program, but focused solely on abstinence. The absence of information on protected and safe sex prompted the addition of a smaller subgroup that would learn about condoms and protection (Duflo et al., 2015).
Discussion

When compared to the results of the studies referenced above, this study did not provide any surprising information (see Table 5). Those who were given basic school subsidies were significantly less likely to drop out of school, while the number of dropouts for those in the control was not improved upon (Duflo et al., 2006). This would suggest that a serious shortcoming of Life-Skills programs is that they are not constructed to keep girls in school, despite the fact that, in order to benefit from these courses, adolescent women must have regular access to school, which is not always the case, as supported by the previous studies.

This study also evaluated the impact of providing girls with free education and HIV-information courses. It was found that fertility rates among young women enrolled in both were less than those in the education group, but higher than those who only received free tuition (Duflo et al., 2006). This was, however, the only group in which significantly fewer young women were diagnosed with HSV, establishing a 20% reduction. Finally, those who were given information specifically on condom use were found to have an increased understanding of condoms, but there was no evidence that they were more likely to use them.

Where Do We Go From Here?

Decades of AIDS denialism and the effects of a rapidly declining education system have led many to assume that the underlying force behind the HIV epidemic for adolescent women in South Africa is misinformation and a lack of necessary education and skills. In fact, some studies have found that only 34% of young women have a sufficient amount of AIDS-related knowledge (“HIV and AIDS”), which clearly indicates a serious problem among this group. However, further
research into the effectiveness of life-skills programs, whether taught in schools or through peer-led groups, largely seemed to contradict the theory that gaps in adolescent women’s understanding of HIV are the root cause of this epidemic. Studies showed that while HIV-knowledge markedly increased among participants, there was little improvement in preventing, or at least reducing, risk-behaviors among them (Visser, 2005) (Jemmott et al., 2010).

Some of this has been attributed to the failing of teachers and the schools to provide students with the appropriate information (Visser, 2005), which reflects the concerns regarding the ability of the education system to conduct proper HIV-education. However, as this is a systemic and complicated problem (Dugger, 2009), it does not seem appropriate to propose that improvements in the LSE programs will make any real impact in the near future and, unfortunately, it is imperative that action be taken now.

Additionally, peer-led groups were unable to promote a positive change among participants, and one study even found a significant increase in risk-behaviors, despite the reported improvement in HIV-related knowledge (Mason-Jones et al., 2011). While this can also be attributed to the complexities of adolescents’ abilities to influence one another, the inability for increased education to affect behavioral change may also suggest that there is something more significant and inhibiting than the shortage of information among young women.

Once introducing small forms of financial support, whether through covering young women’s education and related expenses or providing small cash-transfers, there was a tremendous influx of young women staying in school, or in some cases even reenrolling (Baird et al., 2010), as well as a marked reduction in risk-behaviors. And this could be for one of many reasons.
There are many psychological theories that should be considered. The first is the idea that the instability of poverty makes individuals less inclined to put their long-term needs ahead of their short-term wants (Heise et al., 2013). This can leave adolescents more inclined to partake in risk-behaviors because of the sense of uncertainty brought on by poverty (“Adolescent Girls and Young Women in High-HIV Burden Settings”, 2017). Mojola (2014) also echoed this sentiment, noting that information often does not translate into action, and many young women are left wanting to enjoy what they presume will be a short life.

Similarly, it is suggested that risky-behavior among impoverished adolescents stems from a sense of hopelessness and lack of control, which leads individuals to seek out behaviors that provide instant or short-term gratification, rather than investing in a future that is seems uncertain (Heise, 2013). Therefore, it is hoped that cash-transfer programs will increase recipients’ emotional wellbeing and motivate them to make better decisions with a long-term payoff. Though studies did not conduct advanced surveys regarding the participants emotional wellbeing, the positive impact and response seen almost universally seems to be a strong indicator that these cash-transfer programs not only allowed women to navigate their sexual relationships in a safer manner, but also increased the likelihood that they would want to do so, based largely on the theory of opportunity cost (Duflo et al., 2006).

Another explanation is that these transfers help reduce a young woman’s incentive to engage in risky sexual encounters, specifically transactional sex or those that are in age-disparate relationships (Duflo et al., 2006). Such relationships are considered to be a driving factor in the incidence rate among young women (Grovender et al., 2018), and providing financial support greatly reduces the occurrence of these engagements (Cluver et al., 2014).
Additionally, the number of young women staying in school once the associated costs are covered, or those choosing to re-enroll once receiving cash-transfers, is promising but also highlights a serious problem. On one hand, this shows that young women really are prioritizing their education, a focus that is often associated with a significant reduction in early sex and pregnancies (Pettifor et al., 2008). However, this also indicates that there are many women for whom finances are dictating their attendance and suggests that many are forced to drop out because they cannot afford to continue. It is estimated that only 52% of those who should be currently be enrolled in 12th grade have not yet dropped out (Weybright et al., 2017). Therefore, LSE programs are not solving a significant portion of the information and education problem.

Moreover, adolescent women who are no longer enrolled in school are subsequently unable to continue to take advantage of the LSE programming, despite the fact that women who have dropped out of school are at particularly high risk for HIV (Gillespie, Kadiyala and Greener, 2007). However, these programs are committed to providing AIDS information to those who are currently in school and, therefore, already at a reduced risk. This means that many young women who will be faced with difficult decisions may not have the tools to make the best choices for themselves.

Cash-transfers, on the other hand, demonstrated a positive influence on behavior even among those who had dropped out of school (Baird et al., 2010). By eliminating the challenges associated with poverty, adolescent women were able to avoid risky behavior. This is an important accomplishment, because the high dropout rates in South Africa make it clear that school programs cannot be responsible for creating monumental change. Instead, cash-transfers
provided young women with the stability and independence to prioritize their needs, and therefore also their health.

However, cash-transfers are potentially not the most cost-effective type of program and, unfortunately, these studies did not conduct long-term interventions, nor did they calculate the cost these programs compared to the expenses on the individuals, their households, and the government, for every HIV infection. This is understandable, as it is complicated to estimate, particularly for adolescent women, as future partners and potential pregnancies will also impact these assessments. Such research would be very helpful in calculating the effectiveness of CT programs, and if the upfront cost is worth the long-term payoff. Should small CTs reduce the risk of HIV significantly enough, it might be a much more viable and affordable option for the South African government.

**CONCLUSION**

Adolescent women in South Africa are at a significant risk of HIV, and currently make up 30% of the total incidence rate of the country (“SA Youth AIDS Mortality Has Double with Girls Most at Risk”, 2016). Many of these young women are engaging in risky sexual relationships, through transactional sex or partnerships with significantly older men. These decisions gravely undermine their ability to continue in school, as some are forced to drop out due to pregnancies or illness, which ultimately inhibits their future potential. It is critical to understand the underlying motivation for these young women to participate in such behaviors, despite their inherent and clear risks.
Therefore, this paper examined the impact of life-skills education courses, constructed to specifically target and eliminate the information gap associated with the HIV epidemic among adolescents, compared to the introduction of small cash assistance, which focus on alleviating the impacts of poverty. Studies published since 2004 found that increased HIV-knowledge did not translate into a reduction in risk-behavior among adolescent women. This suggests that a lack of HIV information in in fact not the driving force for the epidemic experienced by many young women in South Africa.

Conversely, financial assistance programs produced dramatic results, ultimately improving the outcome for many among this group. Those who had access to free education and school supplies were significantly more likely to prioritize their education and avoid risky sexual behaviors. Similarly, those who received small cash transfers, whether conditional or unconditional, reported similar results. Those who had previously dropped out of school were more likely to return, and all those in the intervention groups were less motivated to engage in risky relationships (Baird et al., 2012). Similarly, these studies have shown that many adolescent women in South Africa would very much like to continue their education. This was particularly apparent in the cash-transfer study conducted by Baird et al (2010) in which a significant percentage of young women maintained excellent attendance regardless of whether these allocations were based on a conditional attendance stipulation.

Therefore, it is possible that young women simply need to know that their access to education is guaranteed, whether through providing free uniforms and supplies, or creating a financial safety net for households, which will allow them to focus on their future and, by extension, encourage safer sex and relationships. The response among participants suggest that
these young women are capable and competent once given the opportunity to make decisions for themselves, independent of the influences of poverty. As suggested by Rugalema et al. (1999) poverty can gravely undermine an individual’s ability to lead safe and healthy lives, even when given the skills and knowledge to do so.

However, despite the apparent decisiveness of these results, gaps in the studies still leave many questions and concerns unanswered. For example, it is problematic that there has been so little recent research into the effectiveness of a nationwide HIV and life-skills program since significant medical and social change may have impacted its success since its initial induction. Similarly, despite the decades in which this program has been rolled out throughout the country, there is little indication that there has been any long-term studies that seek to understand how these skills might impact adolescent women after they have left or completed school. This is important because only 52% of students complete 12th grade in South Africa (Weybright et al., 2017), and one must therefore consider if this information in these programs impact behavior independent of education and school enrollment.

There was also little evidence of any long-term research into the effectiveness of cash-transfers. This is particularly concerning, as improvements in behavior may be completely reliant on the continued access to these CTs. Some students had reported feeling inclined to return to risky sexual behaviors and even crime to compensate for the money they were no longer receiving due to the termination of the studies (Khoza et al., 2018), however, there seemed to be very little follow up. It is also important to calculate the overall cost at both the time of the intervention, but also in the subsequent years to see how these affect their future health and that of their partners and children.
Additionally, these studies largely did not consider the socioeconomic conditions experienced by these young women. Some programs were forced to enroll participants from impoverished areas, but researchers did not learn the specifics of the individuals. This could prove to be a very interesting and enlightening addition to future studies. As suggested by Gillespie, Kadiyala and Greener (2007), the highest HIV rates are predominantly in areas that suffer the most socioeconomic disparities, rather than abject poverty. In order to better understand the conditions fueling the HIV epidemic among adolescent women, it is important to not only understand their education and HIV knowledge levels, but also the potential impact of poverty on their daily lives.

Therefore, to best understand the most effective method for preventing HIV among adolescent women in South Africa, a study must be conducted which only enrolls women, in the years directly before the average sexual debut, around 16, and follows them throughout the programs and in the subsequent years to follow. Interventions should include a modified HIV-information program, which can be disseminated to young women both enrolled and not currently attending schools. This should be compared to young women receiving small cash-transfers, while not attending these information sessions. Finally, a third group should be enrolled in both interventions. Additionally, family structure and socioeconomic conditions should be conducts, as well as some mechanism to encourage, but not demand, regular HIV testing. This would provide a more complete representation of the current situation each young woman is facing and might better indicate the appropriate response.

It is important to compare the efficacy of these two types of programs because the current prominent HIV intervention program targeting adolescents by the South African
government is falling short of its anticipated outcome. While many young women have been enrolled in courses intended to provide them with health and life-skills, they are still at a dramatically increased risk of HIV compared to their male peers. Due to the current socioeconomic conditions for a majority of the population, these information programs are similar to providing young women with oars, but no boats. By this I mean that they are expected to utilize these tools, without first guaranteeing the foundation for which they can be of use. Without guaranteeing financial security, which would allow young women to continue their education and not rely on risky sexual relationships for extra financial support, many are still left in the water, and unable to get themselves to a point where they can safely and effectively develop these life-skills. Instead, a more holistic approach must be considered, to provide young women the stability and independence to safely navigate their adolescence.
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Table 1: Life Skills Education Programs
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</tbody>
</table>

<table>
<thead>
<tr>
<th>HIV-Knowledge</th>
<th>N/A</th>
<th>N/A</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>76.4%</td>
<td>3.2%</td>
<td>22.3%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Country</th>
<th>South Africa</th>
<th>South Africa</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>15 to 19</td>
<td>38.5%</td>
</tr>
<tr>
<td>Country</td>
<td>South Africa</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>15 to 19</td>
<td></td>
</tr>
<tr>
<td>Poverty</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Sex</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

| Table 2. Peer-Led HIV Information Programs |

<table>
<thead>
<tr>
<th>Impact</th>
<th>Increase</th>
<th>Significant</th>
<th>No Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Education</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Groups</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>19%</td>
<td>33%</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>-----</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>Only in this group</td>
<td>N/A</td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>3 times more likely</td>
<td>N/A</td>
</tr>
<tr>
<td>% drop out rate</td>
<td>% drop out rate</td>
<td>Reduced absences</td>
<td>Higher dropout times</td>
</tr>
<tr>
<td>Control</td>
<td>Intervention</td>
<td>Control</td>
<td>Intervention</td>
</tr>
<tr>
<td>Orphans</td>
<td>Orphans</td>
<td>Female</td>
<td>Female</td>
</tr>
<tr>
<td>Female</td>
<td>Female</td>
<td>12 to 14</td>
<td>16 to 16</td>
</tr>
<tr>
<td>Kenya</td>
<td>Zimbabwe</td>
<td>Male</td>
<td>Male</td>
</tr>
</tbody>
</table>

Table 3: School subsidy programs
<table>
<thead>
<tr>
<th>Sex in Lifetime</th>
<th>HIV Knowledge</th>
<th>Pregnancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Impact</td>
<td>No Impact</td>
<td>No Impact</td>
</tr>
<tr>
<td>10% Reduced Rate</td>
<td>23% Reduced Rate</td>
<td>50% Reduced Rate</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Marriage</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
</tr>
<tr>
<td>Reduced Dropout Rate</td>
</tr>
<tr>
<td>No Impact</td>
</tr>
<tr>
<td>Education</td>
</tr>
<tr>
<td>Life Skills</td>
</tr>
<tr>
<td>Cash Transfers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Poverty</th>
</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
</tr>
<tr>
<td>Coed</td>
</tr>
<tr>
<td>Sex</td>
</tr>
<tr>
<td>Grades 6 through 8</td>
</tr>
<tr>
<td>Ages</td>
</tr>
<tr>
<td>Kenya</td>
</tr>
<tr>
<td>Country</td>
</tr>
<tr>
<td>Dummy et al. (2007)</td>
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</tbody>
</table>

Table 5: Comparing Life Skills Education and Cash Transfer Programs
BIBLIOGRAPHY


United States. USAID. *HIV-Related Knowledge, Behaviors, and Exposure to the Life Orientation Curriculum among Grade 8 Learners in Mpumalanga*. June 2017.


