

Fatal Attraction: HIV/AIDS and Family Formation in Southern Africa

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Abstract

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This dissertation examines the complex relationships between HIV/AIDS in southern Africa and family formation processes, specifically the transition to first marriage, contraceptive usage, abortion, and first births, focusing on the experience of women. A quantitative analysis using DHS data looks at the potential mechanisms linking relatively early age at first marriage to elevated risk of HIV infection, while the qualitative analysis examines how an HIV epidemic impacts the decision-making and norms surrounding marriage and childbearing.

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Dedication

This dissertation is dedicated to my father,

Mark Margherio

1951-2010

Chapter 1: Introduction

The global burden of HIV/AIDS is overwhelmingly concentrated in southern Africa, an area with less than 2% of the world's population but at least one-third of all people living with HIV/AIDS (UNAIDS 2006). Throughout this area, HIV is primarily spread via heterosexual exposure. Previous research has suggested that throughout southern Africa the epidemic is driven by high rates of labor migration, concurrent sexual partnerships, and gender inequalities (Beyrer 2007; Bouare 2009). HIV/AIDS has already had significant long-term impacts on households, particularly in regards to loss of labor, reduced income, and food shortages (Rugalema 2000; Mutangadura and Sandkjaer 2009)

South Africa in particular has been heavily impacted by HIV/AIDS. From 1990 to 2005, the HIV prevalence rates soared from less than 1% to around 19% (Hunter 2007). Among South African antenatal clinic attendees in 2008, HIV prevalence was as high as 37.4% and 36.7% in KwaZulu-Natal and Mpumalanga provinces, respectively (National Department of Health 2012). Over this same time period, the rates of marriage among black South Africans have been declining while high rates of adolescent and premarital childbearing have persisted.

Throughout southern Africa, women are disproportionately affected by HIV/AIDS; HIV prevalence rates among girls begin to increase at earlier ages and at a faster pace relative to those rates among boys (Beyrer 2007). It is also estimated that over 50% of all HIV-infected women worldwide live in southern Africa (UNAIDS 2008). Adolescent girls increasingly carry the largest burden of HIV; in many countries their infection rates are more than twice that of males of the same age cohort (Clark 2004). Suggested explanations for this discrepancy include gender-based violence, sexual coercion, and transactional sex (Meekers and Calvès 1997; Petros 2006; Beyrer 2007). Previous research has shown that young females in particular share the

largest burden of unsafe sex (Djamba 1997). Understanding the dynamics of family formation processes is central to our understandings of the exceptionally high HIV prevalence of young women in southern Africa. Given this context, this dissertation investigates the potential relationships between the HIV/AIDS epidemic in southern Africa and family formation processes, focusing on the experiences of African women.

BACKGROUND

Marriage has been promoted as a strategy to reduce risk of HIV but more recent studies have shown that marriage may be an HIV risk factor for young women (Luke 2003; Clark 2004; Clark, Bruce & Dude 2006; Beyrer 2007). While some previous studies have found HIV prevalence rates to be higher among married young women relative to unmarried young women, these studies include non-sexually active women within the unmarried comparison group (Nunn et al 1994). However, the higher HIV prevalence rates of married young women relative to unmarried young women persist in studies that limit their findings to sexually active young women (Clark 2004).

Most studies have attributed the associated risk of HIV infection with early first marriage to increased exposure via both increased sexual activity and decreased condom use (Clark 2004; Clark, Bruce, and Dude 2006; Bongaarts 2007; Santhya and Jejeebhoy 2007). Utilizing survey data coupled with STI testing from Kisumu, Kenya, and Ndola, Zambia, two cities with relatively high HIV prevalence, Clark (2004) found that the HIV prevalence rates were significantly higher among the husbands of women aged 15-19 relative to the male sexual partners of unmarried women aged 15-19; she attributed this difference to age, as the husbands were significantly older than the male sexual partners of unmarried women (and HIV prevalence

rates increase with age). Using DHS data for developing countries in sub-Saharan Africa and Latin America, Clark, Bruce, and Dude (2006) find that marriage increases the exposure to risk of HIV infection via increased frequency of unprotected sexual activity, particularly if the young women are attempting to get pregnant. The three main HIV-prevention strategies dominating public health messages are abstinence, remaining faithful, and using condom; within marriage these strategies are not always practical (e.g. abstinence and condom use) or within a person's control (e.g. faithfulness of their spouse) (Schatz 2005; Reniers 2008).

In addition to increased exposure, relatively early marriage may increase risk of HIV infection due to decreases in both knowledge regarding HIV/AIDS and household bargaining power. Clark, Bruce, and Dude (2007) find that adolescent wives have less access to social and public sources of information; they suggest that this increases risk of HIV infection due to decreased contact with public health messages. Clark and colleagues also finds a significant positive correlation between years of schooling and age at marriage, noting that school is the primary place where HIV education occurs. Bongaarts (2007) attributed the relationship of relatively early marriage and elevated risk of HIV infection to both married young women having an earlier sexual debut than they would otherwise and young brides not having the bargaining power to negotiate condom use with their husbands.

While relatively early marriage is associated with increased risk of HIV infection, delayed marriage can also increase HIV risk behavior by lengthening the period of premarital sexual activity and concurrent partnerships (Bongaarts 2007). Of the countries within southern Africa, South Africa is unique in that not only do very few women marry at relatively young ages, but also marital rates for black South Africans have been declining over time. This trend of declining marital rates has paralleled the sharp increase in HIV prevalence rates. The potential

relationship between HIV prevalence rates and marital patterns remains obscured in previous research. However, it has been shown that the legacy of apartheid has heavily impacted both trends.

Under apartheid, the South African government assigned all blacks to one of ten homelands ('bantustans') based on ethnicity and language; only properly documented workers were allowed in white areas of South Africa, where they were generally limited to staying in black-designated townships located outside of the city (Kaufman 2000). These policies led to an entrenched form of circular migration, where black men would work away from the homelands for at least part of the year while women and children stayed on the homelands. Previous research has shown how influential these racialized structures set in place by colonialism and apartheid, particularly circular migration of men, have been in leading the spread of HIV to reaching epidemic levels (Kaufman 2000; Petros 2006; Hunter 2007). In post-apartheid South Africa, the legacy of apartheid-era policies have led to rising inequality, reduced rates of marriage, and rising rates of women's circular migration (Hunter 2007). While women have increasingly participated in circular migration in recent years, the circular migration process remained strongly sex-specific (i.e. overwhelmingly male), leading to extended periods of spousal separation along with skewed sex ratios in both the rural areas (an excess of women) and urban areas (an excess of men).

In a qualitative study in Nigeria, Smith (2007) investigated extramarital sexual relations among male migrant workers and found that half of all reported extramarital sexual relations were attributed to migrant work. The men described the hardships created by the separation from their families and how participating in migrant work created both opportunities and pressures to engage in extramarital sexual relations (Smith 2007). Research in South Africa has shown that

the migrant labor system created under apartheid strained marriages to the point of relaxing norms surrounding non-marital and extramarital sexual relations (Chimere-Dan 1996; Burgard 2004).

While prior research has suggested that marriage may be seen as protective against HIV/AIDS, the strain on marriages and subsequent relaxed norms of sexual relations may have led black South Africans to view marriage as creating a risk for HIV infection. It is unclear in previous research how HIV/AIDS is impacting the norms about the transition to first marriage. Ethnographic studies have shown sharp declines in marriage among black South Africans since the 1980s (Hunter 2007). It is more difficult, however, to examine this trend using quantitative data, as marriage in South Africa is a process rather than a singular event, with different systems of civil and customary marriage in place; additionally, apartheid statistics are notoriously poor (Hunter 2007). The qualitative studies that have demonstrated the retreat from marriage among black South Africans have not, however, investigated how the HIV/AIDS epidemic may be contributing to this trend.

Just as apartheid-era policies have had a lasting impact on marital formation, they have also shaped contraceptive use and family planning services. During apartheid, each homeland was responsible for its own family planning services provision, leading to uneven quality across black South Africa (Kaufman 2000; Burgard 2004). Over time the apartheid government became increasingly concerned with the growing size of the black population and subsequently established the National Family Planning Programme in 1974, to increase contraceptive access for all women, although it was targeted specifically at black South African women (Kaufman 2000; Burgard 2004). Despite the tensions surrounding the racial motivations behind the family

planning program, the program was quite successful in increasing usage of modern contraceptives and decreasing total fertility rates (Kaufman 2000).

Injectable forms of contraception were heavily promoted for black women as they require minimal education, little user involvement, and few follow-up services, and they remain the primary form of birth control used by black women today (Chimere-Dan 1996; Burgard 2004). Previous research has shown that injectable contraceptives are particularly popular among younger users and users in rural areas in South Africa; while users considered this method to be effective and convenient, they also noted that recommendations by clinic health personnel were a major reason for their use (Smit et al. 2002). Smit et al. (2002) found that the most common reason a woman would use a method other than injectable contraception was related to the side effects resulting from use of an injectable contraception; i.e., even the majority of women using forms of birth control other than injectables had previously tried injectable contraception.

Despite contraception that is provided free of charge in public health clinics, 35% of South African women experience a pregnancy prior to the age of 20 (Wood and Jewkes 2006). While South Africa's total fertility rate has declined to approximately 2.4, the trend of high adolescent and premarital fertility has been persistent over time (Kaufman, de Wet, and Stadler 2001). South Africa, along with Botswana and Namibia, has the highest prevalence of premarital fertility in Africa (Zwang and Garenne 2008). High levels of premarital fertility are especially concerning as they signal high-risk behavior for the spread of HIV/AIDS.

Previous research has found mixed results on how community levels of HIV/AIDS impact childbearing. Baylies (2000) found that the threat of HIV in Zambia led some individuals to desire fewer children due to fears of leaving orphans behind. Utilizing survey data from rural Mozambique, Hayford, Agadjanian, and Luz (2012) find that higher perceived risk of HIV

infection is associated with a greater likelihood of both wanting to accelerate childbearing and wanting to stop childbearing. Similarly, Trinitapoli and Yeatman (2011) found that young adults in Malawi who were uncertain about their HIV status expressed a desire to accelerate childbearing relative to their counterparts who were certain they were uninfected.

RESEARCH OUTLINE

As noted above, most studies have attributed the relationship between relatively early age at first marriage and increased risk of HIV infection to increased exposure to risk; previous research also suggests knowledge and household bargaining power may play a role in the relationship. **Chapter two** investigates factors connected to three potential mechanisms linking early age at first marriage to risk of HIV infection: exposure to risk, bargaining power, and knowledge. This study uses DHS data to compare risk factors between women marrying prior to age 18 to those marrying after age 18 across all of the countries of southern Africa: Lesotho, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe (data are not available for Botswana). The sample is limited to women aged 25-29. By age 25, the majority of women has entered into marriage; as a number of the variables under investigation are associated with mortality, 29 is used as the upper age limit to lessen the impact of right censoring.

Ethnographic research has shown that marital rates are declining in South Africa, particularly among black South Africans. **Chapter three** uses qualitative data from focus group discussions to investigate how HIV/AIDS may be impacting decision-making and norms around the transition to marriage among black South Africans living in a former homeland area. While prior research has suggested that marriage may be seen as protective against HIV/AIDS, the impact of apartheid-era policies producing strain on marriages and subsequent relaxed norms of

sexual relations via an entrenched system of circular migration may have led black South Africans to view marriage as creating a risk for HIV infection. Variations in marital age are understood through Ruth Dixon's (1971, 1978) theoretical framework, which defines three categories of determinants of marital patterns: availability of mates, feasibility of marriage, and desirability of marriage. This study investigates how the HIV epidemic operates through this framework to impact the transition to first marriage.

The persistent trend of high adolescent and premarital fertility has paralleled declining rates of marriage and increasing rates of HIV prevalence in South Africa. **Chapter four** uses focus group discussions to examine how high HIV prevalence rates may be impacting decision-making and norms around contraception, abortion, and timing of childbearing among black South Africans living on a former homeland. Previous research studies on adolescent contraceptive use in rural South Africa have largely denied agency to women by focusing on factors such as lack of knowledge, lack of decision-making around fertility, and stigmatization of accessing family planning services. This analysis works to reframe the conversation beyond acknowledging the barriers young women face in accessing contraception to investigating the complex decision-making processes that influence contraceptive choice, and in doing so allows for researchers to broaden their understanding of how agency operates for these women within the institutional confines of rural South Africa.

The studies in both chapters three and four utilize data collected during fieldwork in May 2013 within the Agincourt Health and Demographic Surveillance System (AHDSS) site in the Ehlanzeni District in Mpumalanga Province, northeastern South Africa. The AHDSS has collected demographic information on a population of approximately 100,000 individuals in 28 villages since 1992. During the apartheid period the Agincourt area was part of the Gazankulu

homeland; the local economy is based on remittances from migrant workers, government pensions, and tourism. One third of the population is former Mozambican refugees, who largely self-settled in the area after fleeing the Mozambican civil war. HIV/AIDS first arrived in Agincourt in 1990; by 2000, it had become the leading cause of death among children and young adults (Garenne et al. 2007; Zwang et al. 2007).

It should be noted that this study recognizes that sexual activity and HIV should not be regarded as equivalent. As reported in previous scholarship, in both research and media coverage racist assumptions exaggerate the importance of sex to the spread of HIV/AIDS (Packard and Epstein 1991; Petros et al. 2006; Hunter 2007). Packard and Epstein (1991) have argued that the preoccupation with African promiscuity originally stemmed from observations that HIV was spreading fastest within the United States and Europe within homosexual communities which were assumed to be promiscuous. However, studies have shown that Africans report similar numbers of lifetime sexual partners as heterosexuals in many Western countries and that partner concurrency is not more common in Africa than other regions of the world (Halperin and Epstein 2007; Sawers and Stillwagon 2010).

This is not to deny the importance of sexual practices in the spread of HIV; promiscuity and concurrent sexual partners are certainly both risk factors for the spread of HIV. These behaviors exist at similar levels in countries without HIV epidemics; the same level of sexual exposure (via these behaviors) creates differential risk in areas with different HIV prevalence rates (Sovran 2013). Contextual factors, such as racial divides in healthcare services, are a major explanatory factor in the rampant historical spread of HIV/AIDS throughout southern Africa (Hunter 2007). Black South Africans primarily rely on an underfunded and overcrowded

public healthcare system, with infrastructural deficits that have resulted in decreased access to preventive care and treatment for blacks (Ojikutu, Jack, and Ramjee 2007).

Given the gender disparity in HIV prevalence rates, this research will be particularly important for informing reproductive healthcare services and interventions designed to reach young women. Developing a greater understanding of the HIV risk factors young women in southern Africa are facing as they transition through family formation processes is crucial to developing effective intervention strategies and designing reproductive healthcare services to best fit these women's needs.

REFERENCES

- Baylies, Carolyn. 2000. "The Impact of HIV on Family Size Preference in Zambia." *Reproductive Health Matters* 8(15): 77-86.
- Beyrer, Chris. 2007. "HIV Epidemiology Update and Transmission Factors: Risks and Risk Contexts—16th International AIDS Conference Epidemiology Plenary." *Clinical Infectious Diseases* 44(7): 981-987.
- Bongaarts, John. 2007. "Late Marriage and the HIV Epidemic in Sub-Saharan Africa." *Population Studies* 61(1): 73-83.
- Bouare, Oumar. 2009. "Modeling Contextual Determinants of HIV/AIDS Prevalence in South Africa to Inform Policy." *African Journal of Reproductive Health / La Revue Africaine de la Santé Reproductive* 13(3): 53-70.
- Burgard, Sarah. 2004. "Factors Associated with Contraceptive Use in Late- and Post-Apartheid South Africa." *Studies in Family Planning* 35(2): 91-104.
- Chimere-Dan, Orijei. 1996. "Contraceptive Prevalence in Rural South Africa." *International Family Planning Perspectives* 22(1): 4-9.
- Clark, Shelley. 2004. "Early Marriage and HIV Risks in Sub-Saharan Africa." *Studies in Family Planning* 35(3): 149-160.

- Clark, Shelley, Judith Bruce, and Annie Dude. 2006. "Protecting Young Women from HIV/AIDS: The Case Against Child and Adolescent Marriage." *International Family Planning Perspectives* 32(2): 79-88.
- Dixon, Ruth B. 1978. "Late Marriage and Non-Marriage as Demographic Responses: Are They Similar?" *Population Studies* 32(3): 449-466.
- . 1971. "Explaining Cross-Cultural Variations in Age at Marriage and Proportions Never Marrying." *Population Studies* 25(2): 215-233.
- Djamba, Yanyi K. 1997. "Theoretical Perspectives on Female Sexual Behaviour in Africa: A Review and Conceptual Model." *African Journal of Reproductive Health / La Revue Africaine de la Santé Reproductive* 1(2): 67-78.
- Halperin, Daniel T. and Helen Epstein. 2007. "Why is HIV Prevalence so Severe in Southern Africa? The role of multiple concurrent partnerships and lack of male circumcision: Implications for AIDS prevention." *Southern African Journal of HIV Medicine* 26: 19-23.
- Garenne, Michel L., Stephen M. Tollman, Mark A. Collinson and Kathleen Kahn. 2007. "Fertility Trends and Net Reproduction in Agincourt, Rural South Africa, 1992-2004." *Scandinavian Journal of Public Health* 35(Suppl 69): 68-76.

- Hayford, Sarah R., Victor Agadjanian, and Luciana Luz. 2012. "Now or Never: Perceived HIV Status and Fertility Intentions in Rural Mozambique." *Studies in Family Planning* 43(3): 191-199.
- Hunter, Mark. 2007. "The Changing Political Economy of Sex in South Africa: The significance of unemployment and inequalities to the scale of the AIDS pandemic." *Social Science & Medicine* 64: 689-700.
- . 2010. "Beyond the male-migrant: South Africa's long history of health geography and the contemporary AIDS pandemic." *Health & Place* 16: 25-33.
- Kaufman, Carol E. 2000. "Reproductive Control in Apartheid South Africa." *Population Studies* 54(1): 105-114.
- Kaufman, Carol E., Thea de Wet, and Jonathan Stadler. 2001. "Adolescent Pregnancy and Parenthood in South Africa." *Studies in Family Planning* 32(2): 147-160.
- Luke, Nancy. 2003. "Age and Economic Asymmetries in the Sexual Relationships of Adolescent Girls in Sub-Saharan Africa." *Studies in Family Planning* 34(2): 67-86.
- Meekers, Dominique and Anne-Emmanuèle Calvès. 1997. "'Main' Girlfriends, Girlfriends, Marriage, and Money: The social context of HIV risk behavior in sub-Saharan Africa." *Health Transition Review* 7(Supplement): 361-375.

Mutangadura, Gladys B. and Bjorg Sandkjaer. 2009. "Mitigating the impact of HIV and AIDS on rural Livelihoods in Southern Africa." *Development in Practice* 19(2): 214-226.

National Department of Health. 2012. The National Antenatal Sentinel HIV and Syphilis Prevalence Survey in South Africa. Pretoria, South Africa.

Nunn, Andrew, Jane F. Kengeya-Kayondo, Sam S. Malamba, Janet A. Seeley, and Dann W. Mulder. 1994. "Risk Factors for HIV-A Infection in Adults in a Rural Ugandan Community: A Population Study." *AIDS* 8(1): 81-86.

Ojikutu, Bisola, Chris Jack, and Gita Ramjee. 2007. "Provision of Antiretroviral Therapy in South Africa: Unique Challenges and Remaining Obstacles." *The Journal of Infectious Diseases* 196(Supplement 3): S523-S527.

Packard, RM and Epstein P. 1991. "Epidemiologists, social scientists, and the structure of medical research on AIDS in Africa." *Social Science Medicine* 33(7): 783-794.

Petros, George, Collins O. Airhihenbuwa, Leickness Simbayi, Shandir Ramlagan, and Brandon Brown. "HIV/AIDS and 'Othering' in South Africa: The Blame Goes On." *Culture, Health & Sexuality* 8(1): 67-77.

Rugalema, Gabriel. 2000. "Coping or Struggling? A Journey into the Impact of HIV/AIDS in Southern Africa." *Review of African Political Economy* 86: 537-545

- Reniers, Georges. 2008. "Marital Strategies for Regulating Exposure to HIV." *Demography* 45(2): 417-438.
- Santhya, K.G. and Shireen J. Jejeebhoy. 2007. "Early Marriage and HIV/AIDS: Risk Factors among Young Women in India." *Economic and Political Weekly* 42(14): 1291-1297.
- Sawers, Larry and Eileen Stillwagon. 2010. "Concurrent Sexual Partnerships Do Not Explain the HIV Epidemics in Africa: A systematic review of the evidence." *Journal of the International AIDS Society* 13(1): 34.
- Schatz, Enid. 2005. "'Take your mat and go!': Rural Malawian women's strategies in the HIV/AIDS era." *Culture, Health & Sexuality* 7(5): 479-492.
- Smit, Jennifer, Lynn McFedyen, Abigail Harrison, and Khangelani Zuma. 2002. "Where is the Condom? Contraceptive Practice in a Rural District of South Africa." *African Journal of Reproductive Health / La Revue Africaine de la Santé Reproductive* 6(2): 71-78.
- Smith, Daniel Jordan. 2007. "Modern Marriage, Men's Extramarital Sex, and HIV Risk in Southeastern Nigeria." *American Journal of Public Health* 97(6): 997-1005.
- Sovran, Steven. 2013. "Understanding culture and HIV/AIDS in sub-Saharan Africa." *Saharan Journal* 10(1): 32-41.

Trinitapoli, Jenny and Sara Yeatman. 2011. "Uncertainty and Fertility in a Generalized AIDS Epidemic." *American Sociological Review* 76(6): 935-954.

UNAIDS. 2006. "Report on the Global AIDS Epidemic." *Geneva: UNAIDS*.

UNAIDS, WHO. 2008. "Report on the Global AIDS Epidemic." *New York: US UNAIDS*.

Wood, Kate and Rachel Jewkes. 2006. "Blood Blockages and Scolding Nurses: Barriers to Adolescent Contraceptive Use in South Africa." *Reproductive Health Matters* 14(27): 109-118.

Zwang, Julien and Michel Garenne. 2008. "Social Context of Premarital Fertility in Rural South Africa." *African Journal of Reproductive Health* 12(2): 98-110.

Zwang, Julien, Michel Garenne, Kathleen Kahn, Mark Collinson and Stephen M. Tollman. 2007. "Trends in Mortality from Pulmonary Tuberculosis and HIV/AIDS Co-Infection in Rural South Africa (Agincourt)." *Transactions of the Royal Society of Tropical Medicine and Hygiene* 101: 893-8.

Chapter 2: Early Age at First Marriage and HIV Risk Factors for Women in Southern Africa

Although the overall growth of the global epidemic of HIV/AIDS appears to have stabilized, the majority of new HIV infections continue to occur in sub-Saharan Africa (UNAIDS 2010). Southern Africa in particular has been severely affected; the countries of southern Africa contain less than 2% of the world's population, but at least one-third of all HIV-positive individuals (UNAIDS 2006). Throughout sub-Saharan Africa HIV prevalence among young women remains more than twice as high as among young men (UNAIDS 2013).

The transition to first marriage has emerged as an important factor in the HIV/AIDS epidemic in parts of sub-Saharan Africa. Previous research has shown that relatively early age at marriage (before 18 years old¹) is associated with increased risk of HIV infection due in part to increased coital frequency and decreased use of condoms within marital unions (Luke 2003; Clark 2004; Clark, Bruce & Dude 2006; Burgoyne & Drummond 2008). In addition to early marriage, late marriage has also been found to be associated with an increased risk of HIV infection; Bongaarts (2007) attributed the association between late marriage and HIV risk to a prolonged period of premarital sexual activity marked with frequent partner changes.

This study examines the mechanisms linking early age at marriage to HIV risk through a comparison of HIV risk factors. While researchers have focused on determining the direction of the relationship between early age at first marriage and risk of HIV infection, the mechanisms behind this relationship remain obscured. The debate over the relationship of age at marriage

¹ 'Early marriage' is defined as prior to age 18 for this study, consistent with definitions and recommendations set forth by the United Nations. Both the 1979 Convention on the 'Elimination of All Forms of Discrimination Against Women' and the 1990 'African Charter on the Rights and Welfare of the Child' suggest a minimum age of 18 for marriage, consistent with the definition of childhood in the 'Convention on the Rights of the Child.'

and risk of HIV infection rests on the assumptions behind which mechanisms are most salient (e.g. frequency of unprotected sex, number of sexual partners). This study uses existing data to compare risk factors for women who married prior to age 18 compared to those who married after age 18 in an attempt to untangle which HIV risk factors are related to early age at first marriage.

Age at first marriage is of special concern for females as compared to males. Not only is early marriage an uncommon trend among males, but also many of the deleterious consequences, such as early childbearing, are specific to females (Jenson & Thornton 2003). Previous research has shown that young females in particular share the largest burden of unprotected sex (Djamba 1997). Throughout southern Africa, women aged 15 to 24 are on average three to six times more likely to be infected with HIV than males of the same ages (UNAIDS 2004). Thus this research focuses on HIV risk behavior specific to females in order to elucidate effective interventions. Drawing on previous research, this study tests three potential mechanisms linking early age at first marriage and elevated HIV risk: exposure to risk, bargaining power and knowledge.

Previous research has primarily assumed that an increased risk of HIV infection resulting from marriage is due to an increase in the frequency of unprotected sex (Clark, Bruce & Dude 2006; Burgoyne & Drummond 2008). An increased frequency of unprotected sex results in an increased frequency of exposure to risk of HIV infection. The period of exposure to risk first begins as sexual debut; as Bongaarts (2007) notes, if early marriage leads women to experience sexual debut at a younger age than they would otherwise, it increases risk of HIV infection by initiating the period of exposure to risk.

In a study based in rural Zimbabwe, Hallett et al. (2007) found that, adjusted for total years of sexual activity, women whose sexual debut was between ages 12 to 16 were

significantly more likely to be infected with HIV than those who began sexual activity at age 21 or later. However, when the number of lifetime partners is controlled for, this difference is no longer statistically significant. However, in a study based in urban Zimbabwe, Pettifor et al. (2004) also found that early sexual debut for women is a strong predictor of later HIV infection, even after controlling for number of lifetime partners. In this dissertation the exposure to risk mechanism takes into account (1) the period of risk via age at sexual debut, (2) the frequency of exposure to risk via frequency of unprotected sex and (3) a behavioral aspect of risk via number of sexual partners other than one's husband.

The bargaining power mechanism reflects variations in gender norms across countries. Gender inequality within the household may influence risk of HIV infection via the amount of control females have in making decisions related to both their sexual health and their sexual practices (Kaye 2004). Luke (2003) found that while adolescent girls had negotiating power over partnership formation and continuation, they had little to no power over sexual practices, such as condom use, and were often met with violence when they did attempt to discuss sexual matters. It is possible that this lack of bargaining power continues even after the women reach adulthood. The bargaining power mechanism is tested via two factors: household decision-making and perceptions of domestic violence.

Previous research has found that domestic violence appears to increase the risk of HIV risk behavior and HIV infection. Using interview data from South Africa and Botswana, Langen (2005) found that women who reported spousal abuse were significantly less likely to suggest condom use with their partners. Similarly, using interview data from India, Go et al. (2003) found that women reported that requesting condom use was interpreted as a sign of infidelity and a trigger for violence. In contrast, using survey data from South Africa, Jewkes, Loveday and

Penn-Kekana (2003) found no indication that domestic violence influenced the likelihood of discussing HIV with their partner; furthermore, they found that women who reported domestic abuse within the past year were significantly more likely to suggest condom use to their partner. However, Fonck et al. (2005) found that while women reporting domestic violence were more likely to report ever using condoms, they were also more likely to test positive for HIV; the researchers speculated that condom use may be a marker for high risk behavior (e.g. extramarital sexual relations). Domestic violence may also increase HIV risk through coercive sexual practices (Kaye 2004).

In addition to exposure to risk and bargaining power, previous research has also suggested that education may be an important mechanism, albeit one with a complex relationship to HIV risk via both knowledge and school attendance (Jukes, Simmons & Bundy 2008). While studies prior to 1996 generally found either no association or a positive association between education and HIV infection, after 1996 studies were more likely to find a lower risk of HIV infection among those with the most education (Hargreaves et al. 2008). This changing relationship is expected as the HIV epidemic matures and people change their behavior based on access to information (Jukes, Simmons & Bundy 2008).

This study does not include educational attainment as a factor as this measure compounds and obscures two separate factors: knowledge and school attendance. The gain in knowledge via educational attainment may change cognitive determinants of behavior, as individuals gain information regarding HIV risk and safer sexual practices. School attendance impacts the development of social networks, thereby influencing access to sexual partners. The focus in this study is on the gain of knowledge (related to HIV/AIDS) associated with educational attainment.

Knowledge regarding HIV/AIDS and literacy levels are the two factors used to test the knowledge mechanism. Literacy increases access to public health and HIV prevention messages. Previous research has found improved literacy levels significantly enhance the effectiveness of HIV prevention programs (Iqbal and Zorn 2010). Information on HIV/AIDS is often designed for individuals with moderate to high levels of literacy, thus people with low literacy skills often lack knowledge on how to adequately prevent HIV (Ammann 2003).

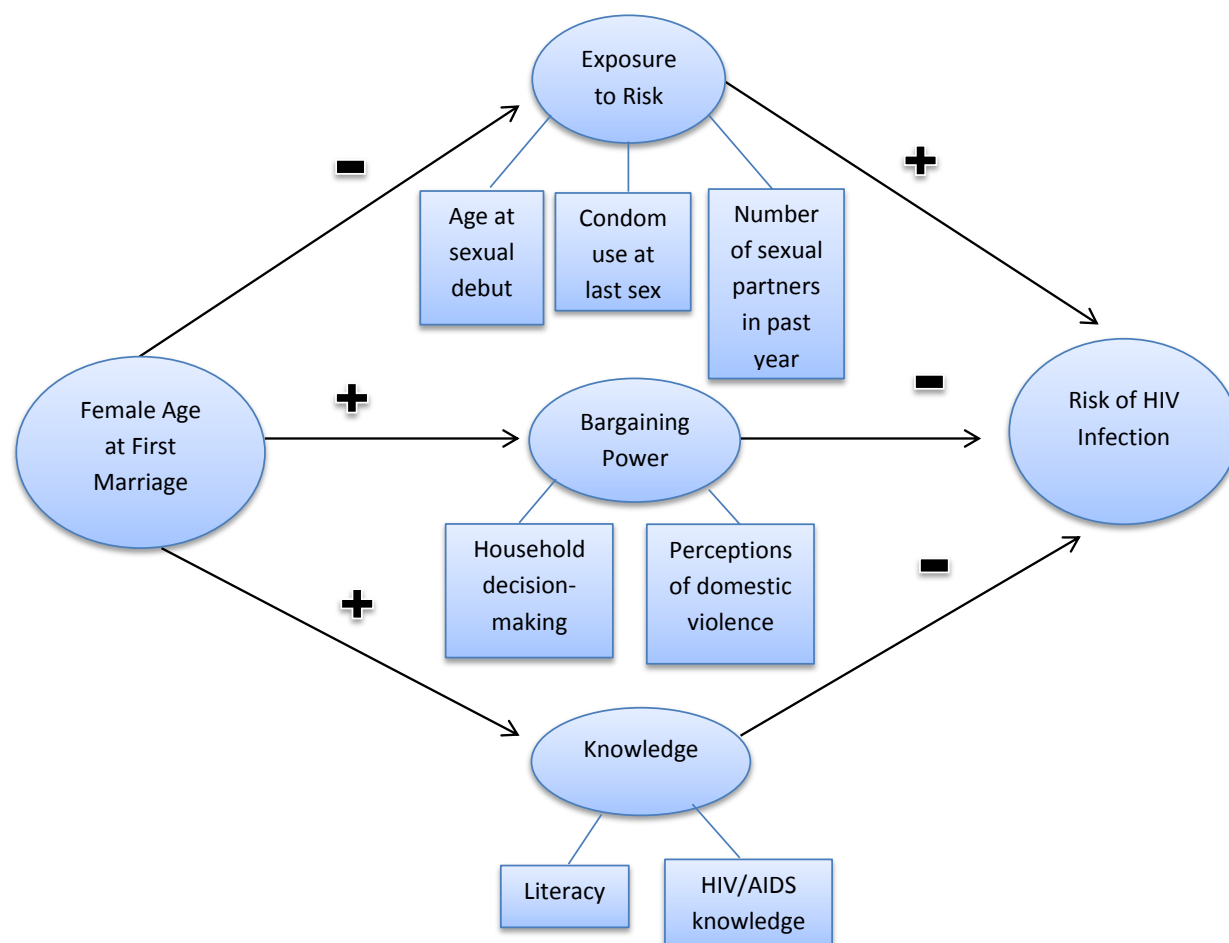


Figure 1. Conceptual Diagram for Mechanisms Linking Female Age at Marriage to Risk of HIV Infection

Figure 1 shows how these three mechanisms link female age at marriage to risk of HIV infection. The sample is restricted to women aged 25-29. By age 25 the vast majority of women in southern Africa have entered marriage. As a number of the variables under investigation are associated with mortality, age 29 is the cut-off point to lessen the impact of right censoring. Thus, the comparisons are between women who married prior to age 18 and those who married after age 18, among married women aged 25 to 29 in the countries of southern Africa² (Lesotho, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe).

DATA AND METHODS

The comparison of HIV risk factors for women by marital age utilizes data from the Demographic and Health Surveys (DHS). DHS data consist of a series of representative surveys collected over the past several decades. Data are collected on fertility, family planning, maternal and child health, and HIV/AIDS awareness. In the households sampled by the DHS, all women aged 15-49 are eligible for the interview. Respondents provide detailed marital histories and information on past relationships as well as census-style information for the household.

Data from seven countries in southern Africa are used for this analysis: Lesotho, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe. The dates of these datasets range from 1998 for South Africa to 2009 for Lesotho. As shown in Table 1, marriage is nearly universal for women in all of the countries included. By ages 45-49, the percent of women ever married ranges from 82.9 (Namibia) to 99.3 (Zambia). For the age group under analysis, 25-29, the percent of women ever married ranges from 44.6 (Namibia) to 95.1 (Mozambique). In four of the countries (Lesotho, Mozambique, Zambia and Zimbabwe) over 80% of women are ever married by ages 25-29. However, in the remaining three countries

² Data are not available for Botswana.

(Namibia, South Africa and Swaziland) only about 50% of women are ever married by ages 25-29.

Table 1. Percent of Women Ever Married by Age Group

Age Group	LS 2004	MZ 2003	NM 2006-7	ZA 1998	SZ 2006-7	ZM 2007	ZW 2005-6
15-19	18.0	43.3	5.5	4.1	3.8	19.5	23.8
20-24	59.8	84.4	24.1	24.6	21.3	73.6	71.6
25-29	81.5	95.1	44.6	53.5	46.3	88.7	91.0
30-34	90.8	98.1	60.3	71.1	61.7	95.5	96.5
35-39	92.6	98.6	69.3	81.5	76.3	98.2	97.0
40-44	94.3	98.9	73.9	85.4	77.2	98.6	99.4
45-49	96.9	98.7	82.9	88.5	82.7	99.3	99.1
Total Married Women	7095	12418	9804	11735	4987	7146	9807

LS=Lesotho, MZ=Mozambique, NM=Namibia, ZA=South Africa, SZ=Swaziland, ZM=Zambia, ZW=Zimbabwe

All of the comparison factors are included within the standard DHS datasets. Seven variables are used to test three causal mechanisms: exposure to risk, bargaining power and knowledge. Under the first mechanism, the variables are (1) mean age at first sex, (2) proportion using a condom during most recent sexual intercourse, and (3) total number of sexual partners other than husband in the past year. Under the second mechanism, the variables are (4) household decision-making index and (5) perceptions of domestic violence index. Under the third mechanism, the variables are (6) literacy level and (7) HIV/AIDS knowledge index. All of the data were weighted using the individual sampling weight variables provided by DHS for each country.

Indices were created for three of the variables: household decision-making, perceptions of domestic violence and HIV/AIDS knowledge. When DHS data are collected, a number of indicators are collected on each of these topics. For example, data are collected on knowledge of

safer sex practices and incorrect beliefs about AIDS (e.g. supernatural transmission). Data is compared between women who married prior to age 18 and those who married after age 18 for a single birth cohort (aged 25-29) and separated by country.

As shown in Table 2, Mozambique has the earliest mean age at first marriage for ever-married women currently aged 25-29 at 17.04; this is also the only country with a mean female age at first marriage prior to 18. Three countries have means above 20: South Africa (20.72), Swaziland (20.86) and Namibia (20.97). The mean age at marriage for women married prior to age 18 ranges from 14.86 (Mozambique) to 16.06 (Lesotho) across all countries. The mean age at marriage for women married after age 18 ranges from 20.21 (Mozambique) to 22.41 (Namibia).

Table 2. Mean Age at Marriage and Total Number of Ever-Married Women Currently Aged 25-29

Country	Married before 18		Married after 18		All Women	
	Mean Age at Marriage	n	Mean Age at Marriage	n	Mean Age at Marriage	n
Lesotho	16.06	276	21.02	720	19.65	996
Mozambique	14.86	1254	20.21	862	17.04	2116
Namibia	15.40	148	22.41	575	20.97	724
South Africa	15.36	200	22.14	751	20.72	951
Swaziland	15.62	81	22.07	351	20.86	431
Zambia	15.58	571	20.58	638	18.22	1209
Zimbabwe	15.60	431	20.55	903	18.95	1334

RESULTS

To test the exposure to risk mechanism, three factors were tested for statistically significant differences between women married prior to age 18 and women married after age 18, aged 25-29: (1) mean age at sexual debut, (2) proportion using a condom at last sex and (3) mean

number of sexual partners other than husband in the past year. As shown in Table 3, for each of the countries under analysis the mean age at first sex is younger for women married prior to age 18 and is statistically significant at the .05 level. As shown in Table 4, the proportion of married women that used a condom during their most recent sexual intercourse was higher for those married after age 18 and statistically significant at the .05 level for three of the countries: Mozambique, Namibia, and South Africa. As shown in Table 5, the mean number of sexual partners other than her husband in the past year was significantly higher among women married before age 18 compared to women married after age 18 only in Lesotho. In Namibia this relationship was reversed; that is, the mean number of sexual partners other than her husband was significantly higher for women married after age 18 compared to women married prior to age 18. The remaining countries under analysis did not exhibit any significant differences. (Data for South Africa for this factor was missing.)

Table 3. Mean Age at First Sex for Married Women Currently Aged 25-29

Country	Married before 18	Married after 18	t	<i>p</i>	df
Lesotho	15.86	18.71	21.329	0.000	778.7
Mozambique	14.48	17.00	26.157	0.000	1419.9
Namibia	15.70	18.19	13.188	0.000	328.7
South Africa	15.66	17.68	12.731	0.000	393.6
Swaziland	15.85	17.60	7.238	0.000	131.0
Zambia	15.28	17.90	21.206	0.000	919.3
Zimbabwe	15.61	19.55	33.471	0.000	1190.8

Table 4. Proportion of Married Women Aged 25-29 That Used a Condom during Most Recent Sexual Intercourse

Country	Married before 18	Married after 18	t	<i>p</i>	df
Lesotho	0.30	0.32	0.680	0.497	495.7
Mozambique	0.02	0.04	2.443	0.015	1205.0
Namibia	0.16	0.24	2.089	0.038	215.2
South Africa	0.05	0.09	2.150	0.032	389.5
Swaziland	0.31	0.28	-0.491	0.624	110.5
Zambia	0.08	0.10	1.086	0.278	1125.3
Zimbabwe	0.05	0.05	0.028	0.978	796.8

Table 5. Mean Number of Sexual Partners Other than Husband in Past Year for Married Women Currently Aged 25-29

Country	Married before 18	Married after 18	t	<i>p</i>	df
Lesotho	0.23	0.16	-2.328	0.025	465.9
Mozambique	0.14	0.17	1.777	0.076	1689.2
Namibia	0.06	0.12	2.311	0.021	345.0
South Africa	MISSING	MISSING			
Swaziland	0.16	0.08	-1.540	0.127	99.4
Zambia	0.08	0.06	-1.374	0.170	1173.9
Zimbabwe	0.06	0.04	-1.191	0.234	766.8

To test the bargaining power mechanism two factors were tested for statistically significant differences between women married prior to age 18 and women married after age 18: (1) the household decision-making index and (2) the perceptions of domestic violence index.

Five indicators were used in creating the household decision-making index; for each indicator it was asked who in the family has the final say on the following decisions: (a) respondent's healthcare, (b) making large household purchases, (c) making household purchases for daily needs, (d) visits to family or relatives, and (e) food to be cooked each day. The possible responses were: respondent alone, respondent and husband/partner, respondent and other person,

husband/partner alone, someone else, or other. Indicators were transformed into binary variables, coded as 1 for woman has a say and 0 for woman does not have a say in the decision; scores were then averaged to create index values.

As shown in Table 6, only women in Namibia and Zambia reported statistically significant increased household decision-making power when married after age 18 as compared to those married before age 18 ($p=.006$ and $.000$, respectively). For the other countries, there was no statistically significant difference for the household decision-making index between the two groups; data was missing for South Africa.

Five indicators were used for the perceptions of domestic violence index; for each indicator, it was asked if a wife's beating or hitting is justified when she (a) goes out without telling him, (b) neglects the children, (c) argues with him, (d) refuses to have sex with him, and (e) burns the food. Responses were coded 0 as no and 1 as yes, and then averaged to create index values. As shown in Table 7, women in Namibia, Zambia, and Zimbabwe showed statistically significant differences between the two groups at the .05 level ($p=.017$, $.026$, and $.000$ respectively), while women in Lesotho showed statistically significant differences at the .1 level ($p=.072$); for all of these differences, the mean score of the perceptions of domestic violence index for women married after age 18 was lower than for women married before 18, signifying less approval of domestic violence. There was no statistically significant difference for Mozambique or Swaziland; data was missing for South Africa.

Table 6. Mean Score of Household Bargaining Power Index for Married Women Currently Aged 25-29

Country	Married before 18	Married after 18	t	p	df
Lesotho	0.84	0.83	-0.859	0.391	454.8
Mozambique	0.62	0.64	1.114	0.266	2068.0
Namibia	0.68	0.77	2.771	0.006	163.4
South Africa	MISSING	MISSING			
Swaziland	0.59	0.62	0.586	0.559	330.0
Zambia	0.63	0.72	4.398	0.000	1011.0
Zimbabwe	0.88	0.89	-0.353	0.733	942.0

Table 7. Mean Score of Perceptions of Domestic Violence Index for Married Women Currently Aged 25-29

Country	Married before 18	Married after 18	t	p	df
Lesotho	0.18	0.15	-1.806	0.072	443.3
Mozambique	0.34	0.33	-0.830	0.407	1900.8
Namibia	0.25	0.17	-2.400	0.017	205.9
South Africa	MISSING	MISSING			
Swaziland	0.07	0.06	-0.661	0.509	406.0
Zambia	0.44	0.39	-2.225	0.026	1178.0
Zimbabwe	0.31	0.22	-4.321	0.000	768.0

To test the knowledge mechanisms, two factors were tested for statistically significant differences between women married prior to age 18 and women married after age 18: (1) literacy level and (2) HIV/AIDS knowledge index. The literacy level is graded on a three point scale, where 0 indicates the individual cannot read at all, 1 indicates the individual is able to read part of a sentence, and 2 indicates the individual is able to read an entire sentence. For South Africa, this variable was not available but a comparable variable exists that is country specific. This variable is measured such that 0 indicates the individual reads easily, 1 indicates the individual

reads with difficulty, and 2 indicates the individual cannot read; this variable was recoded to reverse numeric order so as to be comparable with the literacy variables of the other countries. As shown in Table 8, for six of the seven countries women married after age 18 had a higher mean literacy score than those married before age 18 significant at the .05 level; the remaining country, Lesotho, also showed this difference significant at the .1 level ($p=.054$).

The HIV/AIDS knowledge index was created from several factors. For Lesotho, Mozambique, Namibia, Swaziland, Zambia and Zimbabwe, seven indicators were used to compose the HIV/AIDS knowledge index: (1) ever heard of AIDS, (2) can reduce chance of AIDS by abstaining from sex, (3) can reduce chance of AIDS by always using condoms during sex, (4) can reduce chance of AIDS by having only one sexual partner, (5) can get AIDS from mosquito bites, (6) can get AIDS by sharing food with person who has AIDS, and (7) a healthy person can have AIDS. For South Africa the wording of the available indicators differed slightly and two of the indicators were missing; thus the included factors for South Africa were: (1) ever heard of AIDS, (2) can reduce chance of AIDS by always using condoms during sex, (3) can reduce chance of AIDS by avoiding mosquito bites, (4) can reduce chance of AIDS by avoiding sharing food with a person with AIDS, and (5) a healthy person can have AIDS. All of the factors were transformed into binary variables, coded as 0 for an inaccurate response and 1 for an accurate response. The factors were then averaged to create the HIV/AIDS knowledge index. As shown in Table 9, women in Lesotho, Mozambique, Zimbabwe showed statistically significant difference between the two groups ($p=.023$, $.027$, and $.030$, respectively); for all three countries, women who married after age 18 were had greater HIV/AIDS knowledge than women who married before age 18.

Table 8. Mean Literacy Level for Married Women Currently Aged 25-29

Country	Married before 18	Married after 18	t	<i>p</i>	df
Lesotho	1.81	1.88	1.930	0.054	422.3
Mozambique	0.48	0.81	8.184	0.000	1694.2
Namibia	1.36	1.77	2.181	0.031	160.7
South Africa*	1.71	1.85	3.138	0.002	274.9
Swaziland	1.51	1.81	3.351	0.001	99.4
Zambia	0.92	1.35	8.079	0.000	1150.9
Zimbabwe	1.68	1.88	6.482	0.000	598.5

* Country-specific variable used

Table 9. Mean Score of HIV/AIDS Knowledge Index for Married Women Currently Aged 25-29

Country	Married before 18	Married after 18	t	<i>p</i>	df
Lesotho	0.84	0.86	2.022	0.043	726.0
Mozambique	0.82	0.84	2.294	0.022	824.8
Namibia	0.91	0.92	1.237	0.218	167.3
South Africa	0.78	0.81	1.417	0.157	665.0
Swaziland	0.94	0.94	-0.025	0.980	335.0
Zambia	0.87	0.88	1.365	0.173	981.0
Zimbabwe	0.87	0.89	2.018	0.044	1124.0

DISCUSSION

This study examines three mechanisms potentially linking early age at first marriage to increased risk of HIV infection: exposure to risk, bargaining power, and knowledge. While I find support for the knowledge mechanism and the exposure to risk mechanism, I find only mixed support for the bargaining power mechanism. This study found only limited support for the bargaining power mechanism. The household decision-making index showed statistically significant differences between the two groups for only Namibia and Zambia in the expected

direction. The perceptions of domestic violence index showed statistically significant differences between the two groups for Lesotho, Namibia, Zambia, and Zimbabwe in the expected direction. There were no statistically significant differences between the two groups on either index measuring household bargaining power for Mozambique and Swaziland, while data was missing on these indicators for South Africa.

All seven countries under analysis showed statistically significant differences in literacy levels between the two groups in the expected direction; that is, early marriage was associated with lower levels of literacy. Three of the countries, Lesotho, Mozambique, Zimbabwe, showed statistically significant differences in the HIV/AIDS knowledge index between the two groups in the expected direction; that is, early marriage was associated with lower scores on the HIV/AIDS knowledge index. It was expected that early marriage would be associated with less knowledge, as females who marry young are often forced to leave school. These findings lend support to the findings of Clark (2004) and Clark, Bruce, and Dude (2006), and to the need to encourage education among young married women.

This study also found support for the exposure to risk mechanism. Mean age at first sex showed statistically significant differences between the two groups for all countries in the expected direction, and the proportion using a condom at last sexual intercourse showed statistically significant differences between the two groups in Mozambique, Namibia, and South Africa, in the expected direction. However, the mean number of sexual partners other than her husband in the past year was significantly higher among women married prior to age 18 compared to women married after age 18 only in Lesotho, while in Namibia this relationship was reversed; that is, the mean number of sexual partners other than her husband was significantly higher for women married after age 18 compared to women married prior to age 18.

Age at first marriage and exposure to risk are often collapsed in discussions surrounding the relationship between marriage and HIV/AIDS. While this study found that women married prior to the age of 18 had significantly younger ages at first sex compared to those married after age 18, the remaining factors measuring exposure to risk revealed a less straightforward relationship highlighting the need to unpack the various elements of exposure to risk. As Bongaarts (2007) points out, one key issue is if the marriage occurs before a woman would otherwise become sexually active. Thus, in line with Clark (2004), these findings support the argument that efforts to prevent early marriage, prior to sexual debut, and protect this vulnerable population of young women should be engaged.

However, long intervals between age at sexual debut and age at first marriage create longer periods of risk. During this interval, the process of mate selection prior to marriage is also an important factor in HIV risk. Frequent partner changes and concurrent sexual relationships create a high-risk environment for individuals seeking marital partners. High levels of infectivity (i.e. the rate of transmission from an infected partner to an uninfected partner per sexual act) immediately following HIV infection increase the risk during this period. Efforts to increase condom use among this population are especially important in halting this epidemic.

The primary limitations of this study are data-driven. Without individual-level HIV status data, it is impossible to test directly the mechanisms connecting age at first marriage with HIV risk at the individual level. Future studies are needed to examine these relationships at the individual-level. Furthermore, with cross-sectional data it cannot be determined if early marriage causes or is merely associated with these trends. This study uses cross-sectional data to shed light on how these two groups of women vary on a number of factors related to risk of HIV infection, but it cannot explain the processes that lead some women to marry at a relatively

young age.

REFERNCES

Ammann, Arthur J. 2003. "Preventing HIV: Time to Get Serious About Changing Behavior."

BMJ: British Medical Journal 326(7403): 1342-1343.

Bongaarts, John. 2007. "Late Marriage and the HIV Epidemic in sub-Saharan Africa."

Population Studies 61(1): 73-83.

Burgoyne, Amy D. and Peter D Drummond. 2008. "Knowledge of HIV and AIDS in Women in sub-Saharan Africa." *African Journal of Reproductive Health* 12(2): 14-31.

Clark, Shelley. 2004. "Early Marriage and HIV Risks in Sub-Saharan Africa." *Studies in Family*

Planning 35(3): 149-160.

Clark, Shelley, Judith Bruce and Annie Dude. 2006. "Protecting Young Women from

HIV/AIDS: The Case against Child and Adolescent Marriage." *International Family*

Planning Perspectives 32(2): 79-88.

Djamba, Yanyi K. 1997. "Theoretical Perspectives on Female Sexual Behaviour in Africa: A

Review and Conceptual Model." *African Journal of Reproductive Health / La Revue*

Africaine de la Sasnté Reproductive 1(2): 67-78.

Fonck, Karoline, Leye Els, Nancy Kidula, Jeconiah Ndinya-Achola, and Marleen Temmerman.

2005. "Increased Risk of HIV in Women Experiencing Physical Partner Violence in

- Nairobi, Kenya." *AIDS and Behavior* 9(3): 335-339.
- Go, Vivian F., C. Johnson Sethulakshmi, Margaret E. Bentley, Sudha Sivaram, A.K. Srikrishnan, Suniti Solomon, and David D. Celentano. 2003. "When HIV-Prevention Messages and Gender Norms Clash: The impact of domestic violence on women's HIV risk in slums of Chennai, India." *AIDS and Behavior* 7(3): 263-272.
- Hallett, Timothy B., James J.C. Lewis, Ben A. Lopman, Constance A. Myamukapa, Phyllis Mushati, Mainford Wambe, Geoff P. Garnett, and Simon Gregson. 2007. "Age at First Sex and HIV Infection in Rural Zimbabwe." *Studies in Family Planning* 38(1): 1-10.
- Hargreaves, James R, Christopher P Bonell, Tania Boler, Delia Boccia, Isolde Birdthistle, Adam Fletcher, Paul M Pronyk, Judith R Glynn. 2008. "Systematic review exploring time trends in the association between educational attainment and risk of HIV infection in sub-Saharan Africa." *AIDS* 22(3): 403-414.
- Iqbal, Zaryab and Christopher Zorn. 2010. "Violent Conflict and the Spread of HIV/AIDS in Africa." *The Journal of Politics* 72(1): 149-162.
- Jensen, Robert and Rebecca Thornton. 2003. "Early Female Marriage in the Developing World." *Gender and Development* 11(2): 9-19.
- Jewkes, Rachel K., Jonathan B. Levin, Loveday A. Penn-Kekana. 2003. "Gender inequalities,

intimate partner violence and HIV preventative practices: findings of a South African cross-sectional study.” *Social Science & Medicine* 56: 125-134.

Jukes, Matthew, Stephanie Simmons and Donald Bundy. 2008. “Education and vulnerability: The role of schools in protecting young women and girls from HIV in southern Africa.” *AIDS* 22(suppl 4): S41-S56.

Kaye, Dan K. 2004. “Gender inequality and domestic violence: implications for human immunodeficiency virus (HIV) prevention.” *African Health Sciences* 4(1): 67-70.

Langen, Tabitha T. 2005. “Gender power imbalance on women’s capacity to negotiate self-protection against HIV/AIDS in Botswana and South Africa.” *African Health Sciences* 5(3): 188-197.

Luke, Nancy. 2003. “Age and Economic Asymmetries in the Sexual Relationships of Adolescent Girls in Sub-Saharan Africa.” *Studies in Family Planning* 34(2): 67-86.

Pettifor, Audrey E, Ariane van der Straten, Megan S Dunbar, Stephen C Shiboski, and Nancy S Padian. 2004. “Early Age of First Sex: A risk factor for HIV infection among women in Zimbabwe.” *AIDS* 18(10): 1435-1442.

UNAIDS. 2004. *Facing the Future Together: Report of the Secretary General’s Task Force on Women, Girls, and HIV/AIDS in Southern Africa*. Geneva: UNAIDS.

http://data.unaids.org/publications/irc-pub06/jc380-facingfuture_en.pdf

---. 2006. *Global Report on HIV-AIDS*. Geneva: UNAIDS.

[http://www.unaids.org/en/HIV_data/2006Global Report/default.asp](http://www.unaids.org/en/HIV_data/2006Global%20Report/default.asp)

---. 2010. *Global Report: UNAIDS Report on the Global AIDS Epidemic*. Geneva: UNAIDS.

[http://www.unaids.org/en/media/unaids/contentassets/documents/unaidspublication/2010/
20101123_globalreport_en.pdf](http://www.unaids.org/en/media/unaids/contentassets/documents/unaidspublication/2010/20101123_globalreport_en.pdf)

---. 2013. *Global Report: UNAIDS Report on the Global AIDS Epidemic*. Geneva: UNAIDS.

[http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2013/gr2
013/unaids_global_report_2013_en.pdf](http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2013/gr2013/unaids_global_report_2013_en.pdf)

Chapter 3: HIV/AIDS and the Transition to Marriage in Agincourt, South Africa

The timing of entry into marriage has long been recognized as an important dimension of fertility behavior. Traditionally marriage has marked the beginning of regular exposure to the risks of pregnancy and childbearing, helping explain variations in fertility patterns across societies. More recently, marital patterns have emerged as an important factor in the HIV/AIDS epidemic. At almost 30 percent, the countries of Southern Africa have the highest HIV prevalence rates in the world (Tabutin and Schoumaker 2004). Understanding the dynamics of women's transition into marriage is central to improving our understanding of the exceptionally high HIV prevalence of women aged 15-40 in South Africa.

While the prevalence rates of HIV/AIDS in rural South Africa have increased over the past twenty years, the marital rates have declined (Posel, Rudwick, and Casale 2011; Hosegood, McGrath, and Moultrie 2009; Hunter 2007). Black South African women in particular are far less likely than White women to be ever-married and more likely to be never-married and not cohabiting (Posel and Rudwick 2013). Little is known however, as to how HIV/AIDS may be impacting these changing trends. Studies in Africa have found that marriage, marriage dissolution, and surveillance of potential marital partners are key HIV prevention strategies in sub-Saharan Africa (Reniers 2008, Schatz 2005, Watkins 2004). This study examines how HIV/AIDS may be driving the decline in marriage rates, particularly by impacting the desirability of marriage.

Variations in marital patterns are understood through Ruth Dixon's (1971, 1978) theoretical framework, which focuses on three categories of determinants: availability of mates, feasibility of marriage, and desirability of marriage. The desirability of marriage is generally

conceptualized as reflecting the availability of alternatives to marriage; previous research has operationalized this determinant as female education levels and economic opportunities. This project expands this understanding by proposing that HIV/AIDS impacts the desirability of marriage. HIV/AIDS may increase the desirability of marriage (e.g. marriage may be seen as a protective mechanism by limiting the total number of sexual partners) or decrease the desirability of marriage (e.g. marriage may be seen as a risk factor if women lack the ability to enforce condom use within marriage). Availability of mates and feasibility of marriage within Agincourt are also considered here as alternative explanations for declining rates of marriage.

This study is nested within the Agincourt Health and Demographic Surveillance System (AHDSS) site in the Ehlanzeni District in Mpumalanga Province, northeastern South Africa. The AHDSS has collected demographic information on a population of approximately 100,000 individuals in 28 villages since 1992. One third of this population is former Mozambican refugees, who self-settled in the area after fleeing civil war. In addition to the lack of research examining how HIV/AIDS may be impacting marital patterns, little is known about the long-term impact of refugee status on family formation processes and, specifically, how these decision-making processes may differ for South African and Mozambican women within Agincourt. This study utilizes focus group discussions to draw comparisons across different age groups of women and between South African and Mozambican women.

ANALYTIC FRAMEWORK

The determinants of entry into marriage can be divided into three broad categories: availability of mates, feasibility of marriage, and desirability of marriage (Dixon 1971, 1978). The availability of mates is largely determined by the relative numbers of males and females

eligible for marriage. The feasibility of marriage is a function of economic expectations, particularly in regards to achieving economic independence. Finally, the desirability of marriage reflects the availability of viable alternatives to marriage.

The availability of mates is generally analyzed through use of sex ratios, the number of single men relative to the number of single women of marriageable ages. The human sex ratio at birth is approximately 1.05 (i.e. 105 males for every 100 females); this number decreases with age as males die off faster than females (Poston 2006). Previous research has found that the number of available opposite-sex individuals strongly influences the likelihood of forming cross-sex relationships (South and Trent 2010; Posel and Casale 2009; Trent and South 2003; Fossett and Kiecolt 1993; Bhrolcháin 1992; South and Trent 1988). For instance, in a cross-national analysis South and Trent (1988) found that sex ratios were positively and significantly related to the percentage of women in marital unions. Posel and Casale (2009) found that, for both African and White women in South Africa, simple sex ratios were significantly and positively associated with the probability of marriage.

A number of sex-specific population processes, such as sex-selective abortion, sex-specific mortality patterns and sex-specific migration patterns, may lead to a skewed sex ratio. Although mortality patterns in South Africa have undergone drastic changes in recent years due to increases in HIV-related mortality, these changes have primarily affected adults beyond the prime ages entering first marriage (Williams and Gouws 2001). Thus, it is expected that these recent changes would not have impacted the sex ratio of the marriage market. It is likely, however, that sex-specific migration patterns have skewed the sex ratios in some rural areas of South Africa, due to large levels of circular migration as a lasting effect of apartheid policies,

where the majority of the population was forced onto rural homeland areas that were lacking in employment and agricultural opportunities (Posel and Casale 2009; Zwang and Garenne 2008).

Marital norms in rural South Africa are still largely impacted by processes and practices set into motion during the Apartheid period, particularly on the former homelands. The 1952 Pass Laws Act, in effect until 1986, made it illegal for African adults to stay in urban areas without employment and accommodation; thus if an individual found work in a city, their partner was unable to join them. Simultaneously, individuals were forced to live on homelands, based on a system of ethnic identification. This imposed system of circular labor migration persists today, despite the official end to apartheid policies (Hosegood, Benzler, and Solarsh 2005; Collinson, Tollman, Kahn, and Clark 2003). Over time the migrant labor has become longer term with more frequent trips home, due to improved infrastructure (Collinson, Wolff, Tollman, and Kahn 2006). More men than women engage in circular migration, leaving an excess of women in rural areas and creating an excess of men in urban areas.

The feasibility of marriage depends on a couple's access to economic resources; it varies according to cultural expectations regarding financial and residential independence of the newlywed couple (Dixon 1971, 1978). As Dixon (1971, 1978) outlined, marriage is more feasible with joint family norms; this allows couples to marry prior to establishing economic independence from their households of origin. In the context of Agincourt, it is expected that lobola (bridewealth) will also impact the feasibility of marriage. The exchange of lobola serves the purpose of forging a relational bond between the families and signaling a male's commitment to the union (Posel, Rudwick, and Casale 2011; Madhavan 2010). Over time this transaction has shifted from cattle and household goods to cash payments (Madhavan 2010).

The level of constraint lobola places on marriage is highly variable according to cultural and ethnic norms. For example, Posel and Casale (2009) found that the probability of marriage varied significantly among women in South Africa according to language spoken at home; the probability was lowest for the languages that correspond to ethnic groups where the practice of bridewealth is strictly observed (i.e. Zulu speakers in KwaZulu-Natal). Furthermore, they found that the women speaking Tsonga at home (the dominant language within Agincourt) were not significantly less likely to marry as compared to African women who spoke Afrikaans at home (and thus, presumably, did not practice lobola), evidence that lobola is not a significant barrier to marriage within Agincourt. In research based in Agincourt, Zwang and Garenne (2008) found that in order to facilitate marriage, it is common for the wife's parents to accept a payment to be made over the course of several years or even to accept a symbolic contribution. Thus it is likely that lobola is becoming less of a constraint to the feasibility of marriage.

The desirability of marriage reflects the availability of viable alternatives to marriage (Dixon 1971, 1978). Dixon (1978) proposed female education as a key indicator of alternatives to marriage. While previous research has shown education to be highly correlated to age at first marriage, the existing studies are limited by the endogeneity of education level and entry into marriage (Manda and Meyer 2005; Brien and Lillard 1994). That is, some women may have had to leave school upon entering marriage; for others, the choice to enter marriage may have resulted after the female left school for reasons unrelated to marital decisions. Indeed, numerous studies do not even mention the problem of endogeneity (see, for example: Harwood-Lejeune 2000, Ikamari 2005, Jenson and Thornton 2003).

Over the last twenty years there has been an increased feminization of the labor force, as women aged 15-65 who were either working or actively seeking work went from 38% of the

workforce in 1995 to 47% of the workforce in 1999 (Casale and Posel 2002). However, a large portion of this increase has been within self-employment in the informal labor sector, and significantly more women than men have joined the ranks of the unemployed. It is hypothesized that women's employment provides an alternative to marriage. As women are more likely than men to be unemployed, the degree to which employment is seen as a viable alternative warrants further investigation.

As Oppenheimer (1988) argued, the timing of the transition to marriage depends on transitioning to a stable work career so that individuals are able to set up an independent household and also financially provide for the future. In calculating the desirability of marriage, consideration of a partner's future attributes is also important as these characteristics will impact the desirability of the marital household as time goes by. Testing this theory using data on American families, Oppenheimer, Kalmijn, and Lim (1997) found that when economic forces hindered young men's transition to stable work careers, the transition to first marriage was also delayed. It is likely that economic forces in post-Apartheid South Africa are impacting the desirability of marriage by creating a high degree of uncertainty about future career roles, particularly for individuals on the homelands, and thus in part causing delays in first marriage.

Beyond alternatives to marriage, the desirability of marriage may be conceptualized as the strength of motivation to marry, which includes consideration of the penalties of childlessness, social isolation, and stigma (Dixon 1971). This study expands Dixon's framework by proposing that HIV/AIDS influences the desirability of marriage. Parents may encourage their daughters to marry young, before they become sexually active, as a way to preserve their daughter's virginity and potentially lower their risk of HIV infection (Mensch, Grant & Blanc 2006). Alternatively, marriage may be seen as a risk, if individuals suspect their partner of

extramarital sexual relations thus exposing both partners to HIV. HIV/AIDS may also impact the desirability of marriage via the penalties of remaining unmarried, with particular respect of social isolation and stigma.

SETTING AND METHODS

During the apartheid period the Agincourt area was part of the Gazankulu homeland and was thus particularly economically disadvantaged (Garenne et al. 2007). Due to a dry climate and poor soil, local agriculture is only poorly developed. The local economy is based on remittances from migrant workers, pensions, and tourism; 55% of men aged 30 to 49 are migrant workers and live at least part of the year elsewhere (Zwang and Garenne 2008). Female labor migration has increased over time since the end of apartheid, with approximately 25% of women age 15-39 living away from the area for at least 6 months by 2011. HIV/AIDS first arrived in Agincourt in 1990, with the first documented AIDS-related death occurring in 1993 (Garenne et al. 2007). By 2000 it had become the leading cause of death among children and young adults (Garenne et al. 2007; Zwang et al. 2007). HIV prevalence in Agincourt is higher for young adult women than men, reflecting significant age differences between women and their male partners. At ages 20-24 HIV prevalence is 27% for women (21.9-32.2 CI) and only 6.1% for men (2.9-9.4 CI). At ages 25-29 it is 37.8% for women (32.1-43.4 CI) and 21.7% for men (15.2-28.3 CI). HIV prevalence peaks for both men and women at ages 35-39, 46.1% for women (40.7-51.6 CI) and 45.3% for men (38.1-52.6 CI), meaning under current conditions the risk of contracting HIV during their reproductive years is almost 1 in 2 for both men and women (Gómez-Olivé et al. 2013).

This study investigates the impact such high HIV prevalence and AIDS mortality within a community has on conceptions of marriage via focus groups. The focus groups were conducted during May 2013. The data produced by focus group research includes insight into complex behavior and motivations (Morgan 1996). The participants explain themselves to each other giving researchers access to their reasoning processes (Ansary, Perkins, and Nelson 2004; Morgan 1996). Focus groups not only provide a variety of viewpoints, but also reveal how subjects interact with and respond to these viewpoints; this allows for researchers to examine motivations for behavior with an increased degree of complexity (Morgan and Krueger 1993). Thus this method is well suited to explore decision-making around the transition into marriage, community-based understandings of HIV/AIDS and gendered narratives of disease response.

Two local fieldworkers were hired to assist with recruitment, facilitation, transcription and translation, as the focus groups were held in the local language, Shangaan. Ethical clearance was given by both the Human Subject Division, University of Washington, Seattle, United States and the Committee for the Protection of Human Subjects, University of Witwatersrand, Johannesburg, South Africa. Focus group participants gave written authorization to the informed consent, which was read to them in full by the moderator at the start of each focus group discussion. The focus groups were structured around the topics of: (1) education and work, (2) motivations for marriage, (3) deciding who and when to marry, (4) parental influence on marital decision-making, (5) how marriage has changed over time, and finally (6) understandings of HIV/AIDS.

Sixty-three (63) total women participated in six separate focus groups. Participants were recruited from six villages, Khaya Lami, Kildare C, Newington B, Newington C, Rholane, and Somerset. Subjects were recruited while collecting water from community water taps and

walking throughout the village streets. If an interested but ineligible (due to age) individual was recruited, they would be asked to recommend someone who was eligible; thus we would occasionally visit people's homes or workplaces during the recruitment process. The fieldworkers kept notes throughout recruitment and at the end of each recruitment day would write out a thorough description of their interactions and procedures. On the day prior to a focus group discussion, all the participants recruited for that discussion would be called via telephone to confirm their attendance. If necessary, arrangements would be made to transport participants to the focus group locations; all focus groups were held within centrally located daycare centers or schools within the villages.

As noted above, one third of the population within Agincourt is of Mozambican origin. As shown in Table 10, residents in three of these villages predominately identify as Mozambican (according to AHDSS census data), while residents in the other three villages predominately identify as South African. Although recruitment was not based on an individuals' nationality, this recruitment process allows for a comparison of social norms surrounding the transition into marriage between predominately South African and Mozambican villages within Agincourt. The participants were further divided into separate focus groups based on age, 18-24, 25-34, and 35-44, for a total of six focus groups ranging in size from eight to thirteen participants.

With the exception of Khaya Lami, none of the villages show much of a skew in the sex ratio for adults aged 18-45. However, these numbers take all residents into account, regardless of their migrant worker status. Thus, while the availability of mates does not appear to be an issue in the quantitative data, it may still emerge as a salient factor via the qualitative data.

Table 10. Mid-Year 2012 Demographics for Six Villages within Agincourt, South Africa

Village	Total Population	Percent Mozambican	Sex Ratio 18-45	Mean Household SES*
<i>Predominately Mozambican</i>				
Kildare C	1184	93.50	104.89	2.48
Somerset B	1182	77.92	93.66	2.45
Rholane	2339	94.74	99.59	2.36
<i>Predominately South African</i>				
Khaya Lami	2182	8.85	75.56	2.80
Newington B	3533	8.94	92.72	2.78
Newington C	1945	2.78	93.91	2.75

* Data from 2011

The mean household socioeconomic status (SES) is based on an index calculated by the AHDSS measuring dwelling structure, sanitation structure, electricity access, and livestock assets; the most recent calculation of this index as in 2011. Households within the predominately Mozambican villages have a slightly lower mean household SES, which is not surprising given status as immigrants to the area. However, over time these numbers have been converging with the means for households within predominately South African villages.

As noted above, all of the focus groups were held within centrally located daycare centers or schools within the villages; they were held in the late afternoons after the children had left for the day, school had ended, and individuals had finished work. As participants arrived the fieldworkers and I would greet them; they would talk amongst themselves until we began. To start each focus group one of the fieldworkers would read over the consent forms and answer any questions. After signatures on the consent forms had been collected, we would begin audio-recording the discussions. One of the fieldworkers would moderate the focus group discussion, in Shangaan, while the other fieldworker and I took observational notes. All of the focus group

discussions were quite lively with the participants eager to participate and voice their opinions and experiences. The participants would often disagree with each other and ask the other participants to explain their points of view, while the facilitator guided the topics of discussion. The focus group discussions lasted from 90 to 120 minutes. After at least two of the focus groups, the participants asked if we would return to conduct further discussions; many of the participants thanks us, telling us how much they enjoyed the experiences, sharing their opinions, and learning new information. At the end of each focus group we distributed cold beverages, rolls of bread, and fresh fruit; this is the standard incentive procedure used by the AHDSS during focus group discussions. We also distributed two pamphlets to each participant, one that addressed HIV testing and treatment options and one that addressed options when facing unplanned pregnancy.

The audio-recordings of each focus group discussions were transcribed and translated by the fieldworkers. Any translation issues that emerged would be discussed and occasionally AHDSS staff would be consulted to ensure accurate translation. The transcriptions were then typed and loaded into Atlas.ti where they were coded in an iterative process using selective coding. A priori codes included: defining marriage, marriage as protection, marriage as risk, availability of mates, feasibility of marriage, and desirability of marriage. Emergent codes included: benefits of marriage, difficulties of marriage, rationale for avoiding marriage, and changes in marriage over time. Field notes were consulted to ensure accurate interpretations of the participant interactions. Analytic memos were developed on core themes and used to synthesize findings into a summary analysis.

FINDINGS

Defining marriage

The transition to marriage in South Africa is a process, rather than a singular event, consisting of exchange of lobola, a ceremony, and cohabitation (Hunter 2007). The participants confirmed that this was the usual transition to marriage up until the recent past; they also noted that historically there was a high level of parental involvement, even to the degree that the young bride would not be aware she was being married. For example, one participant noted that:

Long ago, in times of our mothers, they were marrying at maybe 15 years old, if her parents accept this family and want their child. They would take her to that family to get married, they paid a lobola, and she would stay there and grow up in that family. Sometimes without knowing that she was married in that family.
[W1 MZ 35-44]

The perception of the participants was that both lobola and parental involvement were becoming less common. The older participants and the women from Mozambican villages were more likely to offer definitions of marriage that included lobola; they were also more likely to note that it was becoming less common.

While discussing the decreasing parental involvements in the transition to marriage, the women were quick to note that this is, at least in part, an improvement as women now have a say in who and when they marry. For example, one participant explained:

In the past you were not marrying a person of your choice, you were marrying a person whom you have seen in a photo. Your parents were choosing a husband or a wife for you and you were not allowed to refuse to marry him or her. [W5 MZ 18-25]

Although the participants discussed that women now have a say in who they marry, they also noted that it had become common for pregnancy to be the catalyst for marriage. In discussing the decrease in parental involvement, one participant stated,

They don't talk to you. You see by a pregnancy here at home. If they see a pregnancy, they will ask you who is responsible for that pregnancy and then take you there. In many times there is no talking; in some other times, the pregnancy is the one that is talking. [W3 MZ 35-44]

Participants attributed the decreased role of parents in the marriage process to the parents not realizing that their children were old enough to be sexually active. For example, one participant noted:

Our parents are no longer talking to us about getting married. If they look to their children they think they are still young meanwhile when they go to bed their children will jump the fences and visit their boyfriends and come back home pregnant. [W1 SA 25-34]

Thus while arranged marriages have become less common, parents may still force a pregnant daughter to marry the father.

Availability

In none of the focus groups did the participants note any changes or problems with availability of mates. While availability of mates per se was not discussed, there was an assumption that husbands will pursue extramarital sexual relations. This assumption is based on the excess of women in the area; that is, there exist plenty of women for them to pursue affairs. For example, one participant stated that, "He will leave you at home and go out to look for those who have curves and stylish hair. When he looks at you, he finds that you are no longer attractive." [W4 25-34 SA] As the participant explains, the husband is able to find extramarital sexual partners because all he has to do is look and he will find women more attractive than his wife. Another participant attributed other women as taking the initiative to start an affair, stating, "If there is a gap between me and my husband there will be some people who will snatch my husband." [W2 25-34 SA] Yet another participant stated:

Your husband will tell you not to wear trousers, but when he go out to the shabeens [taverns] he will see someone wearing trousers and start to like her, only to find that the person is sick. They will fall in love and have sex without using a condom because they will be drunk. [W3 18-24 SA]

This participant notes the variety of women the men have available to them as a cause of marital infidelity; she also noted the link of men's extramarital sexual relations to the spread of HIV, which will be explored further under desirability.

Feasibility

Feasibility of marriage is often operationalized as employment opportunities or unemployment rates, as employment facilitates the formation of an independent household (see, for example, Goldscheider, Kobrin, and Waite 1986). However, young adults in Agincourt don't expect to form an independent household, thus shifting employment opportunities from an issue of feasibility to desirability, as discussed below. When first entering a union, the couple expects to live with the male's household. While the women in the focus groups did not mention this expectation directly, there were repeated mentions of going to live with their husband's family and the responsibilities of doing chores for their in-laws. For example, one participant explained, "Nowadays it doesn't matter even if no one paid lobola, if I'm in love with that boy I go by myself, [my in-laws] will see me in the morning when I'm sweeping the yard or pouring bath water." [W7 MZ 35-44]

As individuals are not focused on creating an independent household, the feasibility of marriage has instead traditionally depended on affording lobola. However, as noted above lobola is becoming less of an imperative for the transition into marriage. As one participant stated, "Nowadays we are staying with our husbands even if they didn't pay lobola, as long as

you have agreed with each other.” [W5 18-24 MZ] Thus, the women within this study saw marriage as highly feasible; the more salient issues to them were matters of desirability.

Desirability

Analysis of the data indicates that women in general and young women in particular see very few benefits to marriage. The uncertainty of the ability or willingness of men to provide financially for their families increases the desirability of the alternatives to marriage. As a result, young women discussed the importance of getting an education and being able to take care of themselves. For example, one woman discussing the importance of education for women in the area said the following:

Men are no longer responsible for their families. They forgot that they have children that need their support and there are lots of things children need on a daily basis. Women must be educated so that they can be able to get jobs. [W4 25-34 SA]

Another woman noted that, “Long ago there were some benefits [to marriage] because you were taken by a father who worked while you were at home, but nowadays you wake up and work for yourself.” [W2 35-44 MZ] High male unemployment leads to uncertainty about men’s future financial attributes, thus delaying entrance into marriage as these calculations of men’s future financial attributes increase the desirability of alternatives to marriage.

The desirability of marriage is also linked to the perceived difficulty of marriage. There was a great deal of dialogue among women in the focus group discussion about “not making it” in marriage. For example, one woman stated, “Nowadays children don’t persevere because they are telling themselves that if their marriages fail they will find another man.” [W6 18-24 MZ] The participants portrayed this attitude as a norm within their communities. One participant noted, “Its true there is no parent who promotes marriage because they know that marriage is

difficult. Some of them have been married but their marriages failed.” [W6 18-24 MZ] The perception among participants was that older women used to persevere in their marriage but now younger women will return to their parents’ homes or leave to live in public housing when faced with marital difficulties.

One of the rationales given for the change over time in marriage perseverance was a change in attitudes toward temporary labor migration and multiple partnerships. For example, one participant noted:

Older people didn’t care about whether their husbands were sending money or not, they would stay and support themselves by pounding mealies. It is too different with us women nowadays, because if he goes a month without sending money home it will be a disaster. [W1 25-34 SA]

Thus the change in perseverance may be linked to economic circumstances, specifically the shift to a cash economy. Another participant explained:

Long ago we used to go to the field to pick vegetables and come back and cook. If you are the daughter-in-law, you didn’t care whether there was meat in the fridge; you just cooked and dished up for the whole family. [W5 35-44 SA]

As rural households have become dependent on cash to survive, they have also increased their dependence on remittances from migrant workers, thus straining marriages if and when husbands fail to send money.

The women also discussed the expectation of abuse and control within marriage. They saw the likelihood of abuse increase with official marriage, and thus argued for the benefit of cohabitation over marriage. As one participant asserted, “I can say people choose not to get married mostly because men abuse women. ... It’s better to find someone to live with rather than getting married.” [W7 35-44 SA] Financial concerns also motivated the rising popularity of cohabitation over marriage, as even employed men were viewed as not providing for their families. One participant noted, “You will find that you are beaten up, your husband doesn’t

take care of his family, when he earns money he will spend it on beer.” [W6 35-44 SA] Another participant noted the benefit of financial transactions that occur while dating, stating:

It is good to not be married because you are not being controlled by someone. Anytime you want to do something, you do it. Even if you want, maybe, to have many boyfriends that will give you money by the end of the month, each and every one will give money to you. But if you are married you will only expect money from your husband. [W2 35-44 MZ]

Thus while husbands were viewed as unlikely to financially support their families, it was expected that boyfriends would provide money and gifts as an act of courtship.

In general women do not view marriage as protective from HIV, though younger women were more likely than older women to view marriage as potentially protecting women from diseases. One reason many women do not view marriage as protective from HIV is a baseline assumption that men will have difficulty being faithful and will eventually look for other girlfriends, as noted above in discussing availability of mates and the excess of women in the area. For example, one participant said:

The benefits of being married are diseases. You find that your husband is a drunkard; he spends most of his time in the taverns or shabeens. While he is there he will propose girls, sleep with them without a condom, and by so doing he will get diseases. He will come home and infect you. [W9 18-24 SA]

Another reason that marriage is not seen as protective against diseases is because women may lack the ability to use a condom within marriage. For example, one participant noted that, “Me who is not married I can make use of a condom but the one who is married will not use a condom just because she had paid a lobola.” [W8 25-34 MZ] Thus the women felt that by avoiding marriage they were able to enact greater agency over negotiating safer sexual behavior.

While the women seemed to think it likely that one would contract HIV regardless of their marital state, it was noted, particularly among Mozambican women, that when you have a

husband at least you would know where you contracted HIV and others in your community would not judge you for being HIV-positive. For example, one woman said:

If I'm not married, today I will get a man, tomorrow I will get another one, and the day after tomorrow will be another one. I will not know where I got the sickness. But if I'm married having one man, even if he goes out looking for another women, I know that when he comes back, he is coming to me. I will know that I'm getting that sickness from him. [W5 25-34 MZ]

Similarly, another participant stated:

You won't get diseases if you are married because you will have sex with your husband only. If it happens that you do get those diseases, you will know who infected you, but if you are not married you will never know because you will have many sexual partners. [W5 18-24 MZ]

Marriage therefore serves not only to reduce the uncertainty of how one contracted HIV, but also as a mechanism to reduce the social stigma of HIV/AIDS, so that women can expect more support from family and friends.

DISCUSSION

This analysis suggests that marriage has gone through a number of significant changes in the post-apartheid period. While participants perceive that marriage has become more difficult to maintain as individuals are less willing to tolerate long-distance relationships, the traditional obstacle to the formation of a marital union has lessened as lobola is no longer necessary. As lobola exchange is becoming less common and young adults do not expect to form an independent household immediately upon marriage, the analysis suggests that marriage is highly feasible within Agincourt. While the participants asserted that marriage formation had improved for women as they now had a say in whom and when they would marry, they also noted that pregnancy may be a catalyst for marriage, and one that the female's parents may insist on.

Although the quantitative data do not suggest a skewed sex ratio, it is to be expected that there is an excess of women in the area due to circular migration being more common among men. Indeed, evidence of the skewed sex ratio emerged within the focus groups as creating a non-monogamy norm for men due to the availability of single women within the area.

This analysis suggests that women in general and young women in particular see very few benefits to marriage. The participants repeatedly discussed their reluctance to marry as fueled by their expectations that their husbands would not be able to provide for their families. Thus, the women were making decisions about entering marriage based on the future economic prospects of these men. This finding lends support to Oppenheimer's Search-Theoretic Model (1988), in which future attributes and the ability to transition to a stable labor position greatly impact the decision to marry. Under this model, as found in Agincourt, a faltering economy increases the uncertainty of future prospects, thus leading to delayed marriage and decreases in the overall rate of marriage.

Although HIV/AIDS is likely one factor impacting marital rates in Agincourt, other more salient factors are socio-economic, including the inability and perceived unwillingness of men to support their families, changing attitudes towards migration and long-distance relationships, and issues of fidelity caused in part by skewed sex ratios. The finding that the skewed sex ratio impacts the desirability of marriage via its impact on norms around monogamy expands Dixon's framework from the traditional view of the sex ratio impacting only the availability of mates.

While the socio-economic situation in Agincourt is driving the declining marital rates, HIV/AIDS may actually be buffering these decreases via the impact marriage has on the social stigma of the disease. The women in this study showed a fatalism concerning acquiring HIV, but all agreed that marriage reduced the stigma thereby allowing them to receive more support from

friends and family once they became ill. The women showed less consensus around refraining from marriage as a method of protecting oneself from HIV infection; this was debated within the focus groups, particularly pertaining to condom use outside of marriage, showing that this norm may be in transition.

Very few differences were found between the participants from predominately Mozambican villages and those from predominately South African villages, suggesting either a cultural homogeny as Shangaan or that the Mozambican immigrants adapted to the rural South African marital norms. Further research is needed to untangle these two possibilities and further our understandings of the long-term impact of refugee status on family formation.

While this study provides important insights into the decision-making process surrounding marital formation within Agincourt, it is limited in scope by relying solely on female participants. Further research is needed to investigate men's decision-making process, in particular the manner in which men navigate the social stigma of HIV/AIDS in relation to the marital union.

REFERENCES

- Ansary, Sylvia J., Daniel F. Perkins and John Nelson. 2004. "Interpreting outcomes: Using Focus Groups in Evaluation Research." *Family Relations* 53(3): 310-316.
- Bhrolcháin, Máire Ní. 1992. "Age Difference Asymmetry and a Two-Sex Perspective." *European Journal of Population / Revue Européenne de Démographie* 8(1): 23-45.
- Brien, Michael J. and Lee A. Lillard. 1994. "Education, Marriage and First Conception in Malaysia." *Journal of Human Resources* 29(4): 1167-1204
- Casale, Daniela and Dorrit Posel. 2002. "The Continued Feminisation of the Labour Force in South Africa." *South African Journal of Economics* 70(1): 156-184.
- Collinson, Mark, Brent Wolff, Stephan Tollman, and Kathleen Kahn. 2006. "Trends in Internal Labour Migration from the Rural Limpopo Province, Male Risk Behavior, and Implications for the Spread of HIV/AIDS in Rural South Africa." *Journal of Ethnic and Migration Studies* 32(4): 633-548.
- Collinson, Mark, Stephen Tollman, Kathleen Kahn, and Samuel Clark. 2003. "Highly prevalent circular migration: Households, mobility, and economic status in rural South Africa." Paper prepared for Conference on African Migration in Comparative Perspective, Johannesburg, South Africa 4-7 June 2003.

Dixon, Ruth B. 1978. "Late Marriage and Non-Marriage as Demographic Responses: Are They Similar?" *Population Studies* 32(3): 449-466.

---. 1971. "Explaining Cross-Cultural Variations in Age at Marriage and Proportions Never Marrying." *Population Studies* 25(2): 215-233.

Fossett, Mark A. and K. Jill Kiecolt. 1993. "Mate Availability and Family Structure Among African Americans in U.S. Metropolitan Areas." *Journal of Marriage and Family* 55(2): 288-302.

Garenne, Michel L., Stephen M. Tollman, Mark A. Collinson and Kathleen Kahn. 2007. "Fertility Trends and Net Reproduction in Agincourt, Rural South Africa, 1992-2004." *Scandinavian Journal of Public Health* 35(Suppl 69): 68-76.

Goldscheider, Frances Kobrin and Linda J. Waite. 1986. "Sex Differences in the Entry into Marriage." *American Journal of Sociology* 92(1): 91-109.

Gómez-Olivé, Francesc Xavier, Nicole Angotti, Brian Houle, Kirsten Klipstein-Grobusch, Chodziwadziwa, Jane Menken, Jill Williams, Stephen Tollman, Samuel J. Clark. 2013. "Prevalence of HIV among those 15 and older in rural South Africa." *AIDS Care* 25(9): 1122-8. PMC3778517 Epub 2013 Jan 11.

Harwood-Lejeune, Audrey. 2001. "Rising Age at Marriage and Fertility in Southern and Eastern

Africa.” *European Journal of Population*. 17(3): 261-280.

Hosegood, Victoria, Justus Benzler, and Geoff C Solarsh. 2005. “Population mobility and household dynamics in rural South Africa: implications for demographic and health research.” *Southern African Journal of Demography* 10 (1/2): 43-68.

Hosegood, Victoria, Nuala McGrath, and Tom Moultrie. 2009. “Dispensing with Marriage: Marital and partnership trends in rural KwaZulu-Natal, South Africa 2000-2006.” *Demographic Research* 20 (13): 279-312.

Hunter, Mark. 2007. “The Changing Political Economy of Sex in South Africa: The significance of unemployment and inequalities to the scale of the AIDS pandemic.” *Social Science & Medicine* 64(3): 689-700.

Ikamari, Lawrence D.E. 2005. “The Effect of Education and the Timing of Marriage in Kenya.” *Demographic Research* 12(1): 1-28.

Jensen, Robert and Rebecca Thornton. 2003. “Early Female Marriage in the Developing World.” *Gender and Development* 11(2): 9-19.

Madhavan, Sangeetha. 2010. “Early Childbearing and Kin Connectivity in Rural South Africa.” *International Journal of Sociology of the Family* 36(2): 139-157.

- Manda, Samuel and Renate Meyer. 2005. "Age at First Marriage in Malawi: A Bayesian Multilevel Analysis Using a Discrete Time-to-Event Model." *Journal of the Royal Statistical Society*. 168(2): 439-455.
- Mensch, Barbara, Monica J. Grant and Ann K. Blanc. 2006. "The Changing Context of Sexual Initiation in Sub-Saharan Africa." *Population and Development Review* 32(4): 699-727.
- Morgan, David L. 1996. "Focus Groups." *Annual Review of Sociology* 22: 129-152.
- Morgan, David L. and Richard A. Krueger. 1993. "When to Use Focus Groups and Why." Pp. 2-19 in Successful Focus Groups: Advancing the state of the art, Sage Focus Editions, Vol. 156, edited by D. L. Morgan. Thousand Oaks, CA: Sage Publications.
- Oppenheimer, Valerie Kincade. 1988. "A Theory of Marriage Timing." *American Journal of Sociology* 94:563-91.
- Oppenheimer, Valerie Kincade, Matthijs Kalmijn, and Nelson Lim. 1997. "Men's Career Development and Marriage Timing During a Period of Rising Inequality." *Demography* 34(3): 311-330.
- Posel, Dorrit and Daniela Casale. 2009. "Sex Ratios and Racial Differences in Marriage Rates in South Africa." No 153, Working papers, Economic Research Southern Africa, <http://econpapers.repec.org/RePEc:rza:wpaper:153>.

- Posel, Dorrit, Stephanie Rudwick, and Daniela Casale. 2011. "Is marriage a dying institution in South Africa? Exploring changes in marriage in the context of ilobolo payments." *Agenda: Empowering women for gender equity* 25(1): 102-111.
- Posel, Dorrit and Stephanie Rudwick. 2013. "Changing patterns of marriage and cohabitation in South Africa." *Acta Juridica (Marriage, Land and Custom)* 169-180.
- Poston, Jr., Dudley L. 2006. "Age and Sex." Pp. 19-58 in Handbook of Population, edited by Dudley L. Poston and Michael Micklin. New York, NY: Springer Science+Business Media, LLC.
- Reniers, Georges. (2008). Marital Strategies for Regulating Exposure to HIV. *Demography*, 45(2).
- Schatz, Enid. (2005). Take your mat and go!: Rural Malawian women's strategies in the HIV/AIDS era. *Culture, Health and Sexuality*, 7(5), 479-492.
- South, Scott J. and Katherine Trent. 2010. "Imbalanced Sex Ratios, Men's Sexual Behavior, and Risk of Sexually Transmitted Infection in China." *Journal of Health and Social Behavior* 51(4): 376-390.
- . 1988. "Sex Ratios and Women's Roles: A Cross-National Analysis." *American Journal of*

Sociology 93(5): 1096-1115.

- Tabutin, Dominique and Bruno Schoumaker. 2004. "The Demography of Sub-Saharan Africa from the 1950s to the 2000s: A Survey of Changes and a Statistical Assessment." *Population* 59(3/4): 457-519, 522-55.
- Trent, Katherine and Scott J. South. 2003. "Spousal Alternatives and Marital Relations." *Journal of Family Issues* 24(6): 787-810.
- Watkins, S. C. (2004). Navigating the AIDS epidemic in rural Malawi. *Population and Development Review*, 30(4), 673-705.
- Williams, Brian G. and Eleanor Gouws. 2001. "The Epidemiology of Human Immunodeficiency Virus in South Africa." *Philosophical Transactions: Biological Sciences* 356(1411): 1077-1086.
- Zwang, Julien and Michel Garenne. 2008. "Social Context of Premarital Fertility in Rural South Africa." *African Journal of Reproductive Health/ La Revue Africaine de la Santé Reproductive* 12(2): 98-110.
- Zwang, Julien, Michel Garenne, Kathleen Kahn, Mark Collinson and Stephen M. Tollman. 2007. "Trends in Mortality from Pulmonary Tuberculosis and HIV/AIDS Co-Infection in Rural South Africa (Agincourt)." *Transactions of the Royal Society of Tropical Medicine and*

Hygiene 101: 893-8.

Chapter 4: Contraception, Abortion, and First Births in Agincourt, South Africa

South Africa has the lowest fertility rates of any country in sub-Saharan Africa and is well into its fertility transition. However, the country, particularly in rural areas, faces persistently high teenage and premarital childbearing rates. Relatively early childbirth has lasting consequences for young mothers and their children, such as poor nutritional outcomes and incomplete schooling. Furthermore, high levels of premarital fertility signal high rates of unprotected sexual activity among young people, a high risk behavior for the spread of HIV/AIDS.

Previous research indicates many young South Africans engage in sexual risk-taking behaviors, including early sexual debut, unprotected sexual activity, low levels of condom and contraceptive use, and concurrent partners (Wood and Jewkes 2006). Research also shows that young women in South Africa face several barriers when seeking family planning services, including stigmatization of adolescent sexual activity and imbalanced power relations with their male partners.

South Africa enacted a national family planning program in 1994. Prior to this, there were no comprehensive reproductive health care policies in South Africa; women's health services consisted primarily of maternal and child health services with an emphasis on contraception and limiting population growth, particularly among blacks (Cooper et al. 2004). Long-lasting injectables were strongly promoted for black women, especially in rural areas, while birth control pills (a more reversible method) were promoted for white women (Cooper et al. 2004).

At the onset of the national family planning program, abortion was only permitted on extremely restricted grounds (Garenne et al. 2001). However, within two years the 1996 Choice on Termination of Pregnancy Act legalized abortion on request up to 12 weeks gestation, and up to 20 weeks gestation in cases of incest, rape, socio-economic hardship, and for reasons related to the health of the pregnant women and the fetus. Abortion past 20 weeks may only be performed to save the life of the mother. Surgical termination of pregnancy (i.e. mechanical uterine evacuation) may only be performed by a doctor or trained midwife in facilities designated for that purpose by the Provincial Department of Health, while medical (i.e. non-surgical) termination of pregnancy may be legally performed anywhere.

Medical termination of pregnancy in South Africa is commonly performed using misoprostol tablets. This medication is relatively inexpensive and widely stocked in pharmacies for the treatment of peptic ulcers, meaning these tablets are accessible to the general public without medical supervision (Jewkes et al. 2005). Five years after the legalization of abortion, Garenne et al. (2001) found that abortion in Agincourt was usually self-administered as a home remedy, as abortion services were not readily available in rural areas. In a series of focus group discussions in both Agincourt and Soweto, Kaufman, de Wet, and Stadler (2001) found that teenage mothers did not discuss abortion in terms of religious beliefs, as abortion was viewed more as an act of desperation when facing an unintended pregnancy as opposed to being viewed primarily as a moral issue. However, they found that religious beliefs did play a role in framing abortion in focus group discussions with both young men and the parents of teenage mothers. Further research into the understanding and practice of abortion in South Africa is quite limited.

The South African Schools Act (1996) forbade discrimination against pregnant students. Kaufman, de Wat, and Stadler (2001) suggest that the ability to return to school after a first birth,

an ability the Act legally guaranteed, would lead young mothers to delay a second birth. Zwang and Garenne (2008) found that many young mothers in Agincourt return to school although they feel that they carry a stigma. Similarly, in Richter's (2005) qualitative research in Bushbuckridge, participants discussed the stigma attached to teenage childbearing; teenage mothers were upset when they found out they were pregnant, their parents were upset with them, and they felt they were a disgrace in the community.

Persistently high premarital fertility rates have been well documented in Agincourt (Garenne, Tollman, and Kahn 2000; Garenne et al. 2001; Camlin, Garenne, and Moultrie 2004; Richter 2005, Williams et al. 2013). A qualitative study by Richter (2005) in Bushbuckridge, Mpumalanga Province, found a general lack of knowledge of both contraception and conception; participants noted poor sexual education and blamed their parents for not teaching them about sex. Additional explanations for the persistently high premarital fertility rates include: lack of access to healthcare services, peer pressure, sexual coercion, and an increasing age at first marriage combined with early sexual debut (i.e. a widening window of risk for premarital births) (Garenne et al. 2001).

High premarital fertility rates reflect a lack of contraception use among sexually active adolescents. Previous research studies have found several reasons why adolescents in rural South Africa, especially non-mothers, rarely use contraception: stigmatization of adolescents accessing family planning programs, a lack of communication from families and teachers (in line with Richter's findings noted above), perceived lack of risk, and gendered power dynamics in which young women feel they cannot refuse sexual advances or insist on condom usage (Zwang and Garenne 2001, Macleod and Tracey 2010). All of these reasons however, deny agency to the young women of rural South Africa, removing decision-making processes from the young

women themselves. For example, they do not take into account adverse physical reactions such as irregular menstruation, which may lead to a rational decision to terminate use of this type of contraception; within the structural confines faced by these young women, it may then not be possible to switch to an alternative form of contraception.

Schatz (2005) argued that much of the AIDS literature presents women as without any control of their sexual environments and in need of assistance to improve their autonomy. Schatz's study utilizes qualitative data from Malawi to identify sites where women enact agency by creating and deploying HIV prevention strategies that are more suitable for within their contextual situation. Similarly, the analysis of this study moves beyond traditional approaches to understanding low contraceptive use among adolescents by investigating the tension around exercising agency within certain structural confinements. In doing so, this study reframes the conversation around adolescent contraceptive use from one based on women's vulnerability to one based on women's ability to exercise agency within structural constraints.

Locating women's agency in regards to contraceptive use also entails examining the constraints within which women's agency operates. Previous research has found that fears of contraception causing future infertility serve as a barrier to family planning among young women (Preston-Whyte et al. 1990; Wood and Jewkes 2006). When adolescents do seek family planning services, they often find they are unwelcome at the health clinics (Wood, Maepa, and Jewkes 1997; Kaufman, de Wet, Stadler 2001; Coovadia et al. 2009). Neglect, rudeness, and psychological assault by nurses have been widely reported, especially within sexual and reproductive health services (Coovadia et al. 2009). Wood, Maepa, and Jewkes (1997) found that nurses felt that giving teenagers "moral guidance" was an official part of their job. Nurses attempted to stigmatize adolescent sexual activity and lectured the young women on the dangers of sexual

activity when the women came to the clinic seeking contraception (Wood and Jewkes 2006). This attitude is likely rooted in the development of nurse training in early missionary days, where nurses were taught to be moralizing influences along with providing medical care (Coovadia et al. 2009).

This study uses focus group discussions to investigate attitudes around contraception, family planning, abortion, and HIV testing in Agincourt, South Africa. Of particular interest is furthering our understanding of the persistence of premarital and teenage childbearing throughout the area. The analysis is structured through a focus on the tension between women's agency and structural constraints surrounding family planning and reproductive health.

SETTING AND METHODS

This study is nested within the Agincourt Health and Demographic Surveillance System (AHDSS) site in the Ehlanzeni District in Mpumalanga Province, northeastern South Africa. The AHDSS has collected demographic information on a population of approximately 100,000 individuals in 28 villages since 1992. One third of this population is former Mozambican refugees, who self-settled in the area after fleeing civil war.

During the apartheid period the Agincourt area was part of the Gazankulu homeland and was thus particularly economically disadvantaged (Garenne et al. 2007; Coovadia et al. 2009). Due to a dry climate and poor soil, agriculture is poorly developed in the area; the local economy is based on remittances from migrant workers, pensions, and tourism. The majority of economically active adult men are migrant workers; 55% of men aged 30-49 are migrant workers and live at least part of the year elsewhere (Zwang & Garenne 2008). Since the end of apartheid female labor migration has increased; by 2011 about 25% of women 15-39 lived away from the

area for at least 6 months of the year. The conservative Zionist Christian Church (ZCC) is influential throughout Agincourt (Zwang and Garenne 2008).

Agincourt is nearing the end of the fertility transition. The total fertility rate (TFR), representing the average number of children born per woman, dropped from 3.7 in 1993 to a low of 2.3 in 2002 and has hovered around 2.5 since then (Williams et al. 2013); this is similar to fertility declines across rural South Africa. Garenne et al. (2001) found a bimodal fertility pattern suggesting many women give birth at a relatively early age prior to marriage and then wait several years before bearing a second child. As noted above, persistently high premarital fertility rates have been well documented in Agincourt (Garenne, Tollman, and Kahn 2000; Garenne et al. 2001; Camlin, Garenne, and Moultrie 2004; Richter 2005, Williams et al. 2013).

The focus group discussions were conducted during May 2013. Focus group discussions are appropriate methodology for this study, as the data they produce includes insight into complex behavior and motivation (Morgan 1996). These discussions serve to bring forth salient issues common to many rural black South Africans. Ethical clearance was given by both the Human Subject Division, University of Washington, Seattle, United States and the Committee for the Protection of Human Subjects, University of Witwatersrand, Johannesburg South Africa. Two local fieldworkers were hired to assist with recruitment, facilitation, transcription and translation, as the focus groups were held in the local language, Shangaan. Focus group participants gave written authorization to the informed consent, which was read to them in full by one of the fieldworkers at the start of each focus group discussion. The focus groups were structured around the topics of: education, work, family planning, unplanned pregnancy, and HIV/AIDS.

Sixty-three (63) total women participated in six separate focus groups. Participants were recruited from six villages, Khaya Lami, Kildare C, Newington B, Newington C, Rholane, and Somerset. Subjects were recruited while collecting water from community water taps and walking throughout the village streets. If an interested but ineligible (due to age) individual was recruited, they would be asked to recommend someone who was eligible; thus we would occasionally visit people's homes or workplaces during the recruitment process. The fieldworkers kept notes throughout recruitment and at the end of each recruitment day would write out a thorough description of their interactions and procedures. On the day prior to a focus group discussion, all the participants recruited for that discussion would be called via telephone to confirm their attendance.

As noted above, one third of the population within Agincourt is of Mozambican origin. As shown in Table 10, chapter three, residents in three of these villages predominately identify as Mozambican (according to AHDSS census data), while residents in the other three villages predominately identify as South African. Although we did not recruit based on an individuals' nationality, this recruitment process allows for a comparison of social norms surrounding family planning between predominately South African and Mozambican villages within Agincourt. The participants were further divided into separate focus groups based on age, 18-24, 25-34, and 35-44, for a total of six focus groups ranging from eight to thirteen participants.

All of the focus groups were held within centrally located daycare centers or schools within the villages; they were held in the late afternoons after the children had left for the day, school had ended, and individuals had finished work. As participants arrived the fieldworkers and I would greet them; they would talk amongst themselves until we began. To start each focus group one of the fieldworkers would read over the consent forms and answer any questions.

After signatures on the consent forms had been collected, we would begin audio-recording the discussions. One of the fieldworkers would moderate the focus group discussion, in Shangaan, while the other fieldworker and I took observational notes. All of the focus group discussions were quite lively with the participants eager to participate and voice their opinions and experiences. The participants would often disagree with each other and ask the other participants to explain their points of view, while the facilitator guided the topics of discussion. The focus group discussions last from 90 to 120 minutes. After at least two of the focus groups, the participants asked if we would return to conduct further discussions; many of the participants thanks us, telling us how much they enjoyed the experiences, sharing their opinions, and learning new information. At the end of each focus group we distributed cold beverages, rolls of bread, and fresh fruit; this is the standard incentive procedure used by the AHDSS during focus group discussions. We also distributed two pamphlets to each participant, one that addressed HIV testing and treatment options and one that addressed options when facing unplanned pregnancy.

The audio-recordings of each focus group discussions were transcribed and translated by the fieldworkers. Any translation issues that emerged would be discussed and occasionally AHDSS staff would be consulted to ensure accurate translation. The transcriptions were then typed and loaded into Atlas.ti where they were coded in an iterative process using selective coding. A priori codes included: ideal timing for first births, modern contraception, traditional contraception, unplanned pregnancy and abortion, and timing of HIV tests. Emergent codes included: contraception and irregular menstruation, abortion and infertility, abortion as sin, and HIV and caregivers. Field notes were consulted to ensure accurate interpretations of the participant interactions. Analytic memos were developed on core themes and used to synthesize findings into a summary analysis.

FINDINGS

The focus group participants discussed attitudes and norms around: first births, unplanned pregnancy, contraception, abortion, and HIV/AIDS. While the consensus across all of the groups was that early first births are common, they were also viewed negatively. It was noted that an early first birth interferes with school and could “destroy” a young woman’s future. Younger women were more likely than the older women to focus on early births interrupting schooling and future work prospects, often reflecting on their own experiences. For example, one participant stated, “Like myself, I got a child while I was 14 years and I’m not willing that my child could be the same as me. I didn’t complete my school, and it has disturbed me a lot.” [W5 25-34 MZ]

However, the women discussed the difficulty of balancing school and young motherhood, indicating that young mothers did frequently return to school after childbirth. One woman described the challenges of young mothers returning to school by stating:

I don’t think it is good to have a child when you are still young because you will be still at school and you will have to leave your child at home and your child will not be treated in a proper way. By the time you pass grade 12 you will want to go to tertiary, while your child is still young, and you have to leave them at home. The child will never learn to love you as their mother because you didn’t have enough time to bond with your child and the child needs their mother’s love. [W2 18-24 MZ]

As noted in the above quotation, it was expected that the children of young mothers would be left at home with their grandparents as caretakers while the mothers returned to school and/or work. The two focus groups comprised of women aged 35-44 years framed their discussion of teenage mothers around the suffering the situation brings to grandparents. One participant stated that, “As a parent it will be difficult to you because you have to carry a burden of being a grandmother and look after your grandchild.” [W4 35-44 SA] In a different focus group a

participant explained that the caretaking would also present a financial burden, stating, “[I]t is difficult because if she is going to school she must stay... If the parent was cleaning somewhere, she must leave it to stay with her grandchild and you find that there is nothing to eat at home. It is difficult. [W2 35-44 MZ] Although the older women were concerned about the burden teenage motherhood created for grandmothers, they still felt it was necessary for the young women to finish schooling after an early first birth.

Early first births were viewed as financial burdens, despite child support grants. Started in 1998, child support grants were designed to assist poor families with childcare and school fees. The women from Mozambican villages discussed the need for proper identity documents proving citizenship or permanent resident status in order to obtain the child support grant. One woman explained:

There are no benefits in getting a child while still young, even if there are child support grants. And it is not enough nowadays because we are using pampers, not napkins, and they are expensive. Sometimes it might happen that you don’t even have an identity document, so how are you going to register your child support grant? Because of that you will suffer. [W6 18-24 MZ]

There was agreement across all of the focus groups that it is ideal to wait and have a first birth once a woman is mature and in a position to support the child, whether through her own work or through her husband’s employment. One participant noted that, “I can plan to have a child if I’m married and my husband is working.” [W4 18-24 SA] In the same focus group, another participant stated that, “I will plan to have a first child when I’m working because I will be able to maintain him or her.” [W1 18-24 SA] The majority of participants stressed finding a partner before becoming pregnant; one participant stated, “If I can find a man who is working I can plan to have a child.” [W11 18-24 SA] The importance was placed on having a partner and not on having a formalized marriage. As one participant explained:

Even if it is not white wedding as long as the girl has told her parents that she found someone who wants to marry her and the marriage is introduced to both families. I don't think it will be a problem if the girl can fall pregnant because she will know who is responsible for her pregnancy. [W7 35-44 SA]

Given the lack of male employment opportunities, it was not surprising to hear many of the women focus on the need for themselves to be employed before their first birth. For example, one participant stated, "Even if I'm not married, when I'm working I can [have a child]." [W6 35-44 MZ] However, the importance of bearing children once married was also discussed; one participant stated, "She must bear children for her husband to show him that she is a woman." [W5 35-44 SA] Given that all focus groups stressed the importance of delaying childbearing until women are partnered and working, investigating these norms did not help explain the persistent trend of early first births. To analyze this issue further, norms and behaviors surrounding contraceptive use were also analyzed.

Younger women were more likely to suggest that females should seek contraception both prior to dating and once they begin menstruation; they were likely to cite pregnancy prevention as the primary rationale for using contraception. One of the younger participants explained how her reasoning was based on her own experience, stating, "16 years is too late, because I fell pregnant when I was 14 years. It's better to start using contraceptives when you have started seeing your periods, because if you have started to menstruate you will start dating." [W1 18-24 SA] Older women were more likely to suggest that females should seek contraception at sexual debut, citing HIV prevention as an important rationale. For example, one woman noted:

It is good for a young woman to start using family planning if she has already started to have sex, because nowadays there are diseases. When it comes to protection or family planning she needs to know what kind of family planning she can use in order to prevent diseases. [W2 35-44 SA]

As shown in this quote, the participants tended to link family planning and HIV prevention.

Women in all of the focus groups discussed the importance of females taking initiative with family planning; contraception was viewed as a locus of female agency, albeit with numerous institutional constraints. For example, one participant emphasized:

If you have started dating you should go for family planning, because the boy is not going to tell you to go for family planning. As a girl you have to think by yourself if you don't want to fall pregnant. [W6 25-34 SA]

Refusing sexual activity was seen as one option, as stated by a younger participant, "If he doesn't want to use a condom you mustn't have sex with him." [W1 18-24 SA] When engaging in sexual activity, the women stressed the need to remain aware of their male partner's actions, as described in the following conversation:

W9: If you are busy having sex you need to concentrate on what you are doing so that you can feel if the condom has burst or not. As a girl you need to differentiate between sex with condom and sex without condom. You must not only enjoy sex without feeling the difference.

W11: If you are having sex you don't have to enjoy it only you must also concentrate so that you can feel it if the condom has burst.

W9: When you have sex you must be active.

W1: If you have sex you need to be active, because you have decided to use a condom for your own safety you must watch what your husband or boyfriend is doing. [18-24 SA]

Not only were the women discussing the need to be proactive, but also how this need arises from an inability to trust their male partners.

When discussing where contraceptive methods were obtained, women were just as likely to mention visiting clinics as home methods and traditional healers. Traditional methods of contraception were discussed in-depth; younger women in particular were aware of the riskier

home methods, such as drinking manganese.³ Many of the women discussed how their mothers and grandmothers taught them these methods. For example, one participant stated, “I have been told by my grandmother that you can use ash. You need to use it early in the morning after sex before you sweep the yard.” [W11 25-34 SA] Traditional healers were also seen as being able to prevent pregnancy, as explained by this participant, “There’s also a traditional contraceptive when you are menstruating, they take the [menstrual] pads that you are using and put a muthi [herbal medicine] on it, and dig a hole where they keep it.” [W10 18-24 MZ] This is believed to prevent conception as long as the menstrual pad remains buried.

In discussing traditional methods of contraception, similar to the above-noted conversations surrounding modern methods, the participants emphasized female agency even to the extent of hiding methods from their male partners. For example, one woman described a traditional method as follows:

Other people are using warm water to prevent pregnancy. Every time after sex you just drink a cup of warm water. You must make sure that there is water in your room because immediately after you finish having sex you must drink it. It might happen that your partner asks you why you always drink water when you finish having sex. You need to tell him that you are thirsty. [W6 18-24 MZ]

Regardless of which type of contraceptive method the women were discussing, the emphasis was placed on remaining in control; the females, and not the males, were seen as the source of contraceptive knowledge and decision-making.

In discussing reasons women may switch between contraceptive methods or stop using them altogether, the focus groups of 18-24 year-old women discussed weight gain, feeling ill, and concerns about infertility. Adverse reactions to injectable contraception were noted multiple times, such as by this participant, “Like myself, when I use injectables I will always have lower

³ Informational pamphlets concerning the safety of traditional methods of contraception have been prepared, based on these research findings, and distributed to the women within Agincourt by the AHDSS office.

abdominal pains so the best contraceptive for me is to use a condom.” [W1 18-24 SA] Another participant noted, “Let’s take the person is using a Depo-Provera, an injectable that lasts for three months, and it makes her to have a continuous menstruation. She is going to change to another type.” [W5 18-24 SA] The young women from predominately Mozambican villages were equally knowledgeable about modern methods of contraception and adverse reactions to injectables. For example, one participant explained. “There are two types of injectables: Nur-isterate, it lasts for two months, and Depo-Provera, it last for three months. Other people, if they use Nur-isterate they have continuous menstruation.” [W5 18-24 MZ]

The women in the two focus groups comprised of women aged 35-44 were the only ones to discuss a decreased sex drive as a deterrent from using contraception. For example, one participant stated:

I had an opinion on why someone would change the type of contraception she is using. There are some types of contraception that kill your feelings. Even if your husband touches you, you are feeling nothing. So if you can come across this situation you need to change the type of contraception you are using to another that can makes you feel when your husband touches you. [W6 35-44 SA]

All of the focus groups discussed irregular menstruation as a common reason to switch or stop using contraceptive methods, particularly in regards to injectable contraception as noted above.

Participants also discussed fears of contraceptive-caused infertility as a barrier to contraceptive use. One participant warned, “Family planning is not good when you are still young because you might end up not conceiving.” [W11 18-24 SA] Fears of infertility also surrounded traditional methods of contraception. For example, one participant explained:

If you use traditional contraceptives, the one of taking a pad you are using when you are menstruating and put some muthi [herbal medicine] on it, digging a hole, and putting it in there. If the traditional healer who did it for you dies and they didn’t show you where they put, it you won’t be able to have children. [W2 18-24 MZ]

Furthermore, traditional methods of contraception were also discussed in regards to their unreliability; one woman stated, “If you use traditional contraceptives you are at a higher risk because you don’t know how your reproductive system works and you don’t even know how strong your husband’s sperm are.” [W9 18-24 SA] In both of the focus groups composed of women aged 18-24, a few of the participants covered their mouths with their hands and giggled while the other women explained traditional methods of contraception, indicating their disbelief. This reaction did not occur among any of the participants in the other focus groups.

While, as noted above, participants were quite knowledgeable regarding multiple contraceptive options, the younger groups of women felt that women in general do not plan their pregnancies. It was further noted that women may plan for later births but that the first birth was generally unplanned. One potential cause was the apparent lack of parental communication regarding initiation of contraception. One woman attributed her own early first birth to this, stating:

I fell pregnant at an early age, but I was using some contraceptives. Sometimes I was scared to go to the clinic because I was doing it without permission from my mother. I was also scared to tell her that I have started seeing my periods... Because of being scared to tell my mother, I had a child who is now 8 years old because I fell pregnant at the age of 15. [W6 18-24 MZ]

Lack of parental communication and fear of her mother’s disapproval led to this woman’s sporadic use of contraception, which in turn led to an early first birth.

In all of the focus groups, participants stated that unplanned pregnancies are common; younger women and Mozambican women in particular were likely to discuss this. One participant stated that, “99% of women don’t plan [first births] and 1% do plan.” [W3 18-24 MZ] Abortion as an option when facing unplanned pregnancy was also noted in all of the focus groups. The reasons a woman would seek to obtain an abortion differed significantly by age

group. The 18-24 year old participants cited pride, fear of telling their parents, and the desire to finish school as the reasons a woman would seek an abortion. The older women were more likely to note socioeconomic challenges and infidelity as the reasons a woman would seek an abortion.

Older women and women from predominately South Africa villages were significantly more likely to say that abortion was justifiable under certain circumstances. For example, one woman stated, “if you committed adultery while you are married and scared that your husband will find out there is no option other than terminating the pregnancy.” [W7 35-44 SA] Women from predominately Mozambican villages were more likely to view abortion as a sin.

All of the participants, and older women in particular, viewed abortion as dangerous. Some of the participants saw abortion as dangerous for religious reasons. For example, one woman stated, “It is dangerous to terminate the pregnancy as it might happen that God will punish you. Instead of the baby dying, you will die. I will never allow my daughter to have an abortion. She has to give birth.” [W5 35-44 SA] Other women explained that in spite of religious reasons, abortion was sometimes still justifiable. One woman explained:

She can think it is a sin, but the situation forced her to terminate... It might happen that I find I am pregnant meanwhile I am ill. It could be impossible to stay with the pregnancy. Maybe she is a child, still young, and she gets pregnant and she is not having any help. It is possible she can terminate the pregnancy because it is difficult to stay with that pregnancy because it cannot take her anywhere.
[W2 35-44 MZ]

In a few of the focus groups, heated discussion erupted on the subject of abortion, as the participants held a wide-range of opinions on the matter. These tensions centered on viewing abortion as a sin versus viewing abortion as unavoidable in some circumstances.

As with contraception, fears of future infertility also arose while discussing abortion. One of the younger women stated, “But there is this thing of going to the clinic and terminating the

pregnancy. Later when you get married, your husband will demand a child and you will fail to give him children.” [W3 18-24 SA] The fear of abortion damaging future fertility was also discussed by the older participants; one woman said:

When I fall pregnant I will terminate the pregnancy, but there will be a time where I will find a man of my dreams who will marry me only to find that I can no longer have children. It happens in life and there a lot of issues like that. I will keep on crying and say “if” and that “if” will be useless. [W4 35-44 SA]

Participants in all of the focus groups agreed that abortion was a topic of gossip and that the community would be angry with a woman for obtaining an abortion. Women feared negative repercussions from the community, as one woman explained:

The community and the Induna [community leader] will become angry with you, sometimes they can beat you or expel you from the community as they will think that you will teach young girls who will want to get married and give birth in the future. [W1 35-44 SA]

Participants also viewed this sort of condemnation coming from the nurses at the local clinic.

One woman explained the difficulty in obtaining an abortion from a clinic as follows:

The nurse who is responsible for doing TOP [termination of pregnancy], he is no longer willing to do it but it’s his profession. He has no choice; really, he is no longer interested in even giving you the pill that they use to clean the womb. He will say they are finished meanwhile they [the pregnancy] are still there. He will even ask you why you didn’t go for family planning in order to prevent pregnancy. I once came across a clinic sister who was giving health talks and said that you can do TOP as you wish, but you need to know that you are damaging yourself. She continued saying that the machine used to clean the womb damages something in your womb because when somebody is busy doing TOP you will hear her crying as if she is giving birth. [W1 35-44 SA]

Thus the attitudes of the nurses discouraged women from seeking abortion.

While the participants of this study were wary of visiting clinics for abortions, they did view the clinics favorably as sources of HIV testing and treatment. The participants in all of the focus groups stressed the need to get regular HIV tests due to the likelihood of unfaithful sexual partners. For example, one participant stated, “It is important to get tested for HIV, because

while you might know that you are a person who doesn't sleep around meanwhile your partner sleeps around." [W9 25-34 SA] Suspecting, or even expecting, your partner to be unfaithful occurred regardless of marital status; another participant noted, "[If] you have a husband or you are married, maybe you don't trust him, maybe he is cheating on you, even if you are healthy, it makes you to go and test in order to know your status." [W11 25-34 MZ] Additionally, participants in all of the focus groups noted the necessity of being tested after participating in unprotected sexual intercourse. One woman explained:

[She should get tested when] she started dating and when she has started to have sex, even is she is 12, 15, 19 or 20 years as long as she knows that she has started to have sex and she is not using a condom. [W1 35-44 SA]

The participants all stressed that a person's age did not matter regarding getting tested for HIV; sexual activity was discussed as the primary reason to seek HIV testing.

Participants were also quick to stress that women need to be tested even if they are not sexually active, because they are vulnerable in their role serving as caregivers for family members who may be infected. For example, one of the women explained:

And even if you are not doing mats [engaging in sexual activity] there are others that you find are sick or injured, you haven't got time to go and get gloves. You find yourself holding her meanwhile you are also injured, you can also get infected by that way, by that virus. [W7 35-44 MZ]

The women in both focus groups of participants aged 18-24 felt it was important to get tested in order to protect their families. For example, one participant explained:

It is good to do an HIV test at an early stage because you will be able to protect those who are close to you. If you tested in time it will help your family members because when you become sick, even if you are not bed-ridden, when you are unable to bathe yourself they can bathe you. But if you didn't disclose your status to your family it might happen that the person who bathes you has sores and you are also having sores. When they bathe you, she might get infected because the fluids that come out of your sores might come to her own sores. If you have tested at an early stage you are able to confide in your family. They will know what to

do when you become sick. In that way you have protected your family, your husband, and also your children. [W8 18-24 MZ]

In all of the focus groups, the need to know one's status was emphasized repeatedly.

DISCUSSION

As previously discussed, research studies on adolescent contraceptive use in rural South Africa have largely denied agency to young women by focusing on factors such as gendered power dynamics, lack of information, and stigmatization of accessing family planning services. By reframing the conversation beyond acknowledging the barriers young women face in accessing contraception to investigating the complex decision-making that influences contraceptive choice allows for researchers to broaden their understanding of family planning among adolescents and how agency operates for these young women within the institutional confines of rural South African society.

Within these confines, women showed agency in utilizing contraception: taking responsibility for contraceptive use, exhibiting knowledge about a variety of methods (both traditional and modern), providing biological explanations for switching/ terminating methods (e.g. irregular menstruation, aches and pains), and discussing how young women need to figure it out as their parents will not talk to them about it. The women also discussed several strategies exhibiting the use of agency: refusing sexual activity if the male partner refuses to use a condom, remaining aware during sexual activity in case the condom breaks or the man removes the condom, and hiding contraception from one's partner.

This study found many locations of agency for young women in rural South Africa. The participants spoke of decision-making processes in which women are acting in what they believe to be in their best interests, although often in the presence of faulty or incomplete information

(particularly in regards to ineffective traditional methods of birth control such as drinking a glass of warm water after sexual activity). The decision-making surrounding contraceptive use of sexually active young women consists of a series of decision junctures at which women must assign values to certain factors and then select their behavior on the basis of those values. Young women must weigh the costs and benefits of contraception and of pregnancy, while also taking into account the chances of actually becoming pregnant along with the costs and benefits of abortion. In calculating the costs and benefits of contraception, the women in this study discussed: structural factors such as barriers to obtaining contraception, the social costs of acknowledging sexual activity (especially high costs for younger women), and biological factors such as the impact of contraception on menstrual cycles. Contrary to the findings of Preston-Whyte et al. (1990) the participants in this study do view their fertility as within their control. Although the women in the study discussed the costs of pregnancy, particularly as an obstacle to completing schooling, they also spoke to the struggle to consistently use contraception. The participants, of all ages, were firm and unanimous that there were no benefits to early childbearing.

Participants in all of the focus groups were quite knowledgeable about both modern and traditional contraceptive methods. Traditional methods, which several of the women acknowledged are less reliable, are often easier to access than modern methods which require regular clinic visits. Thus the risk of traditional methods of birth control may at times outweigh the benefit of efficacy of modern contraception. Furthermore, the women viewed contraception as within their own realm of decision-making and action (as opposed to within the realm of their male partners). Similarly, although the participants did not feel they could control if their partner

was unfaithful, they found agency in the ability to seek HIV testing; getting tested and knowing your status are important forms of agency within these constraints.

The findings presented here support the bimodal fertility pattern found by Garenne et al. (2001), reflecting a lack of contraception prior to first birth, a low prevalence of abortion, and high contraceptive prevalence following first birth. This study found that stigmatization of adolescent sexuality, fear of parental disapproval, lack of communication from parents regarding contraception, and disapproval from nurses all created barriers to contraceptive use that were difficult for young women to overcome prior to first birth. It is possible that for those young women who had an early first birth, the process forced them to face the possible disapproval from their parents and their community, and introduced them into the reproductive healthcare system, thus reducing the costs of future contraceptive use.

REFERENCES

- Bongaarts, John and John Casterline. 2012. "Fertility Transition: Is sub-Saharan Africa Different?" *Population and Development Review* 38(Supplement): 153-168.
- Caldwell, John C., I. O. Orubuloye, and Pat Caldwell. 1992. "Fertility Decline in Africa: A New Type of Transition?" *Population and Development Review* 18(2): 211-242.
- Camlin, Carol S, Michel Garenne, and Tom A. Moultrie. 2004. "Fertility Trend and Pattern in a Rural Area of South Africa in the Context of HIV/AIDS." *African Journal of Reproductive Health/ La Revue Africaine de la Santé Reproductive* 8(2): 38-54.
- Cooper, Diane, Chelsea Morroni, Phyllis Orner, Jennifer Moodley, Jane Harries, Lee Cullingworth, Margaret Hoffman. 2004. "Ten Years of Democracy in South Africa: Documenting Transformation in Reproductive Health Policy and Status." *Reproductive Health Matters* 12(24): 70-85.
- Coovadia, Hoosen, Rachel Jewkes, Peter Barron, David Sanders, and Diane McIntyre. 2009. "The health and health system of South Africa: Historical roots of current public health challenges." *The Lancet* 374(9692): 817-834.
- Garenne, Michel, Stephen Tollman, and Kathleen Kahn. 2000. "Premarital Fertility in Rural South Africa: A Challenge to Existing Population Policy." *Studies in Family Planning* 31(1): 47-54.

Garenne, Michel, Stephen Tollman, Kathleen Kahn, Terri Collins, and Shirley Ngwenya. 2001.

“Understanding Marital and Premarital Fertility in Rural South Africa.” *Journal of Southern African Studies* 27(2): 277-290.

Jewkes, Rachel K., Tebogo Gumedde, Margaret S. Westaway, Kim Dickson, Heather Brown,

Helen Rees. 2005. “Why are women still aborting outside designated facilities in metropolitan South Africa?” *BJOG: an International Journal of Obstetrics and Gynaecology* 112: 1236-1242.

Kaufman, Carol E., Thea de Wet, and Jonathan Stadler. 2001. “Adolescent Pregnancy and

Parenthood in South Africa.” *Studies in Family Planning* 32(2): 147-160.

Macleod, Catriona Ida and Tiffany Tracey. 2010. “A Decade Later: Follow-up review of South

African research on the consequences of and contributory factors in teen-aged pregnancy.” *South African Journal of Psychology* 40(1): 18-31.

Madhavan, Sangeetha. 2010. “Early Childbearing and Kin Connectivity in Rural South Africa.”

International Journal of Sociology of the Family 36(2): 139-157.

Morgan, David L. 1996. “Focus Groups.” *Annual Review of Sociology* 22: 129-152.

Preston-Whyte, Eleanor, Maria Zondi, Gladys Mavundla, and Hilda Gumedde. 1990. “Teenage

pregnancy, whose problem? Realities and prospects for action in KwaZulu/Natal.”
Southern African Journal of Demography 3(1): 11-20.

Richter, MS. 2005. “Perceptions of Rural Teenagers on Teenage Pregnancy.” *Health SA
 Gesondheid* 10(2): 61-69.

Schatz, Enid. 2005. “‘Take your mat and go!’: Rural Malawian women’s strategies in the
 HIV/AIDS era.” *Culture, Health & Sexuality* 7(5): 479-492.

Williams, Jill, Latifat Ibisomi, Benn Sartorius, Kathleen Kahn, Mark Collinson, Stephen
 Tollman, and Michel Garenne. 2013. “Convergence in Fertility of South Africans and
 Mozambicans in Rural South Africa, 1993-2009.” *Global Health Action* 6:
 10.3402/gha.v6i0.19236.

Wood, Kate and Rachel Jewkes. 2006. “Blood Blockages and Scolding Nurses: Barriers to
 Adolescent Contraceptive Use in South Africa.” *Health Matters* 14(27): 109-118.

Wood, Katherine, Joyce Maepa, and Rachel Jewkes. 1997. *Adolescent sex and contraceptive
 experiences: Perspectives of teenagers and clinic nurses in the Northern Province*.
 CERSA.

Zwang, Julien and Michel Garenne. 2008. “Social context of premarital fertility in rural South
 Africa.” *African Journal of Reproductive Health* 12(2): 98-110.

Chapter 5: Conclusion

This dissertation examines the potential relationships between the HIV/AIDS epidemic in southern Africa and family formation processes, focusing on the experiences of African women. The first study investigates three potential mechanisms linking early age at first marriage to elevated risk of HIV infection in southern Africa; the dissertation then narrows in to analyze the decision-making and norms around the transition to marriage, contraceptive use, and first births in Agincourt, South Africa. Throughout the qualitative analysis, this study investigates how women locate and enact agency within the constitutional confines of rural South Africa in navigating these complex decision-making processes.

Chapter two examines the potential mechanisms linking early age at first marriage to elevated risk of HIV infection; this analysis finds support for the knowledge mechanism (measured via literacy levels and HIV/AIDS knowledge). The data showed that women who married prior to age 18 have decreased literacy levels and decreased knowledge about HIV/AIDS relative to those women of the same cohort who married after age 18. These findings highlight the need to encourage education among young married women. Similarly, the qualitative portion of this dissertation found women stressing the importance of acquiring education and feared an early pregnancy would disrupt their schooling. Efforts must be made to keep young mothers in school to improve their future opportunities.

The analysis in chapter two also finds support for the exposure to risk mechanism in the relationship between early age at first marriage and elevated risk of HIV infection. The data showed that women married prior to age 18 experience an earlier sexual debut and are less likely to have used condoms at last sexual intercourse relative to those women of the same cohort who

married after age 18, although the number of sexual partners other than husband in past year exhibited an inconclusive role in the association between early marriage and risk of HIV. This combination of findings highlights the need to unpack exposure to risk in future research, as exposure is composed of several factors which define both the period of risk and frequency of exposure. While this research lends support to the role of exposure to risk in the association of early marriage and risk of HIV infection, further research is needed to refine which factors of exposure are most salient in this association.

The chapter two study uses cross-sectional data to shed light on how the two groups of women (those marrying prior to age 18 and those marrying after) differ on a number of factors related to risk of HIV infection. Therefore, it cannot explain the different processes that lead some women to marry at a relatively young age nor can it accurately assess the temporal ordering of the factors under investigation relative to age at first marriage. Further research is needed to understand why some women enter into relatively early marriages and how this transition affects their educational opportunities. The relationship between marital age and education is potentially endogenous; that is, it is unclear if women enter into marriage because they have already dropped out of school or if they leave school because they have entered into marriage. Further research into this relationship, and into methods to encourage continued schooling among married women, is needed.

Utilizing focus group discussions, chapter three investigates how HIV/AIDS may be impacting the desirability of marriage within Agincourt, South Africa. The participants do not see marriage as a protective against HIV, as they have a certain fatalism regarding the epidemic and expect to acquire HIV regardless of marital status. However, HIV does serve to encourage marriage, as marriage serves as a method of reducing the stigma surrounding HIV/AIDS.

Chapter three finds that socioeconomic reasons have greater salience than HIV/AIDS in the decision-making process around the transition to marriage. While socioeconomic reasons help explain the declining rates of marriage among black South Africans, lobola was not seen as a barrier to marriage by the participants in this study. Researchers have suggested that with rising unemployment men are unable to pay lobola, which has contributed to declining marriage rates (Hunter 2007). This study finds that explanation unlikely, as participants discussed that lobola was no longer necessary to enter into marriage. Rather than women waiting around for a man who is able to afford lobola, the findings here suggest that women do not wish to marry men that they would then have to financially support.

Based on their fieldwork in Agincourt, Zwang and Garenne (2008) claim that young women hold an economic interest in getting pregnant as a method of securing the transition to marriage; they further argue that the shift to the cash economy has created a financial deterrent to marriage for men via inability of having to pay for child's food, healthcare, school fees. They argue that, in this way, socioeconomic barriers to marriage are an indirect cause of premarital fertility. While my findings do support socioeconomic barriers to marriage, such as the inability of men to provide for their families leading to decreases in the desirability of marriage, they do not support the notion of socioeconomic barriers to marriage as an indirect cause of premarital fertility. If Zwang and Garenne's notion were correct, one would expect to see high levels of premarital fertility at later ages (i.e. in their 20s) resulting from delayed or deferred marriage; instead the observed pattern is of high premarital fertility in the teenage years. That is, premarital births occur in the teenage years, then women successfully use contraception for years before getting married, as opposed to a continued increase in premarital fertility as more women become sexually active prior to marriage. Women in my focus groups did not expect financial

support from men, in or out of marriage; they stressed the importance of women finishing school and becoming employed in order to support their families. Thus it seems unlikely that the women in Agincourt are intentionally becoming pregnant in order to transition to a marital union.

The factors driving premarital fertility include barriers to contraceptive access, primarily from the stigma surrounding adolescent sexual activity, the disapproving attitude of the nurses, and lack of conversation from parents. Within these confines, women showed agency in utilizing contraception: taking responsibility for use, exhibiting knowledge about a variety of methods (both traditional and modern), providing biological explanations for switching/terminating methods (e.g. irregular menstruation, aches and pains), and discussing how young women need to figure it out as their parents will not talk to them about it. The women also discussed several strategies exhibiting the use of agency: refusing sexual activity if the male partner refuses to use a condom, remaining aware during sexual activity in case the condom breaks or the man removes the condom, and hiding contraception from one's partner.

The barriers to accessing reproductive healthcare system lead adolescents to rely on traditional methods and/or inconsistently use modern methods, leading to adolescent births. Given that previous research has shown that after an early first birth women are able to delay future childbearing by several years, it appears likely that the adolescent pregnancy and birthing process places these women into the reproductive healthcare system, allowing them to then utilize contraception consistently and prevent future births. It is therefore important to incorporate these women into the reproductive healthcare system at younger ages in order to decrease the rate of adolescent childbearing. It would also be quite valuable to examine the

education that the nurses receive, revising this curriculum to discourage stigmatizing adolescent sexual activity in efforts to increase adolescents' access to contraception.

Building off of these three studies, future research especially needed in establishing temporal ordering of family formation processes and risk of HIV infection. While knowledge and exposure both appear salient in the relationship between early age at marriage and risk of HIV infection, further investigation is necessary to establish the sequencing of events and thus highlight time points for HIV interventions. As the relationship between marriage and educational attainment is potentially endogenous, longitudinal studies are of particular necessity.

While endogenous potential of education and marriage warrants further research, the current studies underscore the need for interventions aimed at continuing education for young married women. Increasing literacy rates among this population will allow greater access to public health messages. This is especially relevant, as this study found decreased HIV/AIDS knowledge among those women who married prior to age 18; access to public health messages could help increase this knowledge among this population.

The data in chapters three and four draw attention to the economic difficulties still facing black South Africans nearly twenty years after the end of Apartheid; these economic circumstances in turn impact family formation processes, such as the retreat from marriage. Clearly, educational and employment programs focused on residents of the former homelands are still greatly needed. Additionally, efforts to destigmatize adolescent sexuality and incorporate young adults into the reproductive healthcare system must be ongoing, in order to decrease adolescent childbearing. The women in this study exhibited a great deal of knowledge regarding contraception and a sense of responsibility towards family planning, but also expressed difficulties in overcoming barriers to reproductive healthcare services. Further research,

particularly with women under the age of 18, will help elucidate these barriers further to build more effective interventions.

While the HIV/AIDS epidemic continues to impact individuals throughout southern Africa, research to deepen our understanding of HIV risk factors may lead to improved interventions. By shifting the discourse from one of women's vulnerability to one of women's agency within structural constraints, these interventions may then be made contextually appropriate. Research here suggests that increasing educational access, to both unmarried and married individuals, and increasing access to modern reproductive healthcare services are key strategies in preventing the spread of HIV.

REFERNCES

Hunter, Mark. 2007. "The Changing Political Economy of Sex in South Africa: The significance of unemployment and inequalities to the scale of the AIDS pandemic." *Social Science & Medicine* 64: 689-700.

Zwang and Garenne. 2008. Social context of premarital fertility in rural South Africa." *African Journal of Reproductive Health* 12(2): 98-110.