The sociocultural context of premarital relationships in rural Ghana

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Abbreviations

SRH: Sexual and reproductive health
TSRs: Transactional sexual relationships

Abstract

Despite the large body of research on adolescent premarital relationships in sub-Saharan Africa, several areas remain underexplored. In the standalone chapters of this dissertation, I explore sociocultural factors that are important to youth sexual culture but are not well understood, including 1) religiosity, 2) initiation rites, and 3) moral norms. The contribution of this dissertation lies primarily in the richness of the data utilized. I draw on complex preexisting longitudinal data involving 1,275 adolescents and their guardians residing in rural market towns in the Manya Krobo districts of Eastern Ghana. I compliment the survey data with qualitative data, which I collected through in-depth interviews and focus groups with 99 adolescents, guardians, and community stakeholders residing in a nearby town. The chapters collectively unearth how adolescents navigate competing sexual norms and structural circumstances as they form romantic relationships and initiate sexual activity.

In the first paper, I rely solely on the longitudinal survey data to examine potential mechanisms behind the association between religiosity and premarital abstinence. I show that adolescents' personal religiosity predicts abstinence but not their public participation in institutional religious life. I also find adolescents' religiosity is unrelated to their sexual attitudes and that sexual conservatism does not explain why religious adolescents are more likely to abstain from sex. Broadening the purview to the socializing influence of the religious network, I demonstrate that abstinence is related to the religiosity and perceived sexual attitudes of an adolescent's peers but not their guardians. Given the central role of religion in the lives of most Ghanaians, these findings offer important insights into how it, directly and indirectly, shapes the sexual norms and behaviors of youth.

In the second paper, I use a mixed-methods approach to examine a common belief that a Ghanaian rite of passage called *dipo* hastens sexual debut among its female participants. Both quantitative and qualitative analyses confirm that the rite is associated with the transition to sexual activity. However, counter to popular perception, the rite is not associated with very early sexual activity. Further, the qualitative interviews suggest that contemporary socioeconomic hardships – not traditional interpretations of the rite – motivate participants to validate the rite as entrée to sexual relationships. These findings highlight the ongoing importance of traditional rites in young girls' sexual and reproductive health, although demographers and public health researchers commonly overlook such practices.

In the final paper, I use qualitative interviews to examine the complexities of financial exchange between adolescent boys and girls in romantic sexual relationships. My results demonstrate how economic parity between boys and girls necessitates youth to reconcile gender and equity norms in courtship. Sometimes, this reconciliation leads to revising gender relations in courtship, where girls provide for boys, and boys rely on girls to address their material needs. At the same time, my analyses show how gender structures limit the extent to which these dynamics can be reconfigured. Given most studies document men being providers to women, this chapter offers novel insights into how socioeconomic conditions reshape the most stable gender dynamics.

The emergent theme across the three chapters is that multiple and oft-competing sociocultural influences frame youth sexual culture. This dissertation examines some of these intersections, demonstrating how youth navigate competing norms and challenging socioeconomic conditions as they form romantic relationships and commence sexual activity. Overall, the dissertation provides new insights into essential elements of adolescent sexual decision-making that are generally overlooked and poorly understood in the current literature.

Résumé

Malgré le grand nombre de recherches sur les relations prémaritales des adolescents en Afrique subsaharienne, plusieurs domaines restent inexplorés. Dans les chapitres autonomes de cette thèse, j'explore trois moins étudié facteurs socioculturels qui sont importants pour culture sexuelle des jeunes, notamment 1) la religiosité, 2) les rites d'initiation et 3) les normes morales. La contribution de cette thèse réside principalement dans les méthodes utilisées. Je m'appuie sur de rares données longitudinales préexistantes impliquant 1,275 adolescents et leurs tuteurs résidant dans les bourgs ruraux dans Ghana. Je complète les données de l'enquête par des données qualitatives nuancées, que j'ai recueillies lors d'entretiens approfondis auprès de 99 adolescents, leurs tuteurs et les parties prenantes de la communauté résidant dans une ville voisine. Cette thèse comprend trois chapitres autonomes qui, collectivement, mettent en lumière la manière dont les adolescents naviguent entre des normes sexuelles concurrentes et des circonstances structurelles lorsqu'ils nouent des relations amoureuses et entament des activités sexuelles.

Dans le premier chapitre, je me base uniquement sur les données de l'enquête pour examiner les mécanismes potentiels derrière l'association entre la religiosité et l'abstinence prémaritale. Je démontre que les expressions de religiosité des adolescents prédisent l'abstinence, ce qui n'est pas le cas pour leur participation publique à la vie religieuse institutionnelle. Je constate également que la religiosité des adolescents n'est pas liée à leurs attitudes sexuelles et que le conservatisme sexuel n'explique pas pourquoi les adolescents religieux s'abstiennent de rapports sexuels. En élargissant la perspective à l'influence socialisante du réseau religieux, je démontre que l'abstinence est liée à la religiosité et aux attitudes sexuelles des pairs d'un adolescent mais pas à celle de ses tuteurs.

Dans le deuxième chapitre, j'utilise une approche à méthodes mixtes pour examiner la croyance commune selon laquelle un rite de passage ghanéen accélère le début de l'activité sexuelle chez les femmes participantes. Les analyses quantitatives et qualitatives confirment que le rite est associé à la transition vers l'activité sexuelle. Toutefois, les résultats de l'enquête indiquent que la différence est beaucoup plus faible que ce que l'on croit généralement. De plus, les entretiens qualitatifs suggèrent que les défis socio-économiques contemporains - et non les interprétations traditionnelles du rite - motivent les participantes à valider le rite comme entrée dans les relations sexuelles.

Dans le dernier chapitre, j'utilise des entretiens qualitatifs pour examiner les complexités de l'échange économique entre les garçons et les filles adolescents dans les relations romantiques. Mes résultats démontrent comment la parité économique entre les garçons et les filles oblige les jeunes à concilier les normes de genre et d'équité dans les fréquentations. Parfois, cette réconciliation conduit à une recomposition des normes de genre dans le cadre des fréquentations, où les filles donnent aux garçons, et les garçons comptent sur les filles pour répondre à leurs besoins matériels. En même temps, mes analyses montrent comment les structures de genre limitent la mesure dans laquelle ces dynamiques peuvent être reconfigurées.

Le thème qui ressort de ces trois chapitres est que des influences socioculturelles multiples et souvent concurrentes encadrent la culture sexuelle des jeunes. Cette thèse démontrant comment les jeunes naviguent entre des normes concurrentes et des conditions socio-économiques difficiles lorsqu'ils nouent des relations amoureuses et entament une activité sexuelle. Dans l'ensemble, la thèse fournit de nouvelles perspectives sur les éléments de la prise de décision sexuelle des adolescents qui sont moins bien compris dans la littérature actuelle.

Preface

All chapters are the result of the work of Madeleine Henderson, who is the sole author of all three papers. The longitudinal data utilized in two of the papers were collected by Dr. Jeffrey Bingenheimer of George Washington University, who otherwise had no role in the conception, design, or execution of the research papers. The qualitative data used in the thesis are the result of the independent fieldwork of Madeleine Henderson, who received institutional support from the McGill Nutrition Links Project for this fieldwork. The final dissertation contributes to the scholarship of adolescent premarital sexual relationships in sub-Saharan Africa.

Chapter 1. Introduction

Adolescent Premarital Sexual Relationships in Sub-Saharan Africa

Sub-Saharan Africa has long experienced some of the most challenging sexual and reproductive health (SRH) issues, which have had considerable social and economic impacts. Perhaps most notably, sub-Saharan Africa disproportionately carries the brunt of the global HIV/AIDS epidemic. Despite the rapid global expansion of antiretroviral therapy, HIV/AIDS remains the leading cause of morbidity and mortality in many African countries, principally those in the south (James et al., 2018). Through its erosion of human capital, HIV/AIDS hinders Africa's economic development (Institute of Medicine Committee US, 2011; Piot et al., 2001; UNAIDS, 2019). Parts of sub-Saharan Africa, particularly West and Central Africa, also have the highest prevalence of teenage pregnancies globally (United Nations Population Fund, 2013). Teen pregnancies are associated with health complications for young mothers and their children (Patton et al., 2009; United Nations Population Fund, 2013), and perpetuates challenging social issues, including poverty and gender inequality (Black et al., 2012; Bratton, 2009; Ruedinger & Cox, 2012).

Due to a synergistic effect of sociocultural, environmental, and economic factors, adolescents are at the highest risk of these SRH challenges (Chandra-Mouli et al., 2021; UNAIDS, 2019; Yakubu & Salisu, 2018). In sub-Saharan Africa, sexual activity typically commences during adolescence (Bongaarts et al., 2017). However, because of their young age, adolescents are least likely to or capable of protecting themselves against unwanted pregnancies or STIs (Chandra-Mouli et al., 2015). Youth often lack access to contraception or comprehensive knowledge regarding safe sex (Blackstone et al., 2017; Maticka-Tyndale, 2012), and local gender and sexual norms undermine contraceptive use even without these barriers (Bochow, 2012; Devine-Wright et al., 2015; Jewkes & Morrell, 2010; Protogerou et al., 2018).

The sexual decisions individuals make during adolescence have profound implications for health and social well-being across the life course (Motsima & Malela-Majika, 2007; Onsomu et al., 2013). Given youth constitute the largest proportion of the population in sub-Saharan Africa compared to anywhere else in the world (Velkoff & Kowal, 2006), the consequences of these decisions also manifest on a macro scale. Consequently, adolescents are a key target group to address Africa's health and development challenges (Chandra-Mouli et al.,

2015; Gallant & Maticka-Tyndale, 2004; Green et al., 2009), and understanding their sexual decision-making has been a focal point within social science research.

Most research on adolescent sexual behavior focuses on the influence of education, poverty, or gender inequalities (Asante et al., 2018; Hailegebreal et al., 2022; Handa et al., 2017; Madise et al., 2007) but neglects other potentially important sociocultural factors, such as religion, rites of passage, and cultural moral codes. These factors may be relevant to youth sexual culture and decision-making because each provides a set of norms and ideals around sexuality. Understanding how these norms may inform adolescent decision-making in sub-Saharan Africa is not straightforward. Norms often conflict, and structural conditions like poverty push individuals to adopt some norms and behave out of alignment with others. How youth navigate competing sexual messages is further complicated by the transitional nature of adolescence, a time where the influence of family, peers, and other socializing agents is in flux.

Dissertation Outline

While these complexities challenge our understanding of youth sexuality in Africa, they also lend to sociologically compelling research. Within three standalone chapters, I examine youth sexual culture as it relates to 1) religiosity and sexual attitudes, 2) traditional initiation rites, and 3) the moral economy of exchange in romantic relationships. Collectively, this thesis offers an in-depth account of how some adolescents navigate the sociocultural and structural environment as they make critical decisions about sex and romantic relationships.

Some gaps in the extant literature on these three topics reflect methodological issues. Capturing life course transitions such as sexual debut requires expensive, logistically challenging longitudinal data. For similar practical constraints, much research relies solely on the experiences of adolescents while omitting the perspectives of other influential actors like guardians and community members. The strength of this dissertation and its contribution to the present literature is in its data richness. I examine the three topics of interest using two types of data. I use preexisting longitudinal data involving 1,275 adolescents and their guardians who reside in market towns in the Manya Krobo districts of Eastern Ghana. To add contextual detail to the findings, I also rely on in-depth interviews from a separate sample of 99 adolescents, guardians, and community stakeholders residing in a market town near the longitudinal study site. I

collected the qualitative data with the help of local research assistants during a period of fieldwork in 2017.

In the remainder of the introduction, I detail the current literature on adolescent sexual decision-making, particularly regarding religiosity, initiation rites, and economic exchange in courtship. I situate these topics within the Ghanaian context to illustrate the constellation of sociocultural and structural factors that shape youth sexual culture in Ghana. The introduction finishes with discussions of how each dissertation chapter addresses current knowledge gaps and summaries of the findings.

Sex, Love, and Dating in Sub-Saharan Africa

Ghanaian youth dating culture mirrors many dating patterns commonly observed across sub-Saharan Africa. In sub-Saharan African courtship, adolescents intertwine sexual intimacy with love and monogamy. Premarital sexual intimacy typically occurs within committed relationships (Mensch et al., 2006), and sex is an essential part of a relationship (Bhana, 2016; Eriksson et al., 2013). To youth, the value of sex is in the way it symbolically demonstrates the seriousness of a relationship through emotional attachment and sexual exclusivity (Burchardt, 2011; D. J. Smith, 2000). Displays of commitment are integral to courtship because youth treat premarital romantic relationships as a pathway to marriage and family formation, two of the most important social values in African society (Clark et al., 2010; Eerdewijk, 2006; Harrison & O'Sullivan, 2010; D. J. Smith, 2004). To abstain from sex is to refrain from love, courtship, and marriage formation altogether, which may explain why nearly half of Ghanaian adolescents are sexually active by age 18 (Mensch et al., 2006). Despite youths' long-term intentions, many premarital relationships do not end in marriage unless formed between partners closer to the age of marriage. In Ghana, marriage typically occurs in the early twenties (Clark et al., 2017), which makes dissolution a likely outcome of many adolescent relationships. These factors generate a ubiquitous pattern of serial monogamy, where youth move in and out of a series of committed relationships until eventually settling into a union (D. J. Smith, 2004; Wight et al., 2006).

Like youth across many settings, Ghanaian adolescents' decisions regarding sex, love, and relationships are caught in webs of competing sexual norms. A mélange of institutions and actors across the social environment provides differing blueprints for adolescent sexual decision-making. In many settings, religion offers a shared moral compass advocating traditional values

and sexual conservativism, which parents or guardians often uphold as they socialize their children (Alimi, 2019; Hummer & Ellison, 2010; Osafo et al., 2014). At the same time, peers are often the vanguards of a modern youth culture that places high value on romantic relationships and premarital sexual activity (Bochow, 2012; D. J. Smith, 2000). The landscape of sexual norms is further complicated by the transitional nature of adolescence, a liminal moment of the life course where individuals navigate the thresholds of childhood dependency and adulthood independence. During adolescence, youth form their own sexual identities, values, and behaviors (Aalsma et al., 2013), often self-consciously against the more conservative influence of parents and more closely in line with peer norms and attitudes (DeLamater, 1981; Dilger, 2003; Smetana et al., 2006; Van der Geugten et al., 2013).

As they mature into adulthood, adolescents' decisions about their romantic sexual lives are implicitly gendered. Gendered economic disparities and norms in sub-Saharan Africa encourage men and women to seek romantic sexual relationships for different reasons. Men in sub-Saharan Africa have a significant financial edge over women (Benería, 2003), even in countries like Ghana, where female economic participation is relatively higher than in most African countries (World Economic Forum, 2013). Gender norms place a high value on men who have sexual experience (Muparamoto, 2012; Walker, 2005) and can fulfill a providing role in heterosexual relationships (Dworkin et al., 2012; D. J. Smith, 2017; Swidler & Watkins, 2007). In contrast, norms situate women as gatekeepers of sexual intimacy (Harrison, 2008) and consumers of material goods (Bhana & Pattman, 2011; Masvawure, 2010). Because of these structural and social considerations, premarital relationships offer a nexus through which adolescent boys and girls can address their needs or desires, where boys use their financial edge to secure sexual intimacy from girls, and girls offer sexual intimacy to ensure the financial provision of a boyfriend (Stoebenau et al., 2016).

Just as the motives for entering romantic sexual relationships are gendered, so are the deterrents. Sexual intimacy in sub-Saharan Africa typically presents more SRH risk for women than men. For a complex web of physiological and social reasons, women are more likely to acquire HIV and other STIs (Achalu, 2011; CDC, 2011; Laga et al., 2001). With a prevalence of only 1.7%, Ghana remains outside the epicenter of the African HIV/AIDS epidemic (GSS, 2015). However, national prevalence rates conceal variations within Ghana. In the Manya Krobo

districts where my data comes from, prevalence rates reach 10.4% in some towns (NACP, 2013) and have been observed to be as high as 18.5% among local women (Sauvé et al., 2002).

Single motherhood is also a challenging SRH outcome and a growing problem for Ghanaian women of all ages (Ayebeng et al., 2022). Father absenteeism and single-mother households have become more common as divorce rates climb (GhanaWeb, 2010; Salm & Falola, 2002; Takyi & Gyimah, 2007). Because child maintenance laws are weakly enforced in Ghana (Abdullah et al., 2020; Laird, 2011), and institutional support for childcare is nonexistent, single mothers often shoulder most of the instrumental and financial responsibilities of childrearing, alongside the help of kin (McGadney-Douglass et al., 2005). Single motherhood is a particularly pronounced problem for adolescent girls who bear children premaritally. Without marriage, girls are further limited from making claims for support from fathers, who can relinquish parental responsibilities by denying paternity (Gyesaw & Ankomah, 2013). Recent studies suggest prevalence rates of adolescent premarital births reach as high as 10-22% (Clark et al., 2017; GSS, 2015), and that premarital childbearing is currently the primary pathway through which women become single mothers (Ayebeng et al., 2022). The pattern of serial monogamy in African courtship partly sustains this problem, where sexual intercourse occurs regularly between partners, yet notions of love, trust, and commitment conflict with condom use (Dilger, 2003; Machel, 2001). Research further suggests the risk of premarital pregnancy is not offset by other forms of contraception, as Ghanaian adolescents do not have high rates of utilization (Enuameh et al., 2015; F. B. Oppong et al., 2021).

As a broad characterization, Ghanaian youth sexual culture reflects a series of tensions, where decisions about sex are made against a backdrop of competing societal norms, structural constraints, and uneven SRH consequences for boys and girls. Even as a massive body of extant literature examines how the sociocultural environment informs adolescent sexual decision-making, many potentially essential elements are not well understood. In the next section, I present three sociocultural factors underexplored in the current literature and represent the three substantiative areas of focus in this dissertation.

Religiosity, Sexual Attitudes, and Abstinence

To understand how social institutions and norms may shape youth sexual culture in sub-Saharan Africa, it would be amiss not to consider the role of religion. While much of the world

has moved towards secularization, religion forms the backbone of social life across most African countries (Trinitapoli & Weinreb, 2012). The potent force of religion is particularly notable across West African countries like Ghana. West Africa has experienced a powerful and visible renewed influence of Christianity through the recent surge of Pentecostalism, which has been exceptionally well-received among adolescents and young adults (Asamoah-Gyadu, 2005; D. J. Smith, 2003). It is rare for a Ghanaian to not identify as religious, with most belonging to Christian (~80%) or Muslim (~15%) denominations and a minority associating with African traditional or spiritualist religious beliefs (~3%) (GSS, 2015).

Ghanaians' relationship with religion expands beyond religious affiliation. Religious expression, or what social scientists call religiosity, is more intense in sub-Saharan Africa than anywhere else in the world (Trinitapoli & Weinreb, 2012). The salience of religion across Africa often manifests in the ubiquity of religious sexual messaging in sexual education and attitudes. Youth sexual health programs across sub-Saharan Africa are often articulated within conservative Christian or Islamic sexual morality, emphasizing premarital abstinence above all (Plummer, 2012; Winskell et al., 2011). There is evidence that the abstinence agenda is not out of touch with adolescent sexual morality. As will be demonstrated in this dissertation, an overwhelming majority of Ghanaian youth consistently agree that premarital sex is wrong or immoral.

But whether the abstinence rhetoric is put into practice has long been a question of great interest to social scientists and local stakeholders. In general, research from highly religious settings suggests that despite their values and intentions, waiting until marriage to commence sexual activity is not the reality for many religious adolescents (for a review of this literature, see Regnerus et al., 2003; Rostosky et al., 2004). Notwithstanding, a large body of literature across the globe still suggests a consistent relationship between higher religiosity and *delayed* sexual debut (Heaton, 2010; Landor et al., 2011a; Shaw & El-Bassel, 2014a). Because of the SRH risk associated with an earlier sexual debut (Chandra-Mouli et al., 2015), religion's role in prolonging abstinence to later ages has critical implications for adolescent well-being and public health. Social theorists as early as Durkheim (1973) have offered many explanations for why religion may inhibit socially 'deviant' behaviours like premarital sex. The general understanding is that religion provides a blueprint of morals and norms that individuals endeavor to uphold and a

social sanctioning system to keep them accountable to these codes (Merton & Rossi, 1950; Rohrbaugh & Jessor, 1975; Stark et al., 2016).

Despite a consistent empirical association between religiosity and delayed sexual debut, the relationship is not as straightforward as it appears at face value. Several nuances of this connection remain unanswered. Knowledge gaps are particularly pronounced in the body of literature involving African populations. Despite the region's high religiosity and pressing SRH concerns, few studies have examined the relationship between religiosity and sexual debut in sub-Saharan Africa. Most of what we know about religiosity and sexual behavior comes from Western studies, which are not easily generalizable to the African context.

One question of interest is whether the connection between religiosity and abstinence varies by religious expression. Recognizing that individuals can be highly religious in some ways but not others, social scientists conceptualize religiosity as being extrinsic or intrinsic (Allport & Ross, 2006). Extrinsic religiosity reflects participation in public institutional religious life, whereas intrinsic religiosity pertains to religion's personal importance. Since most studies treat religiosity as a singular concept, it is unclear to what extent each subdimension relates to abstinence. Findings from Western settings hint at a more consistent association between intrinsic religiosity and delayed sexual debut but are nonetheless generally mixed and warrant further investigation (Burdette & Hill, 2009; Hardy & Willoughby, 2017; Longest & Uecker, 2018).

A second intricacy in the connection between religiosity and sexual debut is the role of sexual attitudes. A popular hypothesis in social science theory is that highly religious people abstain from sex because they internalize the sexual norms of their religion (Bock et al., 1983; Merton & Rossi, 1950). However, extant research from Western settings does not find conclusive support for this. Although studies consistently find a positive association between religiosity and conservative sexual attitudes, the modest correlation between the variables suggests other sociocultural norms may inform sexual attitudes (Hardy & Willoughby, 2017; Lefkowitz et al., 2004). Further, while some studies find evidence that the effects of religiosity on abstinence are channeled through sexual attitudes, others do not find evidence of mediation (Hardy & Willoughby, 2017; Meier, 2003; Regnerus et al., 2003a; Whitbeck et al., 1999).

A final question of interest concerns the socializing influence of adolescents' social networks. Theorists have long acknowledged that the socializing force of religion operates

through the religiosity and sexual attitudes of other co-religionists, primarily family and friends (DeLamater, 1981; Rohrbaugh & Jessor, 1975). However, studies often exclude familial and peer variables from models examining religiosity and sexual outcomes. Consequently, it is not well known how network religiosity and sexual attitudes predict sexual debut and which individuals are the most influential. Again, research from Western settings is mixed, with some suggesting a more decisive role of peers and others highlighting the importance of parental authority (Adamczyk & Felson, 2006; Burdette & Hill, 2009; Longest & Uecker, 2018).

If research from Western populations remains inconclusive on these fundamental questions, even less is understood in an African context. In the first research paper, I rely on longitudinal survey data to begin moving the literature beyond its current nascent state. This paper examines three primary research questions:

1) How do different dimensions of religiosity (intrinsic or extrinsic) relate to premarital sexual debut?

2) What is the relationship between adolescents' religiosity, sexual attitudes, and premarital sexual debut?

3) What is the relative influence of adolescent, guardian, and peer religiosity and/or sexual attitudes on premarital sexual debut?

The findings from this chapter add important insight into the mechanisms that underpin the association between religiosity and premarital abstinence. The results from the first research question suggest that intrinsic but not extrinsic religiosity is associated with prolonged abstinence among Ghanaian adolescents. While this may suggest religiosity prohibits sexual activity via the internalization of norms, results indicate that sexual attitudes are unrelated to either dimension of religiosity. Further, intrinsic religiosity retains its association with abstinence when controlling for attitudes. Finally, findings from the third research question indicate that adolescent and peer religiosity and sexual attitudes are associated with abstinence in similar magnitudes. By contrast, similar guardian-level variables have no relation to sexual debut.

Initiation Rites and the Transition to Sexual Activity

Even as most Ghanaians affiliate with modern religion, 'traditional' or 'indigenous' religious practices permeate daily life, including blessings, purification, and pacification related to annual agricultural cycles, health, lineage, marriage, and fertility rituals. African traditional

religions also often include rites of passage, ceremonial occasions that mark critical transitional periods in a person's life, including birth, puberty, marriage, childbirth, and death (Van Gennep, 1960). Of most significance to adolescents are initiation rites, which usher individuals from childhood into adulthood and typically occur around puberty (La Fontaine, 1986). In pre-colonial eras, these rites were an essential source of sexual socialization and social control, as most customs included proscriptive boundaries on when adolescents could commence sexual activity (Fuglesang, 1997).

Although once an integral part of the transition to adulthood in sub-Saharan Africa, many initiation rites have faded or have fundamentally changed. In Ghana, only one female initiation rite called *dipo* remains. *Dipo* is practiced by the Krobo ethnic group who reside in the Manya Krobo districts of Ghana's Eastern region. Although a source of cultural pride across Ghana, *dipo* is also a point of contention as many believe the rite fosters very early sexual activity among Krobo initiates (Boakye, 2010; Steegstra, 2006; Yarney et al., 2015).

The perceived problem of *dipo* is that the rite has fundamentally changed in practice and symbolic meaning since pre-colonial times, yet contemporary girls continue to interpret the rite in traditional ways. Historically, passing through *dipo* marked the entrance to adulthood (Huber, 1963). Girls began the initiation process in mid or late adolescence, which lasted a year and included extensive training on womanhood (Boakye, 2010; Glozah, 2014). Until *dipo* was completed, girls were strictly forbidden from having sexual intercourse, which was evidenced by conception and upheld by taboos (Steegstra, 2006). Upon completing *dipo* and becoming adults, initiates were permitted to commence sexual activity, irrespective of marital status (Huber, 1963).

While once the normative entrée to adulthood and sexual activity, sweeping structural shifts ushered in new norms related to life course transitions. In contemporary Ghana, individuals no longer reach adulthood through a single custom but rather by completing a series of milestones, of which *dipo* is just one. Although Krobos still consider it taboo for girls to commence sexual intercourse before *dipo*, there is also a community-wide expectation that girls remain chaste after passage and begin sexual activity only after marriage (Boakye, 2010; Bratton, 2009; Crentsil, 2015). *Dipo*'s contemporary relevance and purpose is preserving traditional customs and expressing Krobo identity (Steegstra, 2006). Some of these shifts in the symbolic meaning of *dipo* are reflected in how it is currently practiced. Girls no longer receive

year-long training in womanhood but rather pass through an expedited, three-day version of the rite (Anarfi, 2004; Boakye, 2010; Steegstra, 2006). Further, because of *dipo*'s minimal relevance to life course transitions, guardians can initiate their girls at any age and typically do so when girls reach early adolescence (Steegstra, 2006).

Ghanaians often perceive that despite these changes, initiates continue to interpret *dipo* as a passage to adulthood and a license to commence sexual activity (Adjaye, 1999; Anarfi, 2004; Boakye, 2010). Because many girls complete the rite during early adolescence, the problem with *dipo* is that it is not only catalyzing premarital sex but very early sex. This perception supports a stereotype across Ghana that Krobo girls are more sexually experienced than girls from other ethnic groups (Anarfi, 2004; Steegstra, 2006). Many further assert that initiates' supposedly greater sexual permissiveness is a primary driver of the unusually high HIV rates in the Krobo communities (Anarfi, 2004; Steegstra, 2006). The connection between *dipo*, female sexual behavior, and HIV is considered so robust that many local leaders have called for the rite's abolition (Steegstra, 2006).

Yet, the association between *dipo*, sexual permissiveness, and the SRH challenges in the Krobo communities may not be as straightforward as suggested. For example, ethnicity may confound these associations. Krobo women have a unique history of migrating to and from Cote d'Ivoire for sex work, where HIV is more severe (Anarfi, 1992). This cyclical migration was sparked in the 1970s by a local development project and persists as younger women follow older cohorts into the trade (Sauvé et al., 2002; Steegstra, 2006). To this effect, the greater sexual permissiveness and high HIV rates of Krobo women may be related to their unique sexual norms and practices, not their initiation rite.

A different possibility is that the effect of *dipo* on sexual debut may reflect the pre-emptive actions of guardians who may be rushing to initiate girls before they become sexually active. Previous research suggests older cohorts are skeptical of adolescents' willingness to abstain from sex, and guardians may respond by initiating their girls when they show signs of becoming sexually active (Anarfi, 2004; Boakye, 2010; Yarney et al., 2015). The catalyzing influence of *dipo* may be capturing the transition to sexual activity among girls who were already on the cusp of becoming so or even those who may have already been sexually active in hiding.

Finally, it is also possible that poverty may be driving initiates into sexual relationships after the rite. Although widely regarded as immoral, premarital sexual relationships are an

essential source of financial support for girls, particularly those receiving inadequate support at home (Mojola, 2014a; Stoebenau et al., 2016). Some Krobo girls may resolve the tension between ideals and practical needs by justifying *dipo* as an alternative normative entrée to sexual relationships. In this sense, socioeconomic conditions may moderate the effect of *dipo* on sexual debut.

It is difficult to examine these possibilities with extant literature, as initiation rites are not well represented in the literature on youth sexual culture. This lack of literature may reflect an implicit assumption that initiation rites are no longer relevant to life course transitions, although public narratives across Ghana would suggest otherwise. To this effect, it is uncertain whether initiation rites are still related to the onset of sexual activity and how contemporary initiates interpret the tradition. To help fill these gaps, I combine time-ordered analyses on longitudinal data with qualitative accounts of Krobo girls and community members in Manya Krobo districts to answer the following questions:

1) Does *dipo* hasten sexual debut among initiates?
2) What is the contemporary meaning of *dipo* as it pertains to the transition to adulthood and sexual activity?

This chapter finds consistent evidence that *dipo* is associated with an earlier transition into sexual activity, as assumed across Ghana. In the longitudinal analyses, initiated girls are significantly more likely to become sexually active than non-initiates, even when controlling for ethnicity and accounting for anticipatory initiations. On average, initiated girls begin sexual activity six months sooner than other girls. The in-depth interviews correspondingly find Krobo girls interpret *dipo* as a normative entrée to sexual activity. However, although initiates commence sexual activity sooner than non-initiates, the results counter public opinion that *dipo* fosters very early sexual activity. On average, *dipo* participants transition to sexual activity at age 16, which suggests *dipo* accelerates sexual activity for girls in mid-adolescence. Further, whether Krobo girls transition to sexual activity after *dipo* is predicated on socioeconomic concerns and their need for multiple modes of informal support, including the financial support of a boyfriend. These findings suggest that traditional initiation rites may have continued relevance to adolescent sexual decision-making in sub-Saharan Africa, albeit in ways that are reflective of the contemporary structural environment.

Transaction in Romantic Sexual Relationships

Although *dipo* may be a means through which Krobo girls have their economic needs met more expeditiously, romantic sexual relationships are a critical safety net for all girls. The pattern of men financially providing for women and women reciprocating with sex is so common that scholars often refer to nonmarital relationships as transactional sexual relationships (TSRs) (Stoebenau et al., 2016). Morally and conceptually distinct from the quid pro quo exchange of sex work, money and sexual intimacy are means by which boys and girls respectively demonstrate love, commitment, and interdependence (Bhana & Anderson, 2013; Moore et al., 2007; D. J. Smith, 2009). Despite the underlying emotional sentiments, TSRs do not escape the microeconomic dynamics intrinsic to all relationships of exchange (Luke et al., 2011; Nyanzi et al., 2001), which are underpinned by self-interest (Blau, 1964). In sub-Saharan Africa, individuals often enter nonmarital relationships with an implicit assumption that reciprocity will be balanced if not weighed in their personal favor (Maticka-Tyndale et al., 2005; Poulin, 2007; D. J. Smith, 2009). This expectation lends to a courtship pattern where boys endeavor to get the most sexual intimacy per financial input, and vice versa for girls, and have both genders surveilling the relationship for equal flows (Bhana, 2015; Maticka-Tyndale et al., 2005).

The current literature suggests that gender norms and the economic disparities between men and women sustain this courtship pattern in sub-Saharan Africa (Jewkes & Morrell, 2012; Mojola, 2011a; Poulin, 2007). Although less acknowledged in the TSR literature, some scholars suggest that exchange within courtship reflects African society's moral fabric (D. J. Smith, 2017; Swidler & Watkins, 2007). From this perspective, TSRs are a materialization of a rich patron-client moral economy ubiquitous across sub-Saharan Africa, where moral codes emphasize the success of broader society over the individual (Groes-Green, 2013; Swidler & Watkins, 2007). Inherent to a moral economy is a strong expectation that those with resources redistribute to those with less by establishing mutually beneficial exchange relationships (Cheal, 1988; Guyer, 1993). The asymmetrical interdependence of TSRs is a manifestation of the moral economy, where men redistribute their resources to women to maintain equity, who in turn sustain men's patronage by reciprocating with sexual intimacy (Hunter, 2010; Swidler & Watkins, 2007).

Importantly, however, the moral imperative to assume a patron position is not inherently gendered; both men and women are expected to become patrons to those with less when at an economic advantage (Groes-Green, 2013; Vaa et al., 1989). Although men have a clear

economic advantage over women in Africa on an aggregate level, this advantage is less apparent among Ghanaian adolescents, whose socioeconomic standing is mainly tethered to their household conditions. Boys and girls are equally likely to come from poorer households and generally receive comparable household support (Gangadharan, 2003). In the labor market, boys' work tends to pay more than girls. However, Ghanaian girls have equal or often higher labor force participation than boys, reflecting Ghanaian women's informal sector dominance (Heintz, 2005; Kolev & Sirvin, 2010). Eventually, boys' educational advantages accrue into economic ones, and girls' economic opportunities become impeded by childrearing responsibilities. During adolescence, however, boys and girls have relatively equal financial standing, with many girls being advantaged.

Economic parity between Ghanaian boys and girls places two norms in conflict in TSRs: gender norms that require men to be the providers and moral norms that necessitate the wealthier individual to provide for the poorer one. How Ghanaian youth grapple with these conflicting norms in courtship is unclear, as studies on Africa's moral economy typically focus on adult relationships (Swidler & Watkins, 2007; Vaa et al., 1989). The vast majority of studies on TSRs document boys and men doing the lion's share of the provision in relationships, suggesting youth may maneuver to maintain gender norms in contexts of economic parity. For example, girls may seek partners who are relatively wealthier than them, and vice versa for boys (Maticka-Tyndale et al., 2005; Muparamoto, 2012). Still, a smaller but growing body of research documents instances of women becoming the primary providers to men when women have a sharp financial edge (Cole & Thomas, 2009b; Mojola, 2014b; Nyanzi et al., 2004).

Interestingly, some of the common gendered exchange patterns within courtship become reconfigured in these cases. Some studies find women acting as financial patrons to men to secure sexual intimacy, and men reciprocate with sexual intimacy to sustain women's patronage and gain upward mobility (Cole & Thomas, 2009b; Mojola, 2014b; Nyanzi et al., 2004). However, in the broader body of literature, these dynamics are regarded as exceptional circumstances and not a normative part of adolescent courtship.

These possibilities bear the need for a deeper examination of moral exchange among adolescents in sub-Saharan Africa. I approach the final paper from a moral economy framework, seeking to understand the logic of exchange among Ghanaian adolescents more broadly without

any a priori assumptions about the direction of giving between genders. To this effect, the final paper relies on in-depth interviews to address the two following questions:

1) How do adolescents grapple with gender norms vis-à-vis moral norms of equity in their premarital relationships?

2) How or to what extent does female financial advantage inform exchange dynamics in courtship?

In examining premarital courtship from a moral economy lens, my findings depart from the large body of literature on TSRs. I demonstrate that local girls provide for boys frequently and in large magnitudes. Female provision is considered unexceptional in courtship because a community moral code prioritizes equity between partners over gender norms. I find that common exchange patterns in courtship reconfigure when girls have a financial edge, which suggests economic circumstance may play a more prominent role than gender norms in shaping courtship dynamics. At the same time, I also find evidence of limits on how gender becomes reconstituted within adolescent courtship. Within their relationships, adolescents place parameters on female provision to ensure provider masculinity endures in the long term. Further, despite girls' economic edge and providing power, norms that permit men to move between sexual relationships do not protect girls and their families from disproportionately bearing the consequences of such relationships, including unexpected pregnancy.

Chapter 2. Methods

Setting: Ghana, the Eastern region, and the Manya Krobo districts

Ghana

Ghana is a West African country situated on the Gulf of Guinea on the Atlantic side of the African continent. With a population of about 30 million, Ghana is far from the most populous country in Africa. Notwithstanding, Ghana holds much sociohistorical salience across the globe. Formerly known as the Gold Coast, Ghana was the epicenter of the pan-African nationalist movement and the first black African nation to achieve independence. Ghana's independence from British rule in 1957 sparked a series of nationalist movements across sub-Saharan Africa and is thereby widely considered the beginning of the end of colonialism across the subcontinent.

Ghana's peaceful transition to independence largely explains its relatively high political and economic stability since the end of colonial rule. Ghana has remained a democratic country with some of the lowest levels of conflict and corruption and the highest government reliability across sub-Saharan Africa (BTI, 2022). A country rich with export resources like gold, petroleum, and cocoa and a burgeoning tech manufacturing industry, Ghana is considered a model of economic stability and has some of the highest growth rates on the continent (Aryeetey & Kanbur, 2017; World Bank, 2022b). With a total GDP in 2019 of $77 billion, Ghana has the fifth largest economy in continental sub-Saharan Africa, eclipsed only by the economies of Nigeria, South Africa, Ethiopia, and Kenya (World Bank, 2022a).

Despite its relative economic success within the subcontinent, Ghana is still among some of the least developed countries globally, hosting some of the lowest scores on human development indicators like life expectancy, infant mortality, and education (UNDP, 2022). Many of these difficulties are stratified across urban and rural regions. Ghanaians who live in urban centers tend to be the primary benefactors of the country's economic growth (Cooke et al., 2016). By comparison, the large minority in rural agricultural regions disproportionately live in poverty and have limited access to social and physical infrastructure (GSS, 2015). Market towns offer some economic opportunities and infrastructure for residents of the rural region but lag far behind urban centers in terms of human development and economic development (GSS, 2015).

The Eastern Region and the Manya Krobo Districts

My dissertation is based on the experiences of Ghanaians residing in the market towns where these social and economic challenges are concentrated. The data for this study come from the Manya Krobo districts in Ghana's rural Eastern region. The Eastern region is dotted by small villages connected by dirt roads to peri-urban market towns, which are connected by highways to Ghana's capital city, Accra, about 80 kilometers away. The market towns of the Eastern region host shops, services, markets, hospitals, and large schools and are a draw for residents of smaller satellite villages that are comparatively underdeveloped and difficult to reach. Agricultural production and markets form the backbone of economic activity in the Eastern region. Men partake in a broad range of economic activities, from agriculture (36%), skilled (19%) or unskilled manual labour (15%), and professional occupations (17%) (GSS, 2015). Most women find employment in sales/services (61%) or agriculture (21%) (GSS, 2015). In part, women's high activity in the informal market leads to some of the highest observed levels of female financial autonomy and decision-making across Ghana (GSS, 2015; World Economic Forum, 2013).

Although youth employment opportunities are limited in the market towns, boys and girls are active participants in the informal economy (GSS, 2015). Adolescent economic activity is most prominent on market days when farmers and vendors from across the region travel to the market towns to sell and trade goods. Adolescent boys are often responsible for the more physically intensive manual labor tasks, whereas girls sell goods alongside female kin. Market activity is so dependent on adolescent labour that school closes early on market days in some towns so youth can participate. While both boys and girls are active in the informal economy outside of school hours, boys are notably absent when school is in progress, whereas girls can still be seen operating food stands or selling water.

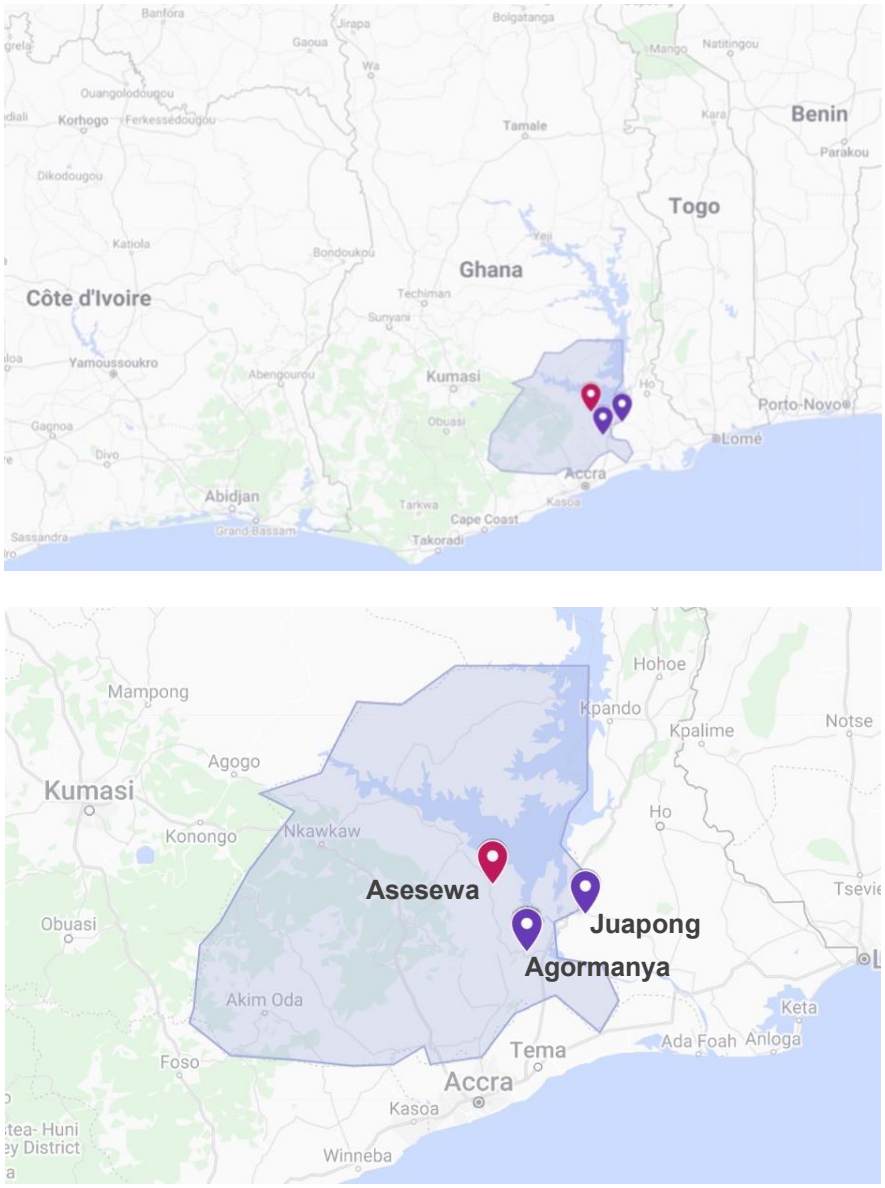
This observation reflects some of the Eastern region's education challenges. The Eastern region has the lowest gender parity in education at the primary level in Ghana (GSS, 2015). At higher levels of education, gender disparities mirror national averages, where 10% of women in the Eastern finish secondary school compared to 15% of men (GSS, 2015). This region's high rates of teenage motherhood partly contribute to these gender deficits in education. Nearly one out of five girls become pregnant during adolescence, almost double the teenage pregnancy rates observed in Accra (GSS, 2015). Although there is no legislation barring mothers from attending

school, there are no institutional supports such as daycare. Consequently, the instrumental and financial costs of attending school while raising an infant often provide an impetus for girls to drop out early.

Along with education challenges, the Eastern region is well known for its health challenges, especially sexual health. The Eastern region has some of the highest observed HIV rates, at around 4%, which is more than double the national prevalence (Ghana AIDS Commission, 2015). HIV is further localized to districts and ethnic groups within the Eastern region. Across the Eastern region's 35 distinct districts, HIV rates reach 10% in the Manya Krobo districts (NACP, 2013) and are nearly double among the Krobo ethnic group compared to other inhabitants (Sauvé et al., 2002). Although there is no data regarding prevalence rates of other STIs in the Eastern region, highly transmissible infections like HPV, chlamydia, and gonorrhea may be as common and even more prevalent than HIV.

The data for this dissertation come from three market towns in the Eastern region's Upper and Lower Manya Krobo districts. The Upper and Lower Manya Krobo districts border each other and were part of the same administrative district until 2008. As the name suggests, the Manya Krobo districts are inhabited primarily by the Krobo ethnic group, the largest sub-group of the patrilineal Dangme-speaking ethnic group. The Krobo are a small ethnic minority, representing only about 250 000 of Ghana's 30 million population. The Krobos have their own language, a derivative of Dangme, but many are proficient in English. The map below shows the location of the three towns, where the shaded area demarcates the Eastern region. The longitudinal data comes from Juapong and Agormanya in the Lower Manya Krobo districts, marked by purple tags in Figure 1. The qualitative data comes from Asesewa in the Upper Manya Krobo districts, labeled with a red tag.

Figure 1. Map of the research sites



Because of the unique sociodemographic, economic, and cultural characteristics of the Manya Krobo districts and Ghana more broadly, there is significant theoretical and practical value in conducting research in this region. As one of the most religious countries in the world, Ghana provides a useful case study to assess whether, and if so how, religion inhibits sexual behaviors among adolescents. Consequently, the findings have the potential to provide new theoretical insights into the social control function of religious institutions. Further, because many African countries share Ghana's religious profile and SRH challenges, understanding how

religion delays sexual activity may yield critical insights relevant to African youth outside of Ghana. Insights generated from the analyses of the Krobo *dipo* initiation rite, female sexual activity, and HIV may be comparatively less generalizable to other settings, since few other ethnic groups practice initiation rites. However, because traditional customs and norms are salient across Africa, *dipo* provides a compelling opportunity to explore how traditional and modern values collectively shape youth sexual culture in this region. Finally, Ghanaian women's and girls' active participation in the country's growing economy offers an opportunity to explore how material conditions may shape gender dynamics. Although these social and economic conditions set Ghana apart from other sub-Saharan African countries, the findings may nonetheless provide a theoretical blueprint of how gender relations may shift as economic development progresses across the subcontinent.

Quantitative Data

Dr. Jeffrey Bingenheimer, a social epidemiologist from George Washington University, collected the quantitative data. These data come from a three-wave longitudinal project conducted between 2010-2013 in Agormanya and Juapong. Both are market towns, each with a population of approximately 15,000, according to a 2000 census. Based on sentinel surveillance and prenatal clinics, Agormanya has a high localized HIV rate of about 10%, whereas Juapong has virtually no cases of HIV (NACP, 2013). Agormanya is also predominantly inhabited by Krobos, whereas most Juapong residents are of the Ewe ethnic group.

After initial enumeration in 2010, 1,275 unmarried youth aged 13-14 and 18-19 were randomly selected for participation. The participation rate at baseline was 75%, and the final sample is representative of each market town. These two separate age groups were strategically selected to capture changes from early adolescence into early adulthood. Participants and their guardians were interviewed at 20-month intervals. By the third and final wave in 2014, the younger cohort was aged 16-17, and the older cohort was aged 21-22. By the last wave, 1,125 participants remained (11% attrition rate). The Noguchi Memorial Institute for Medical Research Institutional Review Board at the University of Ghana and the George Washington University review board provided ethical approval for this study.

Sample Characteristics

Table 1 provides sociodemographic information about the participants at the baseline survey. All data are presented as percentages, save for indices of age and wealth which are presented as means. There were near equal representations of male (45%) and female (55%) adolescents in the sample. The mean age of adolescent participants was approximately 16 years old. More than half (54%) of the total adolescent sample had primary education or less, and boys were slightly better represented in the highest levels of education than girls (13% versus 11%). Reflecting differing ethnic profiles of Agormanya and Juapong, nearly half (46%) of adolescents identified as Krobo, and the rest identified as Ewe (42%) or another ethnic group (12%). Most adolescents were Christian (94%), and a minority were Muslim or practiced a different religion (6%). Approximately half of the homes with one or more biological parents were single-parent homes. Nearly 40% of adolescents were not residing with either biological parent, which is typical in Ghana, where children are often purposively fostered with kin (Hampshire et al., 2015). More adolescent girls (45%) were residing with foster guardians than boys (34%). Household wealth did not differ between genders. At baseline, approximately one-fifth of adolescent participants were already sexually active, with more females (22%) reporting sexual activity than males (20%). Among those who were sexually active, the average age of sexual debut was age 16.

Guardian interviewees were typically female (71%), married (68%), and in their mid-40s. Male guardians were particularly more likely to be married (83%) than their female counterparts (59%). Gender differences in education were also notable among guardians, especially in the highest and lowest levels of education. Half of the female guardians had primary education or less, whereas nearly a third of male guardians (31%) had completed high school or post-secondary education. Finally, as expected, the ethnic and religious profiles of guardians align closely with adolescents.

Table 1. Percent distributions and means of survey participants at baseline

Characteristic	Total	Males	Females
Adolescents	**n=1275**	**n=577**	**n=698**
Age (mean)	15.9	16.2	15.8
Highest education (%)			
None or primary	54.2	54.1	54.3
Junior high	33.6	32.7	34.3
Senior high or higher	12.2	13.2	11.4
Ethnicity (%)			
Ewe	41.7	40.1	42.7
Krobo	46.2	47.7	45.0
Other	12.1	11.8	12.3
Religious denomination (%)			
Christian	93.6	93.0	94.0
Muslim or other	6.4	7.0	6.0
Household wealth (0-1) (mean)	0.46	0.45	0.46
Household composition (%)			
One biological parent	32.2	34.4	30.3
Both biological parents	27.7	31.1	24.9
Neither biological parent	40.2	34.4	44.9
Community (%)			
Agormanya	51.5	52.2	50.9
Juapong	48.6	47.8	49.1
Sexually active (%)	21.5	19.7	22.3
Age at sexual debut (mean)	15.8	15.6	15.9
Dipo initiated	-	-	21.1
Guardians	**n=1275**	**n=371**	**n=903**
Age (mean)	46.0	48.4	45.0
Marital status (%)			
Unmarried	32.0	17.1	40.6
Married/cohabiting	68.0	82.9	59.4
Relation to adolescent (%)			
Biological parent	58.6	60.3	58.0
Other	41.4	39.7	42.0
Highest education (%)			
None or primary	38.5	17.2	50.0
Junior high	46.8	51.7	41.0
Senior high or higher	14.7	31.1	9.0
Ethnicity (%)			
Ewe	42.7	42.3	42.5
Krobo	46.2	45.1	46.4
Other	11.1	12.6	11.1
Religious denomination (%)			
Christian	92.2	91.1	92.4
Muslim or other	7.8	8.9	7.6

I use the survey data for two papers in this thesis. The paper on religiosity and sexual attitudes (Chapter 3) relies solely on this quantitative data and uses the total sample of male and female adolescents and their guardians. The paper on the *dipo* initiation rite (Chapter 4) uses a subset of the survey sample of 690 adolescent female participants. To complement the survey findings regarding the *dipo* initiation rite, I also rely on in-depth interviews from the qualitative part of my study, which I describe below. Further details about the quantitative analytic samples and analyses, including variables and models, are provided in the dissertation chapters.

Qualitative Data

In 2017, I visited Asesewa in Upper Manya Krobo, a market town with approximately 20,000 inhabitants. Asesewa hosts a large secondary school, a hospital that offers SRH services, and a wide variety of churches ranging from Orthodox-Catholic, Methodist, Presbyterian, Pentecostal, Charismatic, Baptist, and Apostolic. It also is home to several mosques. The primary language spoken in Asesewa is Krobo, but over one-third of adolescents can speak English. I received permission for this project from the community leaders as part of a more extensive McGill research program in the Upper Manya Krobo district called Nutrition Links. I also received ethical clearance from the Noguchi Memorial Institute for Medical Research at the University of Ghana and the McGill Research Ethics Boards.

Sample and recruitment

To conduct the interviews, I hired three local female interviewers who were already trained and experienced in interviewing through their employment with the Nutrition Links programs. I chose female interviewers for two main reasons. First, there were no known male interviewers in Asesewa as qualified for this project as the research assistants I hired. Second, due to the sensitive nature of this topic and the more significant stigma attached to female sexual behavior, I anticipated it would be more important for girls than boys to have an interviewer of their gender.

There were two rounds of data collection. I collected the first round of data in Asesewa during seven weeks of fieldwork in the summer of 2017 (July-August). The research assistants and I interviewed male and female adolescents and local stakeholders during this round. After returning from fieldwork and analyzing the data, I initiated a second round of data collection, which took place between December 2017 and January 2018. During this round, the research

assistants conducted interviews with the guardians of the adolescent participants. I managed this round remotely. Between both rounds, we conducted interviews with 99 participants. Including the perspectives of adolescents, stakeholders, and guardians gave me the basis to compare views, allowing me to demonstrate how individual and collective interests inform sexual norms and youth sexual decision-making in Asesewa.

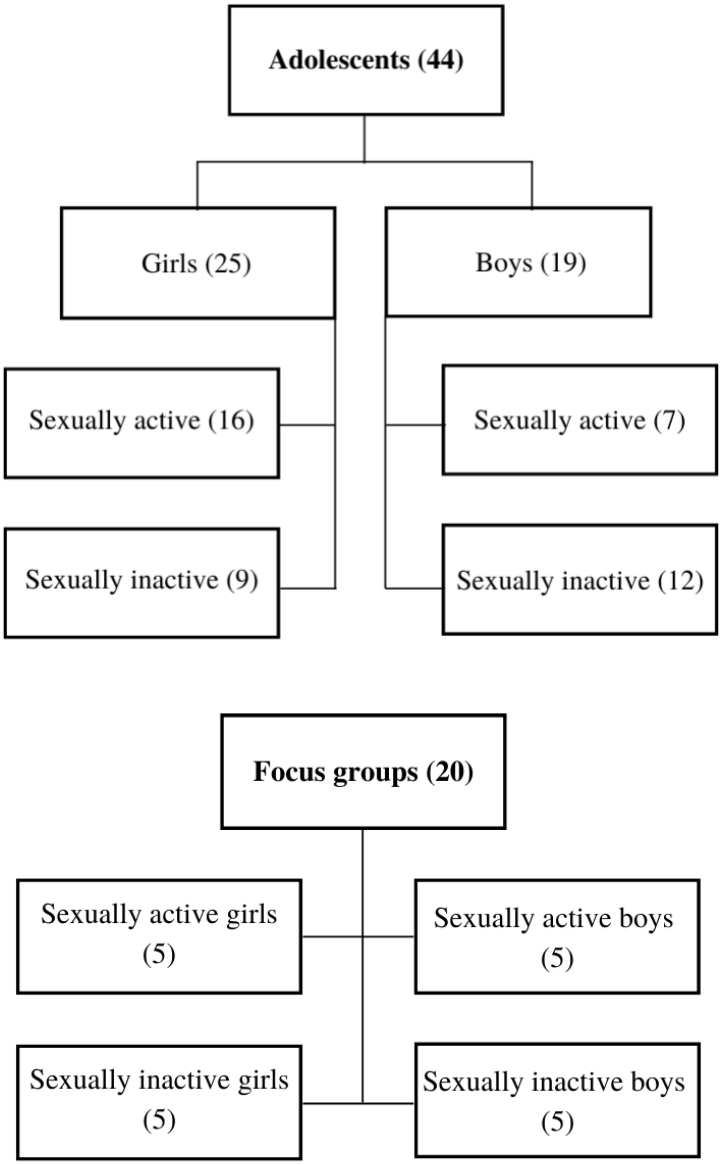
During the first round of data collection, we collected 44 semi-structured interviews with adolescents. We sought adolescents aged 15-19 who were both sexually active and inactive. Single, cohabiting, and married adolescents were eligible for interviews, but we used no specific sampling technique to include all three categories in the final sample frame. Besides age, the only exclusion criterion was proficiency in English or Krobo, which was relevant for all study participants. However, no one was excluded on these grounds as every individual approached spoke either language. Overall, participation rates were high; virtually all individuals we approached agreed to participate, save for two adolescent boys who could not join on account of being too busy.

To recruit adolescents, the research assistants went door-to-door across Asesewa's six administrative sub-districts during and outside school hours. Although the sociodemographic differences between sub-districts are minimal, I allocated each research assistant two sub-districts to ensure we drew participants from all areas. After age verification, adolescents were asked to participate, and guardian consent was sought for adolescents under 18. Both sexually active and sexually inactive boys and girls needed to be well-represented in the findings. Because we could not infer a potential participant's sexual activity status, we continued to recruit adolescents until we reached saturation within each category of adolescent participant (i.e., sexually active girls, sexually active boys, sexually inactive girls, sexually inactive boys). Figure 2 illustrates the adolescent sample, stratified by gender and sexual activity status. Of the 25 females who participated, 16 reported sexual activity. Of the 19 male participants, 7 reported sexual activity. Aside from one girl who was cohabiting with a partner, no adolescent participants were in a union.

We also conducted four focus groups involving 20 additional boys and girls, as illustrated in Figure 2. The focus groups were stratified by gender and sexual activity, with equal participants in each (n=5). I purposely kept each focus group small due to the topic's sensitive nature and related confidentiality concerns. We recruited focus group participants via snowball

sampling, starting with the adolescent participants from the one-on-one interviews. Adolescents from these earlier interviews were asked if they were interested in participating in an additional focus group interview and if they had four or five other friends who would also be interested in participating. Interviewees interested were given recruitment scripts with contact information to share with their friends. Because most were eager for the opportunity to participate in an additional focus group, we only offered recruitment scripts to a few who were interviewed in the early weeks of fieldwork.

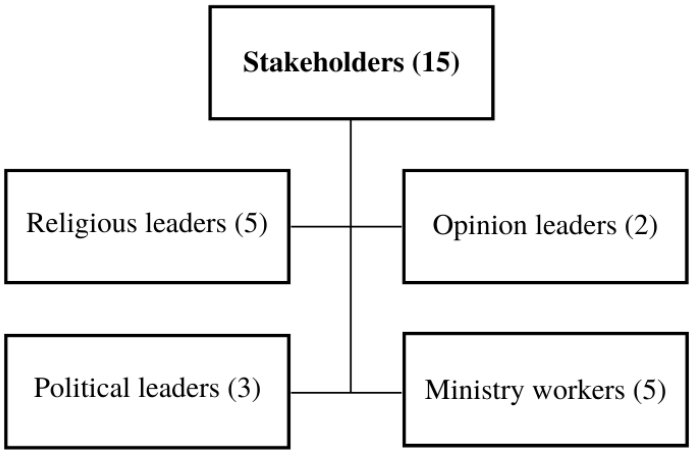
Figure 2. Adolescent sample



I used focus groups in this study because they provide unique and relevant benefits over typical one-on-one interviewing. First, focus groups mitigate ethical concerns about the researcher's power in data collection. The group context reduces this issue, as the interviewer becomes a minority and relatively less present in the conversation (Wilkinson, 1998). Second, focus groups allow participants to ask each other questions, disagree, and challenge, creating a synergistic effect through the elaboration of responses (Goldman, 1962). Finally, focus groups are beneficial because they capture the social processes and everyday social exchange (Goldman, 1962). At the same time, focus groups sometimes lack depth because of the time constraints inherent in interviewing multiple people. Moreover, because of the interactional nature of focus groups, participants may not respond as candidly as they would in a private, one-on-one conversation with an interviewer, especially if their views contradict the dominant beliefs of the group. For these reasons, I use focus complimentary to one-on-one interviews, with the relative advantages and disadvantages of each interview strategy balancing one another.

I also included interviews with 15 key local stakeholders, including religious leaders, ministry employees, political leaders, and opinion leaders. This sample is illustrated in Figure 3. Each religious leader belonged to a different Christian denomination, and one was the head of a local mosque. Ministry employees included health workers, a social worker, and teachers from the local secondary school. Political leaders, including the chief and queen mothers, held important traditional roles in local governments. Opinion leaders are individuals who do not hold formal governmental positions but who many regard as having an authoritative voice on important community issues. The research assistants identified community stakeholders and approached them directly or with a recruitment letter. Stakeholders' perspectives often corresponded closely, irrespective of their position in the community. We reached saturation quite quickly and stopped interviewing after the fifteenth participant.

Figure 3. Stakeholder sample



Finally, during the second round of data collection, the research assistants conducted an additional twenty semi-structured interviews with the guardians of the adolescent participants. The guardian sample is illustrated in Figure 4. Although guardians were randomly selected, I purposively over-sampled guardians of adolescent girls, given the study's focus on the female initiation rite. The research assistants recruited guardian participants by approaching them directly at their homes. Biological parents were preferred over other adult kin as interviewees. If the adolescent was not residing with their biological parents, we asked to interview whichever adult was primarily responsible for the adolescent. Guardians' perspectives were very similar to the stakeholders' but were able to offer more personal experience. Notwithstanding, because of the similarities across adult interviewees, we reached saturation without having to interview each guardian.

Table 2 provides the characteristics of the guardian interviewees. Nearly three-quarters of guardians were women, and half of the guardian sample were biological mothers. Of the female guardians, more than half were divorced or widowed. As is typical in Ghana, these women were primarily involved in the informal market as sellers of goods or agricultural products, food vendors, or farmers. Of the five male guardians, three were biological fathers of adolescent participants, one was a grandfather, and the other a sibling. No men were widowers, but two were divorced. There was more variation in men's employment than for women's.

Figure 4. Guardian sample

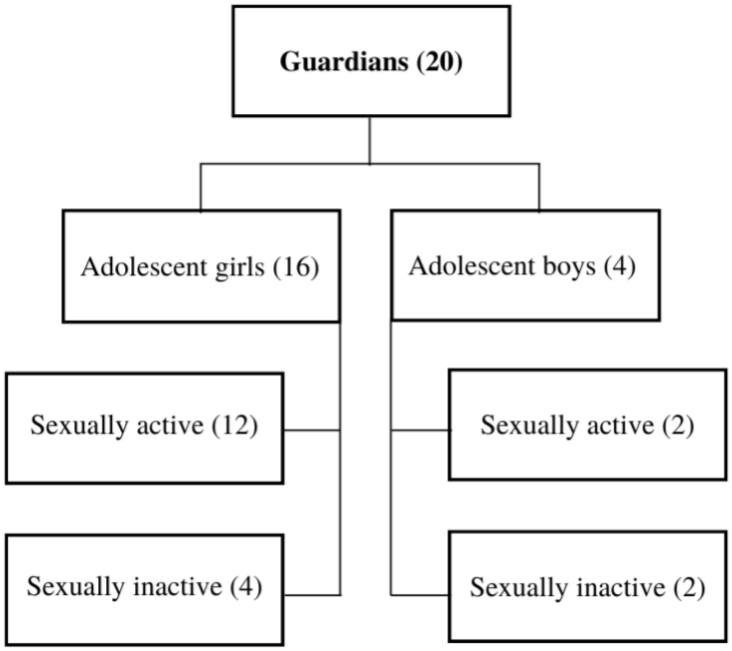


Table 2. Guardian interviewee characteristics

	Gender	Relation to adolescent	Marital status	Ethnicity	Denomination	Occupation
1	Female	Biological mother	Divorced	Krobo	Catholic	Seller/farmer
2	Female	Biological mother	Married	Krobo	Pentecostal	Seller
3	Female	Biological mother	Divorced	Krobo	Apostolic	Trader/food vendor
4	Female	Biological mother	Widowed	Krobo	Apostolic	Farmer/food vendor
5	Female	Biological mother	Widowed	Krobo	Baptist	Seller
6	Female	Biological mother	Married	Krobo	Presbyterian	Seller
7	Female	Biological mother	Divorced	Krobo	Presbyterian	Seller
8	Female	Biological mother	Married	Krobo	Catholic	Farmer
9	Female	Biological mother	Divorced	Krobo	Pentecostal	Seller
10	Female	Biological mother	Widowed	Krobo	Pentecostal	Seller
11	Female	Aunt	Divorced	Krobo	Pentecostal	Food vendor
12	Female	Aunt	Married	Krobo	Pentecostal	Food vendor
13	Female	Aunt	Married	Muslim	Islam	Seller
14	Female	Aunt	Divorced	Ewe	Reformed	Seller
15	Female	Sister	Married	Krobo	Pentecostal	Food vendor
16	Male	Biological father	Married	Akan	Reformed	Seller/farmer
17	Male	Biological father	Divorced	Krobo	Catholic	Driver
18	Male	Biological father	Married	Krobo	Catholic	Hospital worker
19	Male	Grandfather	Divorced	Krobo	Presbyterian	Farmer
20	Male	Brother	Married	Krobo	Pentecostal	Seller

Interview plan

I used a semi-structured interview style for the qualitative portion of this study, which can be found in the Appendix. I created an interview guide to frame the conversation, but interviewers were encouraged to allow conversations to flow in non-structured directions. The interview questions were similar across adolescents, stakeholders, and guardians. To counteract ethical concerns related to confidentiality, I slightly reframed the questions for the focus groups. More specifically, focus group participants were not asked to disclose their own experiences but asked to reflect on the experiences of youth across the community more broadly. Focus group participants were free to speak candidly about their personal experiences at their own will.

The three research assistants worked together to translate the interview guide from English to Krobo to ensure we had a version suiting the language preference of a given participant. Approximately 70% of the interviews were conducted in Krobo and 30% in English, although some interviewees switched between Krobo and English. The research assistants conducted all one-on-one interviews with adolescents and guardians and led the focus group discussions. I preferred that the research assistants conduct the adolescent interviews based on what I perceived to be a greater likelihood that youth would be more candid discussing sensitive topics with a local than a foreign researcher. I conducted the interviews with the stakeholders, save for three who were not proficient in English. All three research assistants were experienced in fieldwork and had comparable levels of expertise with interviewing. To ensure inter-interviewer reliability and consistency, we spent the first week of fieldwork practicing with the interview guide. I also did a blind read of each transcript throughout the fieldwork, where I assessed the interviews without knowing who conducted them. Doing so gave me further assurance that the interviewing quality and style did not vary across the research assistants. The one-on-one interviews ran anywhere from 60 to 90 minutes, whereas focus group discussions lasted between 90 to 120 minutes. We conducted all interviews in the participant's home or the Nutrition Links Centre at the participant's preference. As a small incentive and token of gratitude, we offered interviewees stationery supplies, soaps, or small amounts of cash (5 GHC).

With the permission of the interviewee, we audio-recorded all interviews. I transcribed the interviews conducted in English. The research assistants translated and transcribed the interviews conducted in Krobo, sometimes together, to ensure the quality of translation. The

turnover time between an interview and completed transcription was no more than three days, which allowed me to make iterative changes to the interview guide as the fieldwork progressed.

I rely on data from the qualitative interviews for two papers in this dissertation. As mentioned previously, I use the in-depth interviews in tandem with the survey data for the paper on the *dipo* initiation rite (Chapter 4). I utilize the qualitative data exclusively for the paper on exchange dynamics in premarital relationships (Chapter 5).

Chapter 3. Religiosity, Sexual Attitudes, and Premarital Sex in Eastern Ghana

Abstract

Sub-Saharan Africa has some of the highest levels of religiosity in the world. Yet, how religiosity relates to sexual decision-making among youth in this region is poorly understood. In particular, it is unclear if and how different forms of religious expression relate to premarital sexual abstinence. Further, few studies involving African populations have examined associations between religiosity, sexual attitudes, and sexual activity, either on the individual level or across youths' social networks. Drawing on survey data from 1,204 unmarried adolescents and their guardians residing in market towns in Eastern Ghana, this research finds a) adolescents' personal relationship with religion is associated with sexual activity, whereas their participation in public religious life is not, b) religiosity and sexual attitudes are only weakly related, and have independent associations with sexual activity, c) adolescent and peer religiosity and sexual attitudes predict sexual activity in similar magnitudes, whereas guardian religiosity and sexual attitudes have no apparent bearing on their adolescents' sexual activity. This study highlights the importance of personal faith, sexual attitudes, and peer group norms in shaping sexual decision-making of adolescents in a highly religious setting.

Introduction

Social theorists have long acknowledged the decisive role of religion in shaping sexual behavior (Duncan et al., 2021; Durkheim, 1973; Rostosky et al., 2004). Yet, this connection has not been closely examined in sub-Saharan Africa, which is surprising given this region has been described as the "most religious place on earth" (Trinitapoli & Weinreb, 2012, p.24). One element that remains inconclusive is the connection between religiosity and premarital abstinence. While a large body of literature from Western settings has explored this connection (for a review, see Rostosky et al., 2004; Smith & Lundquist Denton, 2005), research in sub-Saharan Africa remains comparatively limited. For example, a review on religion and sexual behavior in sub-Saharan Africa identifies only six studies assessing a correlation between religiosity and sexual debut (Shaw & El-Bassel, 2014a).

Even in Western settings, where research is far more extensive, some questions related to the religiosity-abstinence connection remain unanswered. The literature generally suggests higher religiosity is associated with delayed premarital intercourse (for a review, see Rostosky et al., 2004; Smith & Lundquist Denton, 2005). However, some research suggests this connection is not straightforward and may depend on the type of religious expression assessed, such as those that are more private or personal versus public or participatory (Burdette & Hill, 2009; Vasilenko & Espinosa-Hernández, 2019). Further, some mechanisms underlining the religiosity-abstinence relationship are not well understood. A common hypothesis is that religious individuals abstain from premarital sex because they adopt their religion's conservative sexual beliefs. Yet, because many competing societal norms inform sexual attitudes, it is not always the case that religious individuals embrace conservative sexual values. Whether religious youth must hold conservative sexual attitudes to abstain from premarital sex – or if simply being religious is enough to motivate abstinence – remains unclear. Further, because most research focuses on individuals and not the socializing influence of family and peers, we lack a detailed understanding of how religiosity and sexual attitudes across adolescents' networks shape their sexual decision-making.

Understanding the role of religion in youth sexual culture is of no minor consequence in sub-Saharan Africa. To policymakers, the primary concern is the challenging sexual and reproductive health (SRH) issues endemic to this region. Sub-Saharan Africa continues to carry the brunt of the global HIV/AIDS epidemic, and West and Central Africa have the highest prevalence of teenage pregnancies worldwide (United Nations Population Fund, 2013). Economic and political challenges lend to weaker institutional support in sub-Saharan Africa than in the West, leaving African youth with few social safety nets and less responsive health care should they contract an STI or face an unexpected pregnancy. For religious institutions, the concern is a public health matter and a moral issue. Religious institutions play a primary role in delivering formal messaging around sexual health and, in particular, champion premarital abstinence above other strategies (Trinitapoli, 2009). The interest of religious institutions in the sexual socialization of youth is only likely to grow as Christianity and Islam continue to become increasingly potent sources of influence across many parts of Africa (Delius & Glaser, 2002).

Given how many stakeholders have a vested interest in understanding the relationship between religiosity and sexual decision-making, it is surprising that so little has been done to understand this connection. While the extensive body of previous research from Western

populations may offer some preliminary insights, the cultural, economic, and demographic differences between regions may limit generalizability. This research, therefore, seeks to add to the small body of literature on religiosity and sexual debut in sub-Saharan Africa using survey data from 1,204 adolescents and their guardians residing in an agricultural district in Ghana. This research uses this data to address three primary questions: 1) How do different dimensions of religiosity relate to premarital sexual debut? 2) Does religiosity primarily influence sexual behavior by altering adolescents' sexual attitudes? 3) What are the relative influence of adolescent, guardian, and peer religiosity and sexual attitudes on premarital sexual debut?

Background

The Multidimensionality of Religiosity

Having a nuanced understanding of how religiosity may inform sexual behavior requires distinguishing between different forms of religious expression. Recognizing that people can be highly religious in one aspect, but less so in others, scholars often refine religiosity into two distinct categories (Allport & Ross, 2006). Extrinsic religiosity – or public religiosity – is an orientation where religion is used as a means to other ends, such as maintaining social relations (Allport & Ross, 2006; Boudreaux et al., 2002). Typically characterized as participation in the formal institution of religion, researchers most often measure extrinsic religiosity by assessing the frequency with which an individual attends religious service. Intrinsic religiosity, sometimes called private religiosity (Nonnemaker et al., 2003), is independent of formal institutions. Intrinsically-oriented individuals treat religion as an end unto itself, emphasizing personal faith or relationship-centered practice (Gorsuch & McPherson, 1989; B. C. Miller et al., 2001). Although there are multiple ways researchers measure intrinsic religiosity, they often gauge this dimension by inquiring about the salience of religion in an individual's life.

Given the clear conceptual distinction between the two dimensions, it is somewhat surprising that studies in both Western (Bearman & Brückner, 2001; Hardy, 2003; Landor et al., 2011b; Meier, 2003; Quinn & Lewin, 2019) and African settings (Gilbert, 2008; Gyimah et al., 2013; Kabiru & Orpinas, 2009a; Okigbo et al., 2015; Somefun, 2019) often combine both into a single composite measure. Doing so conceals potentially differing pathways through which each dimension of religiosity relates to sexual decision-making. For example, regular attendance in formal religious institutions may embed individuals into highly religious circles or give them

more exposure to abstinence messaging. In contrast, intrinsic religiosity may be more closely related to the internalization of such messaging (Rohrbaugh & Jessor, 1975). Further, in Western settings, intrinsic religiosity is understood to be more stable during adolescence than religious attendance (Schnitker et al., 2021; Wink et al., 2021), which may suggest a different contribution of each respective dimension on sexual decision-making.

Studies that assess intrinsic and extrinsic religiosity separately show mixed results, possibly reflecting the heterogeneity of study samples, measures, or analytical methods. Many studies find both intrinsic and extrinsic religiosity are independently associated with sexual debut (Adamczyk & Felson, 2006; Hardy & Willoughby, 2017; Heaton, 2010; Jones et al., 2005; Lefkowitz et al., 2004; Rostosky et al., 2004; Zaleski & Schiaffino, 2000) with similar magnitudes of effects (Goran et al., 2021; Regnerus, 2010). However, other studies suggest that intrinsic religiosity may be more important to sexual decision-making than extrinsic religiosity. For example, one nationally-representative longitudinal study from the U.S. finds a stronger delaying effect of intrinsic religiosity on sexual debut (Burdette & Hill, 2009). Still, other studies find no association between extrinsic religiosity and sexual activity (Holder et al., 2000; Longest & Uecker, 2018) or only so for adolescents who frequently attended religious institutions in early adolescence (Jones et al., 2005). Interestingly, a recent longitudinal study using Add Health data finds that American youth who are exclusively extrinsically oriented have even *higher* odds of reporting sexual activity than their non-religious counterparts (Vasilenko & Espinosa-Hernández, 2019). This finding suggests that unless youth internalize religious beliefs, institutional religious life may inadvertently provide new opportunities for sexual relationships.

In sub-Saharan Africa, comparative literature on religiosity and sexual debut are even less conclusive. For example, some studies find that high intrinsic religiosity delays sexual debut (Amoako-Agyeman, 2012; Beguy et al., 2013; A. N. Miller et al., 2012; Odimegwu, 2005), whereas others find no association (Obeng Gyimah et al., 2014). Others suggest this relationship may depend on gender (Agardh et al., 2011; Fatusi & Blum, 2008; Marston et al., 2013) or age (Beguy et al., 2013). Studies on extrinsic religiosity are similarly mixed (Kumi-Kyereme et al., 2007; Obeng Gyimah et al., 2014; Tavares et al., 2009; Trinitapoli, 2009). Consistent with findings on American youths, studies on young people in Uganda and Cameroon find that extrinsic religiosity may be associated with an *increased* likelihood of sexual debut (Biddlecom et al., 2009; Dimbuene & Defo, 2011).

The Relationship between Religiosity and Sexual Attitudes

The mechanisms through which intrinsic and extrinsic religiosity may influence adolescent sexual behavior are not fully understood. Still, researchers frequently propose that both dimensions of religiosity may operate primarily by altering sexual attitudes. The social reference group theory (Bock et al., 1983; Merton & Rossi, 1950) postulates that religious individuals use their religion's moral order as a blueprint for their sexual morality and endeavor to align their sexual attitudes and behaviors with the values of their faith. It may not be religiosity per se that delays sexual activity. Instead, highly religious people are likely to have conservative sexual attitudes, which are more proximate to sexual decision-making than religiosity.

Theorists further suggest that the pathway between religiosity and sexual attitudes may differ for each dimension of religiosity. Whereas extrinsic religiosity may be associated with greater exposure to religious moral norms, intrinsic religiosity may be closely related to their internalization (Ahrold et al., 2011; Lefkowitz et al., 2004; Reed & Meyers, 1991; Rohrbaugh & Jessor, 1975). Concretely speaking, individuals highly involved in religious life may have conservative sexual attitudes because of the frequency with which they encounter their religion's moral directives, either in religious service or across religious social networks. By contrast, those who define their inner selves by their faith may have conservative sexual attitudes because they incorporate religious moral orders into the framework of their lives.

Because many studies treat religiosity as a singular concept, it is difficult to validate the distinct ways extrinsic and intrinsic religiosity may shape sexual behavior via attitudes. Notwithstanding, research relying on composite measures of religiosity provides evidence that sexual attitudes are integral to the religiosity-abstinence connection. For example, studies consistently find a positive association between religiosity and conservative sexual attitudes and that conservative sexual attitudes predict sexual abstinence (Hardy & Willoughby, 2017; Hull et al., 2011; Lefkowitz et al., 2004). More pointedly, other studies find that associations between religiosity and sexual debut substantially or entirely disappear when controlling for sexual attitudes (Meier, 2003; Whitbeck et al., 1999).

At the same time, other research suggests sexual attitudes may not be as significant in the relationship between religiosity and abstinence as theorized. Although religiosity is associated with conservative sexual attitudes, this correlation is modest at best (Lefkowitz et al., 2004; Rigo

& Saroglou, 2018). This modest correlation reflects individuals' propensity to draw from a variety of sociocultural norms beyond religious ones to inform their sexual attitudes (Lefkowitz et al., 2004; Regnerus et al., 2003b). Further, countering those which give evidence for a mediating influence of sexual attitudes, some studies find that religiosity predicts abstinence net of sexual attitudes, particularly intrinsic religiosity (Hardy & Willoughby, 2017; Regnerus, 2010).

The alternative suggestion is that religiosity has a direct connection with sexual decision-making or may operate via other pathways that have little to do with sexual attitudes. In the case of intrinsic religiosity, for example, individuals may not endorse sexually conservative mores but still abide by other religious principles, including those related to self-control (C. Smith, 2003a). This possibility may be particularly relevant for religious youth who reside in contexts where sexually permissive attitudes or behaviors are the norm but endeavor to behave in accordance with religious order. The analytical distinction here is one's broader views about sexuality versus the sexual standard to which one holds themselves.

In the case of extrinsic religiosity, delayed sexual abstinence may be more closely related to limited opportunities for sexual intimacy versus exposure to religious moral norms. Some theorize, for example, that adolescents who regularly attend religious services have denser networks of relational ties, or what theorists refer to as 'network closure' (C. Smith, 2003b). Because of network closure, religious youth have uniquely close connections to peers, guardians, and other adult congregants and religious leaders, allowing for greater collective oversight and social control of youth behavior (C. Smith, 2003b). At the same time, however, this suggestion conflicts with studies that suggest active involvement in religious life may increase opportunities for sexual activity (Biddlecom et al., 2009; Dimbuene & Defo, 2011; Vasilenko & Espinosa-Hernández, 2019). More research is needed to flush out the intricate pathways through which each dimension of religiosity may relate to sexual decision-making.

Religiosity and Attitudes Across the Social Environment

What becomes evident from the extant research on religiosity, sexual attitudes, and sexual decision-making is the prominent role of the social network. Several theoretical frameworks, including reference group theory (Merton & Rossi, 1950), ecological theory (Bronfenbrenner, 1987), and social control theory (Durkheim, 1973), draw attention to the way the social environment shapes an individual's sexual choices. From these theoretical positions, religious

proscriptions provide the moral blueprint for sexual norms but are inadequate in shaping sexual attitudes and behaviors. Anticipation of personal shame or divine wrath offers some deterrence against moral transgressions, but cognitive-level factors often do not offset the motives for deviating from religious blueprints (Rohrbaugh & Jessor, 1975). Instead, highly religious individuals abstain from 'deviant' behaviors like premarital sex because they belong to 'moral communities' (Stark et al., 2016) or 'organized sanctioning networks' (Rohrbaugh & Jessor, 1975) of other co-religionists who enforce religious sexual norms (DeLamater, 1981).

Research consistently identifies family and peers as the most proximal sphere of influence within an adolescent's ecological network. Unsurprisingly, research from Western settings finds a high congruence of religiosity and sexual attitudes across an adolescent's networks. Religious adolescents are more likely to report having highly religious and sexually conservative parents and peers (Quinn & Lewin, 2019; Regnerus, 2010; Thornton & Camburn, 1987). Studies further consistently find that familial and peer religiosity and conservative sexual attitudes contribute to delays in adolescent sexual debut (Adamczyk, 2009; Landor et al., 2011b; Longest & Uecker, 2018; Quinn & Lewin, 2019; Regnerus, 2007, 2010; Regnerus & Luchies, 2006).

The general picture is that highly religious youth are likely to be embedded in religious networks where sexually conservative attitudes are the norm and that these networks exert an inhibiting influence on adolescent sexual activity. However, two intricacies of this picture have not been well parsed out because the tandem effects of religiosity and attitudes across individual, familial, and peer spheres of analysis have yet to be modeled (Rostosky et al., 2004). The first intricacy pertains to the relative influence of the social network's religiosity versus sexual attitudes. To what extent do friends' and families' religiosity influence youth sexual decision-making vis-à-vis their sexual attitudes?

There are competing possibilities to this question. On the one hand, because attitudes are more proximate to sexual decision-making than religiosity, network religiosity may be channeled through sexual attitudes. Put simply, religious adolescents may abstain from sex because their friends and family have restrictive attitudes towards sex, not because they are highly religious. Relatedly, because individuals often make personal assessments of others' norms and values, network religiosity may be a proxy for sexual attitudes. Adolescents may assume highly religious family members or peers have sexually conservative attitudes, which would motivate adolescents

to abstain. In either case, the effect of network religiosity would theoretically disappear when controlling for sexual attitudes.

On the other hand, research suggests network religiosity may still inhibit sexual activity in ways that are distinct from sexual attitudes. For example, research suggests religious families are closer and have greater surveillance on their children's behaviors, and religious peers reinforce other prosocial norms that inhibit sexual activity, such as abstaining from drugs and alcohol (Quinn & Lewin, 2019; Regnerus et al., 2003; Regnerus & Luchies, 2006). Because network religiosity may thwart behavioral opportunities for sexual activity, it may be a significant predictor of sexual debut vis-à-vis sexual attitudes.

These possibilities are difficult to assess because studies rarely include indicators of both religiosity and sexual attitudes for either family or peers. To the best of my knowledge, only one study does so by jointly estimating familial religiosity and sexual attitudes. Conflicting with most extant literature, the findings suggest that neither familial religiosity nor sexual attitudes are related to adolescent sexual debut (Meier, 2003). Importantly, however, the study estimated familial religiosity and sexual attitudes in tandem with adolescent religiosity and sexual attitudes, which predicted sexual activity. These findings suggest the influence of the family may work indirectly by shaping adolescents' morals, or family religiosity and attitudes may not matter in the same magnitude as adolescents'.

Herein lies the second intricacy of the connection between the social environment and adolescent sexual behavior. Adolescence is a time of flux, where parents and peers influence adolescent decision-making vis-à-vis an adolescent's values and beliefs in varying magnitudes (DeLamater, 1981; Smetana et al., 2006). In the current literature, it is not well established *whose* religiosity or sexual attitudes are most influential in sexual decision-making. Despite the importance of individual, familial, and peer-level factors on sexual decision-making, only two extant studies include indicators of religiosity or sexual attitudes from all three spheres in the same model. Although limited, both studies suggest adolescent and parental factors delay sexual debut, whereas peer factors do not have similar influence (Adamczyk & Felson, 2006; Longest & Uecker, 2018).

However, these findings conflict with a larger body of research that takes a more simplified approach by comparing one sphere of influence to adolescents' beliefs. When assessing adolescent factors in tandem with familial ones, the impact of the family is less

decisive. For example, when controlling for adolescent religiosity and/or sexual attitudes, some studies find familial religiosity or attitudes delay sexual debut, while others find no effect (Adamczyk & Felson, 2006; Burdette & Hill, 2009; Meier, 2003; Regnerus & Luchies, 2006). Other research suggests that familial religiosity may exert a stronger delaying effect on sexual debut than adolescents' (Longest & Uecker, 2018; Quinn & Lewin, 2019). By contrast, studies comparing adolescent and peer characteristics consistently find an influential role of peer religiosity and sexual attitudes on adolescent sexual decision-making. For example, some studies suggest that peer religiosity is associated with delayed sex in similar or greater magnitude as adolescents' (Adamczyk, 2009; Adamczyk & Felson, 2006; Mott et al., 1996; Regnerus & Luchies, 2006).

To date, no studies examine how adolescent sexual decision-making may be related to the religiosity of families or peers in sub-Saharan Africa. More research has focused on the influence of family or peer sexual attitudes on sexual debut, but the literature is small and inconclusive. For example, regarding family, familial sexual attitudes are associated with adolescent sexual debut in Kenya (Kabiru & Orpinas, 2009a) but not in Ghana (Karim et al., 2003). As with Western settings, there is a more consistent relationship between peer sexual attitudes and adolescent sexual decision-making. Studies from several African countries, including Rwanda, Ghana, Ethiopia, and Zambia, suggest peer sexual permissiveness predicts sexual activity (Babalola, 2004; Bingenheimer et al., 2015; Karim et al., 2003) and may even be more influential in adolescent sexual decision-making than personal or parental factors (Asrese & Mekonnen, 2018; Magnani et al., 2002). At the same time, however, a similar study from Cote d'Ivoire finds parental influence may weaken peer influence on adolescent sexual decision-making (Babalola, 2004).

Methods

Setting and Participants

The data for this study come from the predominantly rural and agricultural Manya Krobo district in Ghana's Eastern region. Small villages dot the Eastern region and connect to the larger market towns by dirt roads. These market towns, in turn, are bound by highways to Ghana's capital city, Accra, about 80 kilometers away. This study relies on data from a three-wave longitudinal survey from two market towns (populations: 15,000) in the Manya Krobo districts

conducted between 2010 and 2013 (for more details about this study, see Bingenheimer & Reed, 2014). The two towns, Agormanya and Juapong, were chosen based on their respective HIV prevalence data from pregnant women. Agormanya has a particularly pronounced localized HIV epidemic of 10.4%, while Juapong has a lower prevalence of 2.8% (NACP, 2013).

In 2010, field workers from the University of Ghana visited all homes in the two towns to compile a list of eligible adolescents. After the initial enumeration, 1,275 unmarried male and female adolescents aged 13-14 and 18-19 were randomly selected and surveyed (75% participation rate) with near equal amounts of participants drawn from each town, and more participants drawn from the younger age group versus older (59% versus 41%, respectively). Adolescent participants were interviewed at baseline and 20-month intervals. By the third and final wave, the younger and older cohorts were approximately 16-17 and 21-22, respectively. At each survey wave, fieldworkers also interviewed one guardian for each adolescent interviewee.

This research relies on data from the participants' sexual histories from ages 12 to 19. Individuals who began sexual intercourse before 12 are rare (n=22, 1.7%) and are removed from the analysis because their sexual experiences likely occurred under less typical circumstances (such as forced sex). Fifty-one adolescents (4%) were excluded because they did not have a guardian available to participate during any study wave. The final sample includes 1,204 adolescents.

The procedures involving human participants in this study were per the ethical standards of the institutional review boards at McGill University and the Noguchi Memorial Institute for Medical Research at the University of Ghana.

Measures

Dependent Variable

The outcome variable for this study is whether an adolescent reported premarital sexual debut by or at age 16. Premarital sex is a binary variable in these models. Those who did not report premarital sexual intercourse by age 16 are coded as '0', and those who did are coded as '1'. This information is drawn from all three survey waves during which adolescents were asked to indicate whether they had sexual intercourse and, if so, the age at which they first experienced it. About 19% of adolescents reported being sexually active by the first wave. For these individuals, I use retrospective reports for their age of sexual debut. Most of the respondents who were sexually active at baseline (81%) were aged 18 or older. To investigate the possibility of

reverse causality, I conducted additional sensitivity analyses, excluding participants aged 18 or older at baseline (n=464). Table A1 of the Appendix presents these models. The models show that removing these older adolescents did not alter the main findings, reducing concerns about reverse causality.

Participants who had sexual intercourse during the study waves were asked to indicate their age at sexual debut. Age 16 is commonly chosen as an indicator of early sexual debut. As most adolescents in Ghana and elsewhere begin having sex after age 16 (Amo-Adjei & Tuoyire, 2018), sex before age 16 is often considered early sexual debut (Asante et al., 2018). Early sexual debut is associated with significantly higher sexual and reproductive health risks (Marston et al., 2013; Onsomu et al., 2013) and is a critical area of focus from a policy perspective. Selecting age 16 as the indicator of early sexual debut also minimizes selection bias, as the youngest respondent is 16 in the last wave of the survey.

Because this study focuses on premarital sex, those who reported sexual debut at the same age as entering a union were coded as not being sexually active premaritally. This is not to discount the heightened sexual and reproductive health risk associated with early marriage, which is particularly acute for girls (Clark et al., 2006). However, most religious precepts admonish premarital sex rather than adolescent sexual intercourse that occurs within the confines of marriage. Early marriage applies to a very small subsection of the sample. Only 14 adolescents (~1%), primarily females, reported having entered a union by age 16, most of whom (n=11) were not sexually active prior.

Key Independent Variables

While the dependent variable utilizes data from all three survey waves, data for the independent variables draw primarily from the baseline survey. The only exception is instances where observations are missing on the baseline variables, in which case data is used from the later waves. This situation applied primarily to guardians as virtually no data was missing for adolescents on any of the variables included in this study at baseline. By contrast, approximately 1.2% (n=15) of guardians were not available to be surveyed at baseline.

Religiosity

Adolescent and guardian religiosity was assessed using survey items common in religiosity studies (Longest & Uecker, 2018; Burdette & Hill, 2009). All religiosity items and the corresponding response options are outlined in Table A2 of the Appendix. To assess extrinsic

religiosity, participants were asked to indicate a) how often they attended religious services in the last 12 months (excluding weddings, baptisms, and funerals) and b) the last time they visited a church, mosque, or attended other religious services. Scores were first standardized, and a mean score was generated across both items. In the final composite measure, lower scores indicate lower religiosity (Cronbach's alpha=0.57 and 0.63 for adolescents and guardians, respectively). To assess intrinsic religiosity, adolescents and guardians were asked to indicate the importance of religious faith in shaping their a) daily life and b) major life decisions. Similar to extrinsic religiosity, a standardized mean composite score was created (Cronbach's alpha=0.93 for both adolescents and guardians). For comparison, a principal component score was also created for each dimension of religiosity and used in the analysis. However, using a principal component score did not generate differing results from the composite score (results available upon request). For the sake of interpretation, this study relies on standardized scores.

For peer religiosity, this study relies on one question that assesses extrinsic religiosity only. Adolescents were asked to indicate how many of their peers have regularly attended religious services over the past year (all/some/none). The response options were collapsed into two categories. The variable for peer religiosity thereby constitutes a dummy variable (0= some/no peers and 1= all peers). For the sake of descriptive simplicity, this variable will be referenced as high or low peer extrinsic religiosity in the statistical models.

Sexual Attitudes

Table A2 in the Appendix also displays all survey items used to create the sexual attitude variables. Adolescents were asked to indicate their level of agreement on four items related to the acceptability of premarital sex. Two types of variables were generated to assess the sexual attitudes of adult family members: 1) as *reported* by the guardian and 2) as *perceived* by the adolescent. I rely on both measures as research consistently indicates that individuals are notoriously bad at gauging the values of others, which in turn results in assessments based on stereotypes or projections (Acock & Bengtson, 1980; Ames, 2004; Stattin et al., 2021; Stattin & Kim, 2018; Thijs & Zee, 2019; Thornton & Camburn, 1987). Further, it is unclear whether the perceived sexual attitudes of members of an adolescent's religious network matter more, less, or the same as their actual sexual attitudes. Both guardians and adolescents were asked to respond to nine statements assessing the degree to which adults in the family would endorse sexual activity in various contexts. For peer sexual attitudes, this study relies on 11 survey items

assessing peer endorsement or approval of sexual activity. Notably, these peer sexual attitude items are reported by adolescents, reflecting only *perceived* peer norms. All responses on sexual attitude survey items were coded so that lower scores indicate more permissive sexual attitudes, after which a standardized mean composite score was created (Cronbach's alpha for adolescent attitudes=0.82; perceived guardian attitudes=0.78; reported guardian attitudes=0.64, peer attitudes=0.87).

Controls

This analysis includes sociodemographic and economic factors known to predict sexual debut and may be associated with religiosity and sexual attitudes (Bingenheimer & Reed, 2014). Adolescents and guardians were asked to indicate their highest level of education, ethnicity, religious denomination, and marital status. The response categories for each variable were compressed depending on the number of respondents in each category. Household-level factors include household wealth and household composition. Household wealth was assessed by asking participants to indicate if their household had any of the following: electricity, radio, television, mobile phone, refrigerator, flush toilet, working motorcycle/scooter, or working car/truck. A principal component analysis was executed on these items, from which a mean wealth score was generated. A household composition variable classified adolescents into three categories: Living with one biological parent, living with both biological parents, and living with no biological parents. Finally, the analysis also controls for the community of residence (high-HIV and low-HIV community).

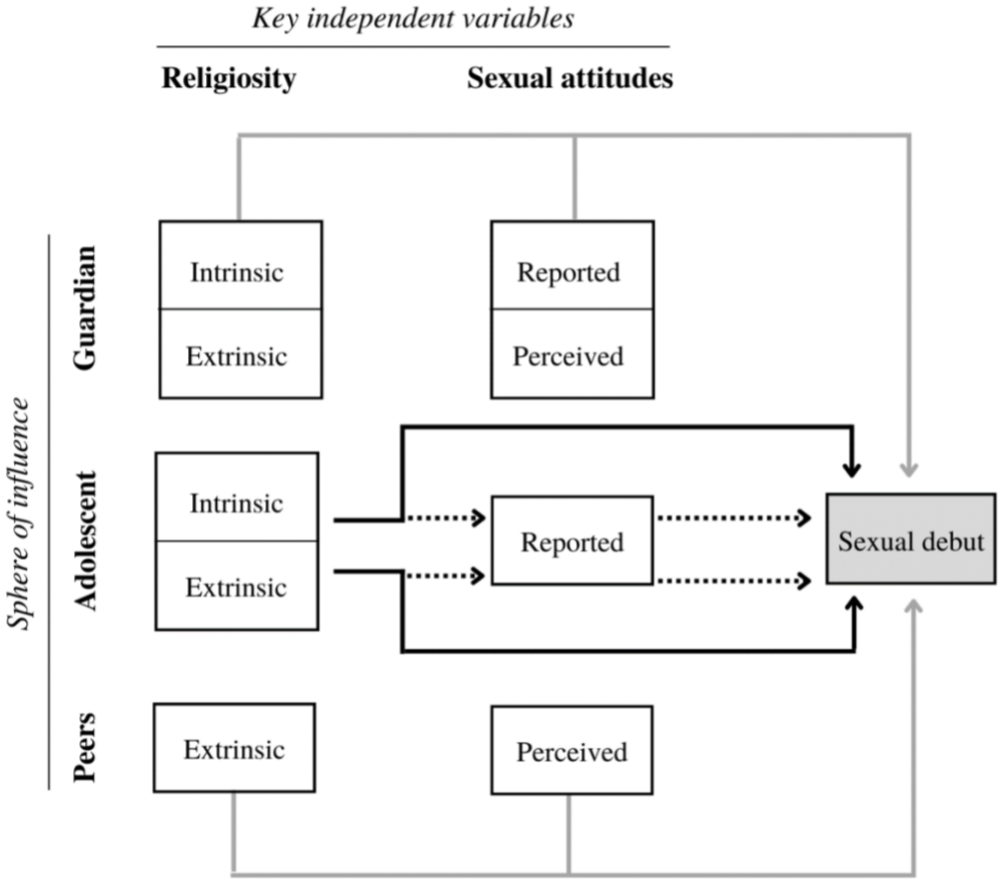
Collinearity diagnostics indicate that correlations between some variables may produce less reliable probabilities in terms of the independent variables in the multivariate model. While all variance inflation factor (VIF) statistics were less than 5, some exceeded what has been suggested as an ideal VIF cut-off point of 2.5 (Johnston et al., 2018). The variables that reached these higher VIF points were adolescent and guardian variables for denomination and ethnicity. Further explorations suggest that the high correlations between adolescent and guardian denomination and ethnicity drive the high VIF. Multivariate models were assessed, including and excluding guardian denomination and ethnicity. Since model fit statistics did not vary, the final decision was to exclude guardian denomination and ethnicity from the final models.

Conceptual Model and Analysis

The first part of the analysis explores bivariate associations between the independent variables and sexual debut. Pearson chi-square and two sample t-tests assess statistical differences in sexual debut across sociodemographic controls. To better understand the religious and attitudinal profiles of the sample, adolescent, guardian, and peer scores on religiosity and sexual attitudes are compared. Next, a correlation matrix displays the strength of the relationship between religiosity and attitudes across the three spheres of analysis. This correlation matrix provides the reference point for the following series of multivariate models.

In the next step of the analysis, I conduct a series of logistic regressions, all of which include sociodemographic and economic controls. Figure 1 illustrates the conceptual model of the multivariate analyses. The three spheres of analysis (adolescent, guardian, peers) are represented on the Y-axis of the figure, and the key independent variables (religiosity and sexual attitudes) are represented on the X-axis. The solid and dotted arrows represent the direct and indirect associations being tested within the models, respectively. For the sake of simplicity, Figure 1 does not show all possible associations between variables in the conceptual model, including the bivariate relationships examined in the correlation matrix.

Figure 1. Conceptual model



I begin by examining the relationship between adolescents' religiosity, both intrinsic and extrinsic, and sexual debut. The solid black arrows represent this model in Figure 1. The second inquiry, represented by the dotted arrows in Figure 1, examines whether the relationship between adolescent religiosity and sexual debut is independent or mediated by their sexual attitudes. The third and final inquiry expands focus to other spheres of influence. I first assess the relative impact of guardian religiosity and sexual attitudes (reported and perceived) on adolescent sexual debut. I then repeat this analysis for peer-level religiosity and sexual attitudes. The solid grey arrows indicate guardian and peer analyses in Figure 1. Finally, to assess the relative magnitude of influence across all spheres of analysis, the last step includes all measures of adolescent, guardian, and peer religiosity and sexual attitudes in the conceptual model.

Results

Table 1 provides descriptive statistics of adolescent and guardians' sociodemographic characteristics and assesses if such characteristics differ by adolescents' sexual activity status. The average age of adolescent participants at baseline was about 16 years old, with near equal numbers of males (45%) and females (55%). Approximately half of all adolescents had primary education or less (56%), the vast majority were Christian (93%), and there were more who were living without biological parents (37%) compared to those living with one (34%) or both (29%). Guardians were most often the biological parent of the adolescent respondent (59%) and were typically female (71%), married (66%), and did not have more than junior secondary education (85%). Not shown in Table 1, a minority of adolescents were sexually active by age 16 (18%), and among those who were, the average age of sexual debut was 16.5 years by study end. As is typical in sub-Saharan Africa (Amo-Adjei & Tuoyire, 2018), those reporting early sexual debut were more likely to be girls than boys (64% versus 36%, respectively, p=0.021). Premarital sexual debut by age 16 was also associated with being of Krobo ethnicity (p=0.000), being poorer (p=0.002), living without either biological parent (p=0.005), residing in the high-HIV community (p=0.000), and having a less educated guardian (p=0.002).

Table 1. Percent distribution and means of adolescent characteristics, with tests of difference by adolescent sexual activity status

Characteristic	Total	Sexually active by age 16 % or mean	
		No	Yes
Adolescent			
Gender (%)**			
Male	44.7	46.6	36.0
Female	55.3	53.4	64.0
Age (mean)***	15.9	15.7	16.5
Highest education (%)			
None or primary	55.5	56.0	53.2
Junior high	32.6	31.8	36.0
Senior high or higher	11.9	12.2	10.8
Ethnicity (%)***			
Ewe	42.4	44.4	33.8
Krobo	44.9	42.1	57.7
Other	12.6	13.5	8.6
Religious denomination (%)			
Christian	93.2	92.8	95.1
Muslim or other	6.8	7.2	4.9
Household wealth (mean)**	0.5	0.5	0.4
Household composition (%)**			
One biological parent	33.6	34.1	31.1
Both biological parents	28.7	30.5	21.2
Neither biological parent	37.7	35.5	47.8
Community (%)***			
High HIV prevalence	50.3	47.8	61.7
Low HIV prevalence	49.7	52.2	38.3
Guardian			
Gender (%)			
Male	29.1	30.0	24.8
Female	70.9	70.0	75.2
Age (mean)	46.0	46.0	45.7
Relationship to child (%)			
Biological parent	58.6	60.0	52.7
Other	41.4	40.0	47.3
Education (%)**			
None	20.1	19.7	22.1
Primary	20.4	19.0	26.6
Junior	44.1	44.2	43.7
Senior or higher	15.4	17.1	7.7
Marital status (%)			
Not married/cohabiting	33.8	32.6	39.2
Married/cohabiting	66.2	67.4	60.8

n=1,204; *0.05; **0.01;***<0.001

Table 2 provides descriptive statistics of the religiosity and sexual attitude scores. Tests of difference are displayed to assess whether religiosity and attitudes differ across adolescents, guardians, and peers. In order to compare means and standard deviations, Table 2 uses the original religiosity survey items instead of the standardized mean scores of extrinsic and intrinsic religiosity. Similarly, Table 2 uses an unstandardized version of the mean attitude score.

Beginning with religiosity, adolescents reported lower averages across all religiosity measures than their guardians ($p=0.000$), except for one extrinsic religiosity item. In this case, adolescents had a lower mean score than guardians, which was statistically significant ($p=0.001$). Peer and adolescent religiosity cannot be compared as they were measured differently. Nonetheless, Table 2 indicates that approximately two-thirds of adolescents report that their peers regularly attend religious services.

For sexual attitudes, separate pairwise comparisons were made between each sphere of analysis (i.e., adolescent, guardian, and peers) and between the two indices of guardian attitudes (i.e., reported versus perceived). All tests of difference reached significance at a 99% confidence interval, indicating that sexual attitudes vary among all sexual attitude measures. Supporting previous research that suggests individuals have inaccurate perceptions of others' attitudes, Table 3 demonstrates that while adolescents perceive their guardians to be more sexually conservative than themselves, they underestimate their guardians' actual sexual conservatism. However, it is essential to note that adolescents do not *greatly* underestimate guardian sexual conservativism. While statistically different, the mean scores for guardian reported versus perceived attitudes are nonetheless comparable (1.87 versus 1.83, respectively). Table 3 also suggests that adolescents perceive their peers as more sexually permissive than themselves.

Table 2. Mean religiosity and attitude scores for adolescents, guardians, and peers

Characteristic	Mean (SD) or %	Score range
Extrinsic religiosity		
Frequency of attending religious services (mean)***		
Adolescent	1.92 (1.00)	0-3
Guardian	2.07 (1.08)	
Last time attended a religious service (mean)**		
Adolescent	1.74 (0.55)	0-2
Guardian	1.66 (0.62)	
Number of friends who regularly attend religious services (%)		
None or some	31.3	N/A
All	68.7	
Intrinsic religiosity		
Importance of religion in shaping daily life (mean)***		
Adolescent	1.36 (0.61)	0-2
Guardian	1.63 (0.53)	
Importance of religion in shaping major life decisions (mean)***		
Adolescent	1.33 (0.61)	0-2
Guardian	1.61 (0.53)	
Sexual attitudes (mean)* **		
Adolescent	1.69 (0.53)	0-2
Guardian reported	1.87 (0.24)	
Guardian perceived	1.83 (0.30)	
Peers perceived	1.47 (0.29)	

n=1,204; *0.05; **0.01; ***<0.001

Table 3 shows the correlation matrix of all religiosity and sexual attitude variables across the three spheres of analysis. Dotted lines demarcate separate sections for adolescent, guardian, and peer variables for visual simplicity. Coefficients outside these lines thereby indicate associations between these three spheres of analysis. The upper left corner (indicated by a light grey box) shows the correlation coefficient for adolescents' extrinsic and intrinsic religiosity. These appear to be only weakly related (r=0.18, p=0.000). Interestingly, this is also the case for guardian extrinsic and intrinsic religiosity, also in light grey (r=0.22, p=0.000).

Table 3. Pairwise correlations between adolescent religiosity, guardian religiosity, and sexual attitudes

		Adolescent			Guardian				Peers	
		Extrinsic religiosity	Intrinsic religiosity	Attitudes	Extrinsic religiosity	Intrinsic religiosity	Reported attitudes	Perceived attitudes	Extrinsic religiosity	Perceived attitudes
Adolescent	Extrinsic religiosity	-								
	Intrinsic religiosity	0.18***	-							
	Attitudes	0.08**	0.12***	-						
Guardian	Extrinsic religiosity	0.27***	0.04	0.08**	-					
	Intrinsic religiosity	0.01	0.31***	0.03	0.22***	-				
	Reported attitudes	-0.01	0.01	**0.20***	0.06*	-0.00	-			
	Perceived attitudes	0.03	0.07*	**0.46***	0.03	-0.001	**0.35***	-		
Peers	Extrinsic religiosity	0.19***	0.17***	0.13***	0.05	0.10**	0.04	0.13***	-	
	Perceived attitudes	0.06*	0.07*	0.28***	0.01	-0.01	0.19***	0.37***	0.22***	-

n=1,204; *0.05; **0.01; ***<0.001

The next step of the analysis examines how adolescents' intrinsic or extrinsic religiosity relates to sexual debut after controlling for sociodemographic and economic factors. Model 1 of Table 4 demonstrates that extrinsic religiosity does not predict sexual debut (p=0.237), whereas intrinsic religiosity does (p=0.0001). A one standard deviation increase in adolescents' intrinsic religiosity score is associated with a nearly 25% decrease in the odds of reporting sexual debut by age 16 (p=0.001). Also of interest, early sexual debut is associated with being female (p=0.007), older (p=0.001), and lower socioeconomic status (p=0.049), whereas having highly educated parents has a protective relationship (p=0.019).

Table 4. Odds-ratios of reporting sexual activity by age 16, as predicted by adolescents' religiosity and sexual attitudes

	Model 1		Model 2	
Variables	OR	95% CI	OR	95% CI
Adolescent religiosity				
Intrinsic	0.77**	(0.65, 0.90)	0.79**	(0.67, 0.93)
Extrinsic	0.88	(0.71, 1.09)	0.90	(0.72, 1.11)
Adolescent sexual attitudes			0.75***	(0.65, 0.87)
Female	1.55**	(1.13, 2.14)	1.56**	(1.12, 2.14)
Age	1.15**	(1.06, 1.25)	1.10*	(1.02, 1.20)
Highest education (none)				
Junior high	1.00	(0.66, 1.51)	1.03	(0.68, 1.55)
Senior high or higher	0.83	(0.44, 1.54)	0.92	(0.49, 1.72)
Non-Christian	0.85	(0.38, 1.91)	0.88	(0.40, 1.96)
Ethnicity (ref: Ewe)				
Krobo	1.26	(0.60, 2.63)	1.23	(0.58, 2.58)
Other	0.83	(0.41, 1.68)	0.80	(0.39, 1.61)
Household (ref: single parent)				
Both parents	0.95	(0.60, 1.49)	0.96	(0.61, 1.53)
No parent	1.53	(1.06, 2.20)	1.55*	(1.07, 2.24)
Mean SES	0.45*	(0.20, 1.00)	0.43*	(0.19, 0.95)
Low-HIV community	0.77	(0.38, 1.56)	0.75	(0.37, 1.53)
Guardian education (ref=none)				
Primary	1.49	(0.94, 2.37)	1.48	(0.93, 2.36)
JSS	1.05	(0.69, 1.60)	1.08	(0.71, 1.64)
SSS or higher	0.46*	(0.24, 0.88)	0.47*	(0.25, 0.90)
Guardian married	1.12	(0.78, 1.60)	1.11	(0.77, 1.60)
Pseudo R-squared		0.076		0.088

n=1,204; *0.05; **0.01; ***<0.001

The next question examines whether sexual attitudes mediate the relationship between adolescents' religiosity and sexual debut. Returning to the correlation matrix of Table 3, dark grey boxes in the top left corner show coefficients comparing adolescents' religiosity with their sexual attitudes. Surprisingly, sexual attitudes have a very low correspondence with both extrinsic (r=0.08, p=0.005) and intrinsic measures of religiosity (r=0.12, p=0.000). These findings preface those in Model 2 of Table 4, which simultaneously assesses the relationship of adolescents' religiosity and sexual attitudes on sexual debut. The key result is that conservative attitudes are associated with a lower likelihood of reporting sexual debut, but including attitudes does little to change the effect of intrinsic religiosity on sexual debut. In other words, intrinsic

religiosity *and* sexual attitudes have a significant and independent association with sexual debut (p=0.004 and p=0.000, respectively). Further, the standardized coefficients for each variable indicate that intrinsic religiosity and sexual attitudes exert a similar magnitude of influence on sexual debut. Each standard deviation increase towards sexual conservatism or greater intrinsic religiosity amounts to a 25% and 21% decreased likelihood of reporting early sexual activity, respectively.

The final research question addresses the relative importance of religiosity and sexual attitudes among peer groups and families. There are two parts to this question. The first part focuses on the relative influence of religiosity and attitudes on sexual debut within a sphere of influence, starting with guardians. Because guardians were surveyed directly, the analyses can examine both measures of guardian religiosity in addition to their reported *and* perceived sexual attitudes. Beginning with sexual attitudes, the boldface text in the correlation matrix of Table 3 shows associations between the different measures of sexual attitudes. A weak correlation coefficient between guardians' reported versus perceived sexual attitudes (r=0.35, p=0.000) confirms adolescents misestimate their guardians' sexual attitudes. Examining the relationship between adolescents' attitudes and both measures of guardian attitudes gives evidence of projection. The correlation is higher between adolescents' attitudes and perceived guardian attitudes (r=0.46, p=0.000) than reported guardian attitudes (r=0.20, p=0.000). This pattern continues into the multivariate Model 1 of Table 5, where the relationship between guardian-level variables and sexual debut is assessed. Guardian-reported sexual attitudes have no bearing on sexual debut (p=0.401), but perceived guardian attitudes do (p=0.005). For every standard deviation increase in guardian sexual conservativism (perceived), the likelihood of adolescent sexual debut decreases by 20%.

The other points of interest in Model 1 of Table 5 are the coefficients on the two dimensions of religiosity. Notably, unlike guardians' perceived sexual attitudes, neither extrinsic nor intrinsic religiosity is associated with sexual debut (p=0.857 and p=0.566, respectively). Further analyses (not shown) confirm that religiosity has no predictive value for sexual debut, even when sexual attitudes are excluded from the model. Table 3 also validates this finding, where the dark gray boxes show little shared co-variance between guardian religiosity and sexual attitudes, as was the case for adolescents.

Table 5. Odds-ratios of reporting sexual activity by age 19, as predicted by adolescent, guardian, and friend religiosity and sexual attitudes

	Model 1		Model 2		Model 3	
Variables	OR	95% CI	OR	95% CI	OR	95% CI
Adolescent religiosity						
Intrinsic					0.82*	(0.68, 0.97)
Extrinsic					0.96	(0.76, 1.20)
Adolescent sexual attitudes					0.78**	(0.66, 0.92)
Guardian religiosity						
Intrinsic	0.95	(0.81, 1.12)			1.05	(0.88, 1.25)
Extrinsic	1.02	(0.82, 1.26)			1.02	(0.82, 1.28)
Guardian reported sexual attitudes	1.07	(0.91, 1.26)			1.11	(0.94, 1.31)
Guardian perceived sexual attitudes	0.80**	(0.68, 0.94)			0.98	(0.82, 1.18)
Peer extrinsic religiosity: high			0.54***	(0.62, 0.85)	0.60**	(0.42, 0.84)
Peer-perceived sexual attitudes			0.72***	(0.62, 0.85)	0.76**	(0.64, 0.90)
Pseudo R-squared	0.070		0.090		0.110	

n=1,204; *0.05; **0.01; ***<0.001; all models control for sociodemographic and economic variables

Next, a similar examination is made for peer-level variables. Here, it is essential to bear in mind that because peers were not surveyed, the measures for both peer extrinsic religiosity and sexual attitudes reflect adolescents' perceptions. This likely explains why peer religiosity and sexual attitudes, although weakly correlated (r=0.22, p=0.000) in Table 3, are still more strongly correlated than the religiosity and sexual attitudes of adolescents or guardians. Model 2 in Table 5 examines the association between peer extrinsic religiosity and sexual debut while accounting for their sexual attitudes. Like the previous models examining adolescent variables, peer religiosity and sexual attitudes predict sexual debut. Compared to adolescents with a less religious peer group, adolescents with a highly religious peer group are roughly 45% less likely to report premarital sexual debut (p=0.000). For peers' sexual attitudes, every standard deviation increase towards sexual conservativism decreases adolescents' likelihood of having premarital sex by 20% (p=0.005).

The second part of this question examines the relative magnitude of influence of adolescent, guardian, and peer-level variables on sexual debut. Model 3 of Table 5 explores this by including the previous models' measures of religiosity and sexual attitudes in this final model.

There are two main takeaway findings. The first suggests no significant independent role of guardians on sexual debut, whereas adolescent and peer influences persist. Including all three spheres of analysis in the same model renders the previously observed association between guardian-perceived sexual attitudes and sexual debut insignificant (p=0.831). The second takeaway finding is that *both* adolescents' and peers' religiosity and sexual attitudes matter for sexual debut. When jointly estimated, the effect size of both adolescent and peer measures is reduced slightly but remains significant. Although it is not possible to compare the relative magnitude of adolescent and peer religiosity because they are different measures, it is possible to compare the magnitude of influence for sexual attitudes. The findings suggest that adolescent and peer attitudes have a nearly identical effect on sexual debut (Wald x^2=0.698).

Discussion

This study aims to understand the connection between religiosity, sexual attitudes, and premarital abstinence across multiple spheres of influence. These complex associations are not even well understood in Western settings, where research on religion and sexual behavior is extensive. To my knowledge, this is the first study to simultaneously estimate the effects of both religiosity and attitudes on sexual debut across multiple levels of an adolescent's social environment. This research makes three main contributions to the relatively thin body of literature on religiosity and adolescent sexual behavior in Africa. First, it assesses multiple dimensions of religiosity. Second, it tests whether religiosity operates primarily through adolescents' sexual norms. Third, it explores the possible influence of family and peers' religiosity and attitudes on adolescent sexual decision-making.

There are three interrelated questions of interest in this study. The first question asks whether differing dimensions of adolescent religiosity predict sexual debut. Capitalizing on the rich nature of this data set, this study uses separate indicators of extrinsic and intrinsic religiosity. It confirms that different types of religious expression relate to sexual debut in unique ways. The primary finding is that adolescents' intrinsic religiosity motivates premarital abstinence, whereas extrinsic religiosity has no relation to sexual activity. Even after adjusting for important individual and family characteristics, a standard deviation increase in intrinsic religiosity reduces the odds of having premarital sex by age 16 by more than 20%.

This finding is consistent with several previous Western and African studies, which generally suggest a more consistent relationship with intrinsic religiosity than extrinsic religiosity (Amoako-Agyeman, 2012; Burdette & Hill, 2009). Even so, other studies in Western settings find a delaying influence of extrinsic religiosity on sexual debut (Adamczyk & Felson, 2006; Hardy & Willoughby, 2017). That extrinsic religiosity was not associated with sexual activity in this study or several other studies from sub-Saharan Africa (Kumi-Kyereme et al., 2007; Tavares et al., 2009; Trinitapoli, 2009) may reflect differences in religious expression between contexts. In Ghana, as elsewhere in Africa, religious institutional activities form the backbone of social life, where the norm is to attend religious services multiple times per week (Soothill, 2007). Youth may regularly participate primarily for social benefits, and attendance may not be a reliable indicator of adolescents' commitment to putting religious teachings to practice. Here, it is also important to note that the results do not suggest attendance *increases* opportunities for sexual activity among Ghanaian youth, as would be suggested by some studies from Western and African settings (Adongo & Wilfred, 2019; Biddlecom et al., 2009; Dimbuene & Defo, 2011).

The lack of association between extrinsic religiosity and abstinence may also reflect the ubiquity of religious messaging in formal and informal modes of youth sexual socialization. In Africa, premarital abstinence is a staunchly endorsed ideal not only within religious institutions, but also within households, communities, schools, peer groups, and formal sex education programs (Bhana, 2016; Osafo et al., 2014). Frequent exposure to norms in religious services may, therefore, not have the same inhibiting impact when compared to settings where there are fewer conduits of religious sexual mores. More concretely, because Ghanaian youth are regularly exposed to religious norms across the social environment, attending church or mosque in more frequently may have little added effect on sexual decision-making compared to youth residing in contexts where these norms are less pervasive throughout society. Together, these possibilities suggest that commonly used measures of extrinsic religiosity may not be tapping the same underlying social processes across different cultural settings. A compelling direction for future research would be to further examine the validity of these measures in Africa and to explore if and how other forms of engagement in public religious life may be more closely associated with sexual behavior in this setting.

The next question of interest concerns the nuances of the relationship between religiosity and sexual attitudes. A popular hypothesis is that conservative sexual attitudes explain the association between religiosity and abstinence. Contrary to Western settings, where correlations between religiosity and sexual attitudes are modest (Lefkowitz et al., 2004; Rigo & Saroglou, 2018), religiosity and sexual attitudes are virtually unrelated in this Ghanaian sample. This finding indicates that even with the intimate role of religion in adolescents' lives, other sociocultural norms may inform their sexual attitudes. In some ways, this is perhaps unsurprising, given many youth cultures across sub-Saharan Africa place a high value on dating, romance, and sexual relationships (Cole & Thomas, 2009a; Leclerc-Madlala, 2003). In other ways, the disconnect between religiosity and sexual attitudes is remarkable, given the explicit messaging around sexual norms in many religious institutions.

Importantly, even if religious youth do not hold conservative sexual attitudes, they are still more likely to abstain from premarital sex than their less-religious counterparts. This finding conflicts with some Western studies finding a mediating influence of sexual attitudes (Meier, 2003; Whitbeck et al., 1999) and align with a smaller body of research that suggests intrinsic religiosity may share a unique connection with abstinence that is independent of sexual attitudes (Regnerus, 2010). Conceptually, this may indicate that religious adolescents still use religious moral norms as a referent for their behavior even if they do not necessarily let such proscriptions inform their value system. It is also possible that religious youth hold themselves to a different sexual standard than they do for others and that the survey items of this study were only assessing the latter. The survey asked the youth to report whether they felt it was acceptable for people to engage in premarital sexual activity, not whether premarital sexual activity was acceptable for themselves. A slight reframing of the questions may have produced different results.

Alternatively, the pathway between intrinsic religiosity and delayed sexual abstinence may operate via other indirect routes not explored in this study. Some of these mechanisms may reflect individual-level factors, such as a penchant for maintaining different religious values like self-restraint (C. Smith, 2003a) or personality traits like aversion to risk-taking (Mendolia et al., 2019). Given the importance of religious social sanctioning networks in mitigating deviance, indirect routes likely also operate through the social environment. It is generally understood that the pathways through which the social environment mitigates deviance are cognitive for

intrinsically religious individuals and behavioral for those extrinsically-oriented. That is, intrinsic religiosity is related to the internalization of widespread sexual norms, whereas high extrinsic religiosity denotes embeddedness into religious networks where behavioral monitoring is high (Ahrold et al., 2011; Lefkowitz et al., 2004; Reed & Meyers, 1991; Rohrbaugh & Jessor, 1975).

However, behavioral pathways may also be relevant to intrinsically religious individuals, and possibly more so in Ghana. In places like Ghana, where most youth regularly attend religious services, attendance alone may be an inadequate indicator of network closure. Rather, adolescents who place high importance on personal faith may be forging profound and far-reaching connections to other co-religionists, who collectively limit opportunities for premarital sexual activity. This possibility remains speculative, as network closure is still a relatively new area of research in studies on youth well-being, particularly in Africa. One study from Malawi nonetheless provides support for the influential role of religious congregations on the sexual behaviors of their adult members (Trinitapoli, 2009). Examining connections between religiosity, network density, and sexual outcomes among African youth would be a fruitful direction for future research.

The final question expands the focus from adolescent religiosity and sexual attitudes to those of their family and peers. The findings suggest a decisive role of peers (or at least perceptions about peers) and a minimal role of guardians. As with adolescents, both peers' extrinsic religiosity and sexual attitudes significantly and independently predict an adolescent's sexual debut, suggesting peer religiosity and sexual attitudes influence adolescent' sexual debut in unique ways. The results suggest the magnitude of peer influence is significant. For example, adolescents whose peer group regularly attends religious services are 50% less likely to report premarital sex than adolescents whose peers do not attend regularly. Further, peer sexual attitudes are as influential to adolescent sexual decision-making as adolescents' own attitudes.

By contrast, guardian religiosity of any type does not matter, nor do their sexual attitudes. Because this dataset includes rare data from adolescents *and* their guardians, it was possible to assess the relationship between guardians' actual versus perceived sexual attitudes and sexual debut. The evidence suggests that adolescents project their sexual attitudes onto their guardians and that such projections have more bearing on adolescents' sexual behaviors than guardians' actual sexual attitudes. However, these projections about guardians become insignificant after accounting for adolescents' religiosity and attitudes. Conceptually, this tells us that although

adolescents may project their sexual attitudes onto their guardians and peers, what they think their peers believe is more important.

These findings correspond with previous research from Western settings, which generally finds a more consistent influential role of peers versus guardians in the adolescent life stage (van de Bongardt et al., 2015). However, that guardians do not influence adolescent sexual decision-making still contrasts with most research, which typically finds parents still matter, even if indirectly (Landor et al., 2011b; Meier, 2003) or to a lesser extent than peers (Karim et al., 2003; Magnani et al., 2002). Given the absence of literature on the religiosity of family and peers in sub-Saharan Africa, it is difficult to situate these findings in comparative literature. The results nonetheless suggest guardians may play a different role in the socialization of youth in sub-Saharan Africa versus the West. One possibility is that children in sub-Saharan Africa are exposed to a broader array of familial socializing influences as they grow up because many are raised under the care of extended family members (Madhavan, 2004). Compared to the nuclear family of the West, where biological parents are the primary agents of socialization, the socializing impact of any single parent or guardian may be diluted in the sub-Saharan African setting.

There are several limitations to this study to keep in mind when considering these findings. The primary limitation concerns reverse causality, a shortfall in cross-sectional research design. It is uncertain, for example, whether religiosity and conservative sexual attitudes prohibit sexual activity or if individuals become or choose peers who are less religious or sexually conservative after having premarital sex. Some longitudinal studies suggest adolescents do not become less religious after premarital sex (Hardy, 2003; Meier, 2003), but in general, the consensus is that most associations involving religiosity are reciprocal (Regnerus & Smith, 2005). Failing to account for instances of reverse causality may lead to an overinflation of the coefficients in this study. However, since I obtained measures of religiosity and sexual attitudes before sexual debut for over 81% of the sample, any issues of reverse causality are likely minimal. Sensitivity analyses confirm this possibility, as results were consistent even when removing those 18 and older from the analysis, who constitute a large bulk of participants sexually active at baseline. Although some coefficients become less significant in these models, these changes are most likely attributable to a substantial reduction in sample size.

Another concern involves reporting and generalizability. Because peers were not directly interviewed, this study relies on adolescents' perceptions of their peers' attitudes and religious practices. Corresponding with previous studies on perceived norms and attitudes (Berry-Cabán et al., 2020; Stattin et al., 2021; Stattin & Kim, 2018; Thijs & Zee, 2019), peer-reported sexual attitudes likely depart from their perceived attitudes, as was the case for guardians in this study. How adolescents perceive their peer groups is still sociologically relevant and, as the findings suggest, possibly more relevant than peers' actual behaviors and beliefs. Care should nonetheless still be taken in the interpretation of the results. The findings are also based on the assumption that participants correctly reported information.

The possibility of social desirability bias means that some adolescents may have exaggerated their religiosity. It is also commonly assumed that men may exaggerate their sexual experience, whereas women may underreport. Notwithstanding, research from both Western settings and sub-Saharan Africa suggests that self-reported data on sexual behaviors are reliable (Clark et al., 2011; Hamilton & Morris, 2010; Kelly et al., 2013). Finally, the other main limitation of the study relates to generalizability. The findings are representative of adolescents in the towns from which the data is collected but may not necessarily represent the experiences of adolescents in Ghana or across sub-Saharan Africa more broadly.

Limitations notwithstanding, this study provides a more nuanced understanding of the ways religiosity and sexual attitudes relate to sexual decision-making. The findings specifically offer evidence of a delaying role of both conservative sexual attitudes and intrinsic religiosity on sexual debut and point to the strong influence of peer beliefs and a virtual absence of parental influence in the sexual decision-making process. These findings are situated in the unique context of sub-Saharan Africa, where religion forms the backbone of social life and lays the foundation for conservative sexual norms but is simultaneously challenged by other sociocultural norms endorsing premarital sex. This study may be of interest to a wide range of stakeholders, from policymakers to religious institutions and actors, who have a vested interest in delaying sexual debut, even as their underlying motivation for achieving this outcome may sometimes differ. In building upon a thin body of literature, this study is an essential addition to the larger body of research examining sociocultural predictors of adolescent sexual decision-making in the challenging context of sub-Saharan Africa.

Appendix

A1. Sensitivity analysis assessing the impact of including versus excluding adolescents who were age 18 or older at baseline (n=464) as reported as odds-ratios.

	All	<18	All	<18	All	<18	All	<18	All	<18
Variables	OR		OR		OR		OR		OR	
Adolescent religiosity										
Intrinsic	0.77**	0.76*	0.79**	0.77*					0.82*	0.82
Extrinsic	0.88		0.90						0.96	0.98
Adolescent attitudes			0.75***	0.71**					0.78**	0.73*
Guardian religiosity										
Intrinsic					0.95	0.89			1.05	0.97
Extrinsic					1.02	1.08			1.02	1.08
Guardian reported attitudes					1.07	1.04			1.11	1.13
Guardian perceived attitudes					0.80**	0.75*			0.98	1.05
Peer extrinsic religiosity: low							0.54***	0.44**	0.60**	0.47**
Peer perceived attitudes							0.72***	0.62***	0.76**	0.63**
Pseudo R-squared	0.076	0.076	0.088	0.089	0.070	0.072	0.090	0.111	0.110	0.123

*0.05; **0.01; ***<0.001

A2. Survey questions assessing religiosity and sexual attitudes of adolescents, family, and peers

Survey question	Response option
Religiosity	
In the last 12 months, how often have you attended religious services?	Monthly or less 2-3 times a week Once a week More than once a week
When was the last time you attended a religious service?	Two months or more In the last month In the last week
How important is religious faith in shaping your daily life? How important is religious faith in shaping your major life decisions?	Somewhat/not important Very important Extremely important
Over the past year, how many of your friends have regularly attended religious services?	Some or all of them None of them
Sexual attitudes	
Adolescent It is alright for people to have sex before marriage if they are in love People should only have sex if they are married People should not have sex before marriage It is alright for two people to have sex before marriage	Very true Somewhat true Not at all true
Guardian (reported and perceived) *Adults in [adolescent's] family:* Would disapprove of him/her having sex	

Think that sex is a normal part of adolescence Would approve of him/her having sex if they thought it would lead to marriage Think that having sex is an important part of becoming an adult Believe that people must wait until they are married to have sex Would approve of him/her having sex his/her partner gave him/her money or other gifts in return Would be very angry if they discovered that [adolescent] had sex with a casual partner Think it is natural for young people to experiment with having sex Would approve of him/her having sex if they knew that some form of birth control was being used	Very true Somewhat true Not at all true
Peers *How many of your friends believe that:* Boys/girls your age should wait until they are older before they have sex? Boys/girls should wait until they get married to have sex? It's okay for a boy/girl your age to have sex with a steady girlfriend/boyfriend? It's okay for a boy/girl your age to have sex with more than one partner in a month? Young boys/girls should have sex regularly in order to avoid health problems?	All of them Some of them None of them
Among your friends, boys/girls who have the most sexual experience are seen as the coolest Your friends suggest dates to each other who are known to be sexually "easy" Most of your friends believe that people should only have sex in a serious relationship Your friends brag about their sexual experiences Your friends would approve of a boy/girl having multiple sexual partners	Very true Somewhat true Not at all true
What would happen if: A girl/boy your age had sex with a boyfriend/girlfriend of about the same age? A girl/boy your age had sexual relationships with two partners at the same time? A girl/boy your age received money or gifts from someone with whom they had sex?	Friends would respect them more It would not affect their friends' respect Friends would respect them less

Preamble to Chapter 4

Chapter 3 explored the ways religion may shape adolescent sexual decision-making. This question is particularly relevant in contexts like Ghana, where virtually everyone identifies as religious, and religion forms the backbone of social life. At face value, it would be expected that religion provides the dominant moral frame from which Ghanaian youth orient their sexual values, attitudes, and behaviors. As my findings demonstrate, the picture is more complicated. While those who place high importance on personal faith are less likely to engage in premarital sex, they do not necessarily have conservative sexual attitudes. Even more curiously, despite not having conservative sexual attitudes, highly religious youth still endeavor to abstain from sex. I provided several possible explanations for these findings in the chapter. From a panoptic view, I see these findings as reflective of the sociocultural landscape, where a mélange of institutions and socializing agents provide youth with competing sets of messages regarding sexuality. That religion may inform youths' sexual behaviors, but not their attitudes, may reflect the high reward youth culture places on premarital relationships, which are blueprints for marriage and family formation and rely on sexual intimacy to validate love and commitment. My findings may reflect how youth strike a moral balance between religious values and those that have long been intrinsic to African culture. This chapter also shows how different actors of the social environment may factor into youths' sexual decision-making and value formation. While Ghanaian adolescents may experience a push-and-pull between competing moral norms, my findings suggest there is no similar struggle between the influential role of families versus peers. Ghanaian adolescents undoubtedly align their sexual behaviors with the perceived value systems of their peers but do not do the same for their guardians. Taken together, Chapter 3 is a story of how the religious sociocultural environment offers Ghanaian youth multiple paths to choose from as they form their values and make decisions about the transition to sexual activity.

Chapter 4 stays within the theme of conflicting sexual norms but shifts focus toward a conflict of norms occurring between modern and traditional religions in Ghana. Even as the vast majority of Ghanaians affiliate with Abrahamic religions, traditional spiritual practices are still intrinsic to the African cultural fabric. Perhaps nowhere are traditional customs more relevant in Ghana than amongst the Krobos, the only Ghanaian ethnic group still practicing a female rite of passage. Despite the importance of the *dipo* initiation rite to Krobo heritage, local leaders have called for its abolition because its traditional values diverge from modern religious norms. While

traditional customs dictate that *dipo* is the normative entrée to adulthood and sexual activity, by modern Ghanaian standards, rites of passage do not confer individuals adulthood status, and marriage is the morally appropriate starting point for sexual activity. The much younger age at which girls now participate in *dipo* complicates this tension, as do the unusually severe HIV rates localized to the Krobo communities. Krobo initiates stand in the center of this debate, straddling the lines between traditional and modern norms, which offer different kinds of permissions for sexual activity. In Chapter 4, I explore how Krobo girls navigate these intersections by examining what *dipo* means and how the traditional practice may inform girls' sexual decisions in the contemporary sociocultural climate.

Chapter 4. Do Initiation Rites Hasten Sexual Debut Among Adolescent Girls? A Mixed-Method Analysis from Eastern Ghana

Abstract

Many identify Ghana's most iconic female initiation rite as a risk factor for early premarital sexual debut. The perceived problem is that despite initiating at much younger ages than their forebears, modern girls continue to validate traditional interpretations of the rite as the normative entrée to adulthood and, by extension, sexual activity. To examine these assumptions, I combine 99 in-depth interviews with girls and community members and longitudinal data from a separate sample of 690 female adolescents, all of whom reside in districts where the rite is practiced. Both forms of data support the assumption that participation in the rite is related to entry into sexual activity; initiates have 67% greater odds of becoming sexually active compared to non-initiates, and most initiates consider the rite a license to begin sexual activity. However, *dipo* does not foster very early sexual activity, as is widely assumed. Rather, initiates transition to sexual activity, on average, at age 16, which is approximately six months earlier than those who do not participate in the rite. Further, socioeconomic concerns often motivate girls to interpret the rite as entrée to sexual activity, not traditional notions of the rite as a passage to adulthood. These findings suggest that traditional initiation rites may have continued relevance to adolescent sexual decision-making in sub-Saharan Africa, albeit in ways that are reflective of the contemporary structural environment.

Introduction

Many Ghanaians identify their country's most iconic female initiation rite as a risk factor for early premarital sexual debut (Anarfi, 2004; Boakye, 2010; Steegstra, 2006). While most female initiation customs across Ghana have faded, every spring, girls of the Krobo ethnic group practice a series of initiation rituals and celebrations in a weekend-long rite called *dipo.* Initiation customs like *dipo* serve the purpose of symbolically ushering participants from a state of childhood to adulthood (Van Gennep, 1960). Like other initiation customs across sub-Saharan Africa (Malisha et al., 2008; Skinner et al., 2013), passing through the rite was historically associated with a new freedom for girls to begin sexual intercourse regardless of marital status

(Caldwell et al., 1989; Hevi-Yiboe, 2003; Steegstra, 2006). This tradition poses a problem in contemporary Ghana, where Krobo girls are much younger upon passage, and Judeo-Christian moral norms prohibit premarital sex. The supposed problem is that despite these considerations, Krobo girls continue to interpret the rite as a passage to adulthood (Adjaye, 1999) and a license to begin sexual intercourse before marriage (Anarfi, 2004; Boakye, 2010; Yarney et al., 2015). This perception contributes to Krobo girls' reputation as commencing sexual activity very young and being more sexually experienced than girls from other ethnic groups (Steegstra, 2006).

The problem of *dipo* extends beyond issues of sexual morality. Ghanaians contend that the supposed sexual permissiveness of *dipo* girls is contributing to the particularly challenging sexual and reproductive health (SRH) problems observed in the Krobo communities (Anarfi, 2004; Steegstra, 2006). In the Eastern region where the Krobos reside, approximately 17% of females aged 15-19 have begun childbearing compared to the national average of 14% (GSS, 2015). Perhaps more salient is the Eastern region's association with HIV; in contrast to Ghana's median national prevalence of 1.7%, HIV prevalence here reaches 4.2% (GHS, 2017). District-level sentinel data further indicates that HIV in the Eastern region may be an issue specific to the Krobos versus other ethnic groups. For example, one Krobo-majority market town is the site of Ghana's highest prevalence rate of 10.4%, which is substantially higher than the 2.8% prevalence rate of a similar, nearby Krobo-minority market town (NACP, 2013). Correspondingly, a survey of 1200 prenatal patients in the Manya Krobo districts found that 18.5% of Krobo patients were HIV-positive, double the prevalence of non-Krobo patients (Sauvé et al., 2002).

Because *dipo* is often blamed for Krobo girls' poor SRH, many public health and local leaders have called for the rite's abolition (Steegstra, 2006). Yet, besides the observed correlation between *dipo* and these localized SRH issues, there is limited empirical evidence available to support the claim that initiation rites like *dipo* are causally related to sexual activity. Initiation rites are generally absent from research on youth sexual decision-making or SRH risk, save for customs that place individuals at heightened HIV risk through circumcision (Kangmennaang et al., 2016; Monjok et al., 2007). This omission may reflect an implicit assumption among researchers that initiation rites are no longer relevant to life course transitions. This assumption is understandable, given the normative pathway to adulthood has changed, and many rites have correspondingly faded. Still, initiation rites have long been regarded as influential in regulating

adolescent sexuality (Crentsil, 2015; Groce et al., 2006; Kotanyi & Krings-Ney, 2009), and as Ghanaians suggest, may still retain this influence where practiced.

Validating Ghanaians' claims requires research that does not yet exist or is too limited to draw persuasive conclusions. To the best of my knowledge, no study has quantitatively examined if there is a temporal relationship between initiation rites and sexual debut. Further, although the initiation rites and sexual behaviors are often discussed in the qualitative literature, findings about their potential links remain sparse and contradictory and often do not include critical voices. In the case of *dipo*, for example, it is unclear how Krobo girls interpret the rite. Also missing are qualitative studies examining initiates' views of these rites in tandem with those of the wider community. Understanding the collective meaning-making of traditional customs is essential because the community plays a pivotal role in constructing the symbolic meaning and purpose of the custom (Adjaye, 1999; Boakye, 2010; La Fontaine, 1985) and may thereby influence initiates' interpretations and sexual choices after passage.

Background

Initiation rites in sub-Saharan Africa have long been regarded as influential in regulating adolescent sexual behavior (Crentsil, 2015; Delius & Glaser, 2002; Groce et al., 2006; Hevi-Yiboe, 2003, Jeannerat, 1997; Jules-Rosette, 1980). Historically, like other rites across sub-Saharan Africa, *dipo* controlled the timing of sexual debut among Krobo girls through a taboo against pre-initiation intercourse (Adjaye, 1999; Boakye, 2010; Huber, 1963; Steegstra, 2006). In pre-colonial times, many rituals were implemented to maintain the Krobo girls' chastity (Huber, 1963). Upon reaching mid or late adolescence, girls were separated from the community for a year, where they would receive training in womanhood (Boakye, 2010; Glozah & Lawani, 2014). Girls with fiancés were permitted visits that allowed sexual play, but full intercourse was forbidden (Huber, 1963). After a year of seclusion, the girls sat on a sacred stone believed to be able to reveal a concealed pregnancy (Boakye, 2010; Huber, 1963). Failing the pregnancy test and bearing an illegitimate child would bring curses and shame upon the household. As a result, girls and their babies were banished from the community to the 'bush' where they would presumably not survive (Hampton, 1990; Steegstra, 2006). Given the gravity of these consequences, pre-initiation sexual intercourse and pregnancies are regarded to have been rare (Steegstra, 2006). Alternatively, passing the test was met with community celebration and

festivities honoring the girls' new status as full Krobo women (Glozah & Lawani, 2014). It also signified new sexual freedoms for initiated girls who were now permitted to have sexual intercourse (Steegstra, 2006). While sexual intercourse was allowed regardless of girls' marital status, *dipo* was closely followed by marriage, restricting extensive premarital sexual opportunities (Huber, 1963).

With the spread of Christianity and Islam across sub-Saharan Africa, a new moral code relegating sexual interactions to the exclusive confines of marriage superseded previous customs, which were more concerned with maintaining pre-initiation abstinence over pre-nuptial abstinence. Structural changes since pre-colonial times also shifted the nature of the transition to adulthood. While *dipo* is still considered a prerequisite for womanhood and sexual intercourse, initiated girls are nevertheless considered sociologically immature until they have completed a longer, slower path to adulthood by finishing school, achieving financial stability through employment, and entering marriage (Boakye, 2010; Bratton, 2010; Crentsil, 2007). That *dipo* constitutes a minimum but not a wholly satisfactory requirement for womanhood and sexual intercourse is especially the case for modern initiates, who not only initiate younger but pass through an expedited, three-day version of the rite (Adjaye, 1999; Anarfi, 2003; Boakye, 2010; Huber, 1963; Sackey, 2004).

A small body of qualitative research from sub-Saharan Africa hints that initiation rites like *dipo* may still matter for sexual decision-making despite these changes. For example, some ethnic groups still consider initiation rites as a passage to adulthood and the normative starting point for sexual intercourse (Caldwell et al., 1989; Munthali & Zulu, 2007; Skinner et al., 2013). This transitional aspect of initiation rites is identified as a risk factor for earlier sexual debut in Ghana and several other African countries (Malisha et al., 2008; Munthali & Zulu, 2007; UNESCO, 2002). Some adolescents in these studies have reported feeling entitled or even encouraged to have sex after passage (Malisha et al., 2008; Munthali & Zulu, 2007; Skinner et al., 2013). These accounts correspond with observations of Manya Krobo residents, who claim that Krobo girls are quick to enter romantic sexual relationships shortly after the rite (Boakye, 2010; Steegstra, 2006; Yarney et al., 2015).

Despite public perception, no research has confirmed whether Krobo girls continue to interpret *dipo* as a passage to adulthood and a license to begin sexual activity. Further, studies from the Eastern region hint the relationship between *dipo*, sexual debut, and SRH challenges

may not be as robust as perceived in Ghana. At least three alternative explanations can be derived from this literature. The first explanation concerns the potentially confounding influence of ethnicity on the relationship between *dipo*, sexual outcomes, and the SRH problems in Krobo communities. More specifically, the elevated HIV rates in the Eastern region may have little to do with *dipo* or early sexual debut but instead reflects Krobo women's proclivity to migrate to and from Cote d'Ivoire to partake in sex work (Anarfi, 1992; Sauvé et al., 2002; Steegstra, 2006). The construction of the nearby Volta hydroelectric dam in the 1970s sparked this cyclical migration, which disproportionately flooded Krobo farmland and produced an economic motive for Krobo women to enter the sex trade in Abidjan (Anarfi, 1992; Sauvé et al., 2002; Steegstra, 2006). Returning sex workers not only came back with HIV, but they also returned with visible affluence, prompting other young women to follow them into the trade (Anarfi, 2004). Krobo girls' sexual behavior may reflect norms and practices of Krobos not related to dipo, and high HIV rates among the Krobos may reflect their unique structural circumstances, not their unique cultural tradition.

The second alternative explanation evokes the possibility of anticipatory effects, whereby Krobo girls may be participating in *dipo* only when they appear to be on the verge of becoming sexually active. This possibility reflects older cohorts' perception that modern girls begin sexual activity much earlier than in the past (Anarfi, 2004; Asampong et al., 2013). Ethnographic research indicates that part of the reason Krobo guardians initiate their girls at younger ages is in response to these perceived changes and to, therefore, ensure the rite continues to precede sexual debut (Boakye, 2010). Guardians may pre-emptively initiate their girls when they appear at 'risk' of becoming sexually active, such as becoming more closely associated with boys. In such cases, the observed catalyzing influence of *dipo* on sexual debut may be capturing the transition to sexual activity among girls who were most likely to become sexually active (or, perhaps, who were already sexually active in hiding).

A final possibility is that *dipo* may have a stronger association with sexual debut for girls who live in precarious household circumstances. Research has consistently demonstrated that girls living in poorer households or without biological parents often do not receive adequate financial support (Ariyo et al., 2019; Madhavan, 2004; Mojola, 2011b). This lack of financial support is related to girls' heightened risk of earlier sexual debut and SRH outcomes (Kågesten et al., 2018; Shoko et al., 2018; Somefun & Odimegwu, 2018) because boyfriends are an

alternative source of economic support (Luke, 2003; Mojola, 2011b). Some qualitative studies suggest that Krobo girls living in poorer households or without biological parents may have a stronger incentive to legitimize *dipo* as the normative pathway to sexual relationships than adequately supported girls (Anarfi, 2004; Yarney et al., 2015). That passing through *dipo* may motivate sexual activity for some girls, but not others, insinuates that *dipo* may operate synergistically with other factors related to sexual decision-making.

This chapter combines qualitative interviews with the longitudinal survey to explore the assumption that *dipo* catalyzes sexual debut, including examinations of these alternative explanations. I use in-depth interviews to understand what the contemporary practice of *dipo* means to girls and the wider community, particularly regarding the transition to adulthood and sexual decision-making. I supplement these interviews with longitudinal analyses where I test the hypothesis that *dipo* initiates are more likely to report sexual activity and begin sex sooner than non-participants. To rule out alternative explanations, I also use the survey data to examine if any observed association between *dipo* and sexual debut is confounded by ethnicity, better characterized by anticipatory effects, or moderated by household socioeconomic circumstances. With this mixed-method approach, this study is the first to explore temporal associations between an initiation rite and sexual debut and to combine statistical analyses with community-level qualitative accounts regarding the rite's meaning for life course transitions.

Methods

Setting

By sub-Saharan African standards, Ghana fares relatively well in economic and human development indicators and is consequently reputed to be the subcontinent's darling of development. However, Ghana's development success is not experienced evenly across its administrative regions. The qualitative and quantitative data come from three market towns in Ghana's Eastern region. The rural, agricultural Eastern region is particularly underdeveloped and is known for its challenging social and public health issues. The Eastern region has the lowest gender parity in primary education (GSS, 2015) and its rates of teenage pregnancy and HIV are twice as high as those observed at the capital or national level, respectively (GHS, 2017; GSS, 2015). The Eastern region's peri-urban market towns are better developed than the small satellite villages, offering shops, services, and economic opportunities for the region's inhabitants. Sexual

and reproductive health issues are nonetheless salient within the market towns and, according to local stakeholders, exacerbate longstanding problems of poverty and gender inequality.

Figure 1 illustrates a map of the research sites. I conducted qualitative fieldwork in a market town called Asesewa, the capital of the Upper Manya Krobo district in the Eastern region. The longitudinal survey data comes from two market towns in the Lower Manya Krobo districts, Agormanya and Juapong. As the name suggests, the Upper and Lower Manya Krobo districts border each other and are primarily inhabited by the Krobos. All three market towns are within 40 to 80 kilometers of one another and near equal distance to Accra, the nation's capital. With a population of 20 000, Asesewa is somewhat bigger than Agormanya and Juapong, each of which has about 15 000 residents.

The Upper and Lower Manya Krobos districts have similar sociodemographic profiles, but there are differences between the market towns. Notably, the Krobo ethnic group predominantly inhabits Asesewa and Agormanya, and the Ewes are the ethnic majority of Juapong. Compared to Krobos, who only constitute about 1% of Ghana's total population, the Ewes are the country's third largest ethnic group (GSS, 2015). The Krobos and Ewes have distinct languages and the Krobos also culturally differ in their practice of an initiation rite. The different ethnic profiles of the towns also mirror the towns' differences in HIV prevalence rates. Sentinel survey data estimates Juapong's HIV rate at 2.8%, which climbs to 10.4% in nearby Agormanya (NACP, 2013). Providing evidence that HIV may be an issue related to ethnicity, not geographical location, data from prenatal clinics in Agormanya found HIV rates to be twice as high among local Krobo women than those from other ethnic groups (Sauvé et al., 2002). Comparable estimates for Asesewa are unavailable, but recent district-level data suggests that nearly 5% of the Upper Manya Krobo population is infected with HIV (Ghana AIDS Commission, 2019).

Figure 1. Map of research sites

Qualitative data

Sample and Recruitment

To gain a community-level understanding of the *dipo* initiation rite, I draw upon in-depth interviews involving 99 adolescent girls and boys, guardians, and community stakeholders in Asesewa. I collected these interviews during a period of fieldwork in 2017. I chose Asesewa because of its proximity to the longitudinal study and because it was the site of another research program called Nutrition Links. Through the Nutrition Links program, I had significant access to

research infrastructure and resources, including experienced local interviewers. I hired three women as research assistants from the pool of available employees. Together, we interviewed 44 adolescents, 20 guardians, and 15 stakeholders. We also held four focus group discussions with an additional 20 adolescents. Reflecting the demographic profile of Asesewa, nearly 75% of all interviewees were Krobo, the rest identifying as Akan, Ghana's largest ethnic group, or another minority group.

To recruit adolescents for the one-on-one interviews, the research assistants went door-to-door across Asesewa's six administrative districts during and outside school hours. Adolescents between the ages of 15 and 19 who spoke English or Krobo were eligible for interviews. Of the 44 adolescents recruited, 25 were female, and 19 were male. Nineteen of the female adolescents were Krobo, and all but four Krobo girls had participated in the *dipo* initiation rite at the time of the interview. Most of the Krobo girls who were initiated were also sexually active (n=12) and only three girls remained chaste after the rite. Among the four Krobo girls who had not participated in dipo, one reported sexual activity, and the other three abstained from sex.

We recruited adolescent focus group participants from these original interviewees. Interviewees were asked if they had friends of the same gender who would be interested in participating in a focus group discussion. We also required that their friends be similar in their sexual activity status so that we could keep sexually active and sexually inactive youth into separate groups. Interviewees were given recruitment slips to share with their friends, who contacted us to participate. Each final focus group had five participants and was segregated by gender and sexual activity (i.e., sexually active girls, sexually inactive girls, sexually active boys, sexually inactive boys). All focus group participants were Krobo, save for one Ewe girl and two Ewe boys in the sexually inactive groups. Because of a stigma surrounding the *dipo* rite and sexual activity, we did not ask female focus group participants to disclose whether they participated in *dipo*. However, all girls in the sexually active focus group discussion indicated they had been initiated.

After completing the adolescent interviews, we interviewed 20 of their guardians. We randomly drew guardians from the original adolescent interviewees, but oversampled guardians of girls (n=16) as they would likely have more insight into the dipo initiation rite. To recruit guardians, the research assistants returned to the adolescents' homes and asked to interview

whoever was primarily responsible for the adolescent. Half of the guardians were biological mothers, while the other half were biological fathers, siblings, or relatives.

Finally, we also recruited 15 community stakeholders. The stakeholders were individuals who had a vested interest in adolescent well-being, including employees from health and social work ministries (n=5), religious leaders (n=5), political leaders (n=3), and opinion leaders (n=2). Research assistants recruited these individuals by approaching them directly or sending them a recruitment letter.

We continued to conduct interviews for each participant category until we reached saturation. To incentivize their participation, we offered interviewees a small gift, including stationery supplies, soaps, or small amounts of cash (5 GHC). The research was explained to the participants both verbally and via a consent form. All participants gave consent or assent to participate, and we also attained consent from guardians for adolescent participants under 18. Community leaders gave their permission to conduct this study as part of the Nutrition Links program. I also obtained ethical approval for the study from the ethics boards at McGill University and the University of Ghana.

Interviews

Interviews took place either in the homes of the participants or the Nutrition Links Centre and were audio-recorded with the participants' permission. I conducted interviews with the stakeholders, except for three who could not speak English. The research assistant interviewed the rest of the participants in either English or Krobo. The assistants also facilitated the focus group discussions, which were held at the Nutrition Links Centre. I perceived it was optimal for local research assistants to conduct most of the interviews given the sensitive nature of some of the topics and the greater likelihood that interviewees would be more candid with a local versus a foreigner. The one-on-one interviews lasted between 60 and 90 minutes, and the focus group discussions ran between 90 and 120 minutes.

The interviews followed a semi-structured format. I provided an interview guide as a general frame, but participants were prompted to expand on their thoughts, and conversations were allowed to flow in non-structured directions. The three research assistants translated the English version to Krobo so that interviewees could converse in the language of their choice.

The primary aim of the in-depth interviews is to understand the contemporary purpose and meaning of *dipo*, particularly as it relates to the transition to adulthood and sexual norms.

We began by asking participants to provide information about the current practice of the rite, including how common it is, the age of the initiates, and details about what happens during the ceremony. Next, we explored the importance of the rite in the lives of Krobo girls and the wider Krobo community. From here, we asked more pointed questions regarding life course transitions and how passing through the rite may inform initiates' sexual decision-making. Krobo girls in the one-on-one interviews were asked to share their experiences and decisions around sex. We did not prompt focus group discussants to share their personal experiences but rather speak about their observations of youth more generally. I framed the questions differently for focus group participants to minimize ethical concerns of confidentiality. Participants were nonetheless allowed to share their personal experiences with the group at their own will.

Analysis

I analyzed the qualitative interviews using ATLAS.ti software and relied on memos to guide each step of the process. I began by grouping the transcripts by interviewee type (initiated girls, non-initiated girls, adolescent boys, guardians, and stakeholders). I maintained a memo for each interview, including a summary, key points, and any peculiarities I may need to investigate further. I then coded each interview line-by-line using both deductive and inductive coding techniques. To code deductively, I generated and assigned codes based on themes developed from my broader research questions, interview guide, and previous literature. While creating this deductive coding structure and assigning codes to each interview, I also applied inductive coding, allowing the data to suggest codes to me organically. After coding each line of the interviews, I organized the codes into thematic subgroups and dropped ones that held little relevance. I used memos to index each of these decisions.

After assigning codes and creating a coding structure, I compared codes between participant categories to identify patterns and variations across different types of participants. Beginning at the broadest level, I compared responses between initiates and all other participant categories to assess if and how the meaning of *dipo* differs between girls and the wider community. I then further explored responses between distinct sub-categories of participants, most principally initiated girls versus their guardians or other adults and sexually active initiates versus those who remained abstinent. I consider agreement occurring across all categories of participants to be community-level narratives. Where agreement is reached within participant categories but not between them, I interpret these differences as reflecting social locations or

subcultures (such as cohort differences). These interpretations occurred within a set of analytic memos, where I compared themes across categories of participants and critically engaged with the findings vis-a-vis pre-existing literature.

Quantitative Data

Sample

To supplement the qualitative findings, this study uses a three-wave longitudinal survey from Agormanya and Juapong, which were chosen based on respective HIV prevalence rates. In 2010, field workers from the University of Ghana visited all homes in the two towns to compile a list of eligible adolescents. A simple random sample of youth was drawn from this list. Interviewers were men and women, generally in their 20s. All field team members were university-educated, having earned, at minimum, an undergraduate degree. Most interviewers also had substantial interviewing experience on previous projects. After the initial enumeration, 1,275 unmarried females aged 13-14 and 18-19 were randomly selected and surveyed (75% participation rate) with near equal amounts of participants drawn from each town. Participants and their guardians were interviewed at 20-month intervals. By the third and final wave, the younger and older cohorts were approximately 16-17 and 21-22 years old, respectively (for more details about this study, see Bingenheimer and Stobeanau 2016).

The procedures involving human participants of this study were per the ethical standards of the institutional review boards, including the Noguchi Memorial Institute for Medical Research at the University of Ghana, the McGill Research Ethics Boards, and the Institutional Review Boards at George Washington University. All participants gave written consent to participate or assent if they were under 18. Written consent from guardians was also given for minors. To mitigate any discomfort associated with discussing sensitive topics like sexual activity, field supervisors attempted to match the gender of interviewers and respondents as often as possible.

This research relies on data from female participants. I more specifically focus on their life histories from age 12 to 19. Adolescent females who began sexual intercourse before 12 are rare (n=10, 1.4%) and are removed from the analysis because their sexual experiences likely occurred under atypical circumstances (such as forced sex). The final baseline sample includes 690 adolescent females.

Measures

The outcome variable is the response to the survey item 'Have you ever in your life had sexual intercourse?'. Participants were also asked to report the age they began having sex, which was used to create a life history dataset. Approximately 22% of participants had already had sex by wave one and were, therefore, reporting retrospectively. An additional 20% became sexually active between waves 2 and 3. I compared responses about sexual debut and the age of sexual debut across waves to detect incidences of misreporting. Discrepancies in reporting sexual debut across waves are minor. In contrast, differences in the reported age of first sex are more common, occurring in approximately 58% of participants who reported sexual activity during adolescence. Of all discrepancies, half (53%) vary in reported age by one year, about one-third (36%) vary in reported age by one to two years, and the rest (11%) vary by three years or more. The average discrepancy in reported age is 1.3 years. Given the high percentage of discrepancies, I ran the initial analyses using the age reported at the earliest wave and the mean age reported across waves. The means for each measure are comparable (16.2 and 16.1, respectively; $r=0.91$, $p<0.001$). Using either measure in the multivariate models did not yield significantly different outcomes (results available upon request). For simplicity, I use the earliest reported age of sex in the final models.

The key independent variable is the response to the survey item 'Have you ever participated in any puberty or initiation rite?'. While the survey item does not reference *dipo* specifically, the data confirms that 94% of initiated girls have at least one Krobo parent. Local sources from my fieldwork confirmed that girls who are half-Krobo are still strongly expected to participate in the rite. Furthermore, given the geographic location of this study, and the general disappearance of other female initiation rites in Ghana (Crentsil, 2015), it is doubtful participants are referencing any other rite besides *dipo*. I use the age of initiation to construct the life history data set. Approximately 86% of all initiated girls reported being initiated by wave one. Participants were asked in wave one at which age they were initiated, while in wave two and wave three, they were asked to recall the date. Approximately 10% of participants gave an inconsistent age in at least one wave. I took the earliest report of initiation as the most valid given that almost half (49%) were initiated in childhood and, therefore, more likely to recall their age at initiation versus the precise date accurately.

This research also includes other social, economic, and demographic factors which previous studies have identified as being significant predictors of sexual debut and which may also be associated with *dipo* (Bingenheimer & Reed, 2014). I treat control variables either as time-variant or time-invariant. Time-variant variables include adolescent education, household wealth, household composition, guardian education, and marital status. For education, adolescents were asked to indicate the highest level of education achieved (none or primary, junior high, and senior high or higher). Household wealth was assessed by asking participants to indicate if their household had any of the following: electricity, radio, television, mobile phone, refrigerator, flush toilet, working motorcycle/scooter, or working car/truck. I executed a principal component analysis on these items, after which I generate a mean wealth score. The household composition variable classifies adolescents into three categories: Living with one, both, and no biological parent(s). Guardian's highest level of education falls into four categories (none, primary, junior high, senior high, or higher) and is not significantly correlated with adolescent education ($r=0.26$, $p=0.00$). Finally, participants were asked in waves two and three if and when they had entered a union (such as marriage or cohabitation).

I treat ethnicity and religious denomination as time-invariant. Data for these variables come from the baseline survey. Participants were initially asked to indicate if they belonged to one of six ethnic groups, which I collapsed into three categories based on sample sizes (Krobo, Ewe, and 'other'). For religious denomination, I collapsed Christian sub-denominations into one single Christian category, and Muslim retained its own category.

Data were only missing for the variable related to the guardian's education. Very few observations were missing on this variable (3%, n=23) and unlikely to bias the results. I replaced the missing values with the median response (junior high school). Using the median resulted in similar outcomes as the multivariate normal (MVN) distribution imputation technique.

Analysis

To understand the relationship between dipo and the timing of sexual debut, this study uses a discrete-time proportionate-hazards model with logistic regression. Since respondents only report the age at which they first had sex, the time intervals are better characterized as discrete versus continuous. However, comparing logistic regression models to survival models requiring continuous time intervals (such as the popular Cox model) yielded similar results

(results available upon request). The analyses allow for shared frailty at the respondent level to adjust for the lack of independent observations, hence fixing the standard errors.

The observational period for this model spans from age 12 to 19. In this study, 57% of the participants are right-censored on account of not reporting sexual debut before age 19, which the model handles. However, the model cannot correct possible bias in the coefficients due to selective attrition. Attrition analyses (available upon request) showed that 8% (n=57) of participants interviewed at baseline exited the study during the observational period without reporting sexual debut. These participants were, on average, six months younger at baseline and more likely to be fostered than those who remained. Nevertheless, because attrition only accounted for a small percentage of the sample, I anticipate the bias to be minimal.

The analysis has several stages. The first stage explores descriptive statistics for the dependent and independent variables. Next, using chi-square and independent sample t-tests, I examine whether the independent variables are related to sexual debut. Data for the independent variables come from the baseline survey, except for *dipo,* which draws upon all three waves to ascertain a girl's initiation status. I similarly utilize data across all three waves for the dependent variable, sexual debut. Next, I explore time-varying associations between *dipo* and sexual debut using the reported ages of each event. With this data, I compare the survivor functions of initiated girls to non-initiated girls using the Kaplan-Meier survival curve. I also rely on log-rank tests to assess group differences.

A series of multivariate regressions using logistic regression follows the descriptive analyses. The first set of models explores whether *dipo* has a significant relationship with sexual debut. The second set of models examines the possibility that anticipated sexual activity prompts girls' participation in *dipo*. To assess anticipatory effects, I delay the reported age of *dipo* initiation by one year to ensure the rite occurred *well before* sexual debut. For example, if a girl reported being initiated at age 12, this method assesses whether the relationship between *dipo* and sexual debut would still hold had she been initiated a year later at age 13. These analyses also enable an examination of how sensitive the findings are to potential misreporting in the age at sexual debut or *dipo*. Given the strong social stigma about becoming sexually active before *dipo*, girls may deliberately decrease their age of dipo or increase their age of sexual debut to ensure the socially desirable chronological ordering. The final multivariate analyses explore whether the relationship between *dipo* and sexual debut depends on household factors. The first

household factor of interest is socioeconomic status, which is measured using guardian education. Since indicators of household wealth represent a girl's socioeconomic status at the time of the survey (and not necessarily at the time of her *dipo* initiation), guardian education is a better proxy for socioeconomic status. Household wealth was nevertheless run for comparative purposes and did not yield comparatively different results (results available upon request). The second household factor of interest is household composition. More specifically, this model assesses whether *dipo*'s relationship with sexual debut differs among girls who live with both biological parents, one biological parent, or neither.

Results

Qualitative Interviews

Traditional Meanings in Contemporary Ghana

As Ghana's only remaining commonly-practiced initiation rite, *dipo* holds great significance to the lives of the Krobo community in Asesewa. Across interviewees, there was a shared understanding of the rite's purpose, meaning, and importance to Krobo life, even among non-Krobo participants. Most respondents see *dipo* as primarily important for the preservation and performance of Krobo's ethnic identity. When asked to explain why *dipo* exists, many simply offered that *dipo* is "the tradition of our forefathers/ancestors" or "a custom of the Krobos." However, *dipo*'s significance extends beyond expressions of collective ethnic identity and signals individual belonging. Girls are not considered full members of the Krobo community until they pass through the rite, and more specifically, they are not seen as full Krobo women. Completing *dipo* has significant implications for Krobo girls' positions within the community, as girls who do not pass through the rite are considered 'disorganized'; unclean, useless members of society, and poor candidates for marriage.

It is consequently inconceivable to most Krobos that a Krobo girl would not participate in *dipo*.[1] As in pre-colonial times, the primary impediment to a girl's passage is pre-initiation sexual intercourse, evidenced by conception. Interviewees recognized *dipo* as necessary to

[1] Although paramount for Krobo girls to participate in *dipo*, there is a strong community-level counternarrative that admonishes the practice. Religious leaders were particularly adamant that *dipo* is a sinful practice, given their view of *dipo* as paganism and thereby in moral conflict with the Christian tenets of monotheism. To reconcile the necessity to initiate their girls with the desire to appear as 'good' Christians, most Krobo guardians send their daughters to be initiated in distant villages where the girls are less likely to be recognized.

control the timing of girls' sexual debut through this taboo. Some traditional *dipo* customs aimed to discourage pre-initation sexual activity are still implemented in the modern practice of the rite. For example, in the final step of the ceremony, girls still sit on the sacred stone, which most Krobos continue to revere for its spiritual properties and ability to detect concealed pregnancies. Further, violating the taboo continues to have heavy ramifications not only for a girl's position within the community but also for her child and household. As in the past, children born to uninitiated modern Krobo girls are considered illegitimate. Families continue to bear the consequences of shame and curses for housing a 'disorganized' daughter and her child. Banishment is still endorsed as a probable consequence of an illegitimate conception. However, girls who are 'banished' are sent to reside with distant relatives outside the community rather than sent to the 'bush.'

Even as few could recall any circumstance of a girl being banished for conceiving before *dipo*, it was nonetheless a looming concern within the Krobo community. Krobo guardians were particularly wary of the consequences of violating the *dipo* taboo. Even as many regard *dipo* for its intended role in maintaining abstinence, there was widespread skepticism of its efficacy. Across Asesewa, there was a general sense that *dipo*'s social control function has limits for modern Krobo girls, who many regard as less disciplined and more sexually permissive than girls of the past. Sebastian, a local religious leader, explains:

> Parents think that a lot of the young ones are very sexually curious. Before the parents are aware, the young ones have started having sex. If they don't do [*dipo*] for them, it is like a taboo. . . In the olden days, there was strict discipline. A woman who is around 16, 17, 18 years old was able to keep herself [from sex] at that time. . . But now the young ones – 9-year-old girls, 10-year-old girls – are having sex. The world is becoming complex. The olden Krobos did not have sex early, so teenage pregnancies were not a big problem. They used to grow to age 18 or 20 before they did the rite. But now, an 11-year-old girl gets pregnant, so parents must do the rite early for them.

The notion of the world becoming increasingly 'complex' was a salient theme across adult interviewees, who perceived a consistent erosion of traditional sources of social control to be

underway in contemporary Ghana. Like Sebastian, adult interviewees often suggested that many adolescents begin sexual activity in childhood or early adolescence due to this erosion. Because of these shifts, many perceive abstinence and the successful completion of the rite as more critical to older cohorts than Krobo youth. Some observers went so far as to suggest that Krobo girls are often sexually active before the ceremony, albeit in hiding. As Sebastian explains, these fears and possibilities motivate guardians to initiate their girls very young to ensure the rite precedes sexual activity and no violations occur.

Incorporating Krobo girls' perspectives about the *dipo* custom complicated these portrayals. Across the interviews with Krobo girls, there was a general sense that girls validate the *dipo* taboo and fear the consequences of violating it. Correspondingly, most girls claimed to have maintained abstinence before passing through the rite or were endeavoring to do so. To remain chaste, some Krobo girls went so far as to avoid interacting with boys altogether until they completed the ceremony. This strategy reflects a community-wide narrative where even flirtatious interactions between boys and girls are a pipeline to sexual intercourse and pregnancy. Ghanaian courtship norms and Asesewa's high teen pregnancy rates sustain this slippery slope logic; when a girl responds positively to a boy's romantic advances, it is taken to mean she is interested in establishing a romantic sexual relationship with him. Condom use is low among youth in premarital relationships, which makes unintended premarital pregnancies not all that uncommon. Because Krobo girls, not community boys, shoulder the consequences of violating the *dipo* taboo, it becomes the girls' responsibility to reject all male advances.

At the same time, other accounts from Krobo girls validate concerns that some Krobo girls may not be gatekeeping their interactions with boys judiciously. Although not overly common, some girls shared that despite not having commenced sexual activity before *dipo*, they had nonetheless started dabbling in courtship by 'chasing' boys or accepting boys' romantic gestures. As 18-year-old Patricia explains, these behaviors motivated her guardians to put her into the rite earlier than expected:

Intv: Was it your wish to participate in *dipo*?

Patricia: I wanted to participate, but I wanted to wait until I was older. So, I was forced.

Intv: Why did they force you?

Patricia: They said I have started chasing men, that I have spoiled.

Intv: Was there truth to what they were saying?

Patricia: Yes, I was going after men.

Although Krobo girls like Patricia did not strive to avoid boys, there was still a sense that completing the rite was important and that they wanted to avoid violating the *dipo* taboo. Even Rebecca (age 16), the only girl who reported being sexually active before the rite, endeavored to successfully pass through *dipo* despite having commenced sexual activity:

Intv: Did you first begin having sex before or after *dipo*?

Rebecca: Before. Before I was initiated, I had sex, but not all that much because of what we were told about having sex before *dipo*. After *dipo*, I started having sex all the time.

Important technical details concerning the *dipo* taboo emerge from these interviews with Krobo girls. While traditional custom dictates girls must remain chaste before *dipo*, girls are only considered to have violated the *dipo* taboo if they conceive before the rite. Even among other members of the Krobo community, including guardians, the concern of transgressing the *dipo* taboo is more specific to girls becoming pregnant than sexual intercourse per se. While virtually all Krobo girls endeavored not to violate the taboo, they differed in how they play the odds of pregnancy. For many girls, avoiding pregnancy is a task of avoiding boys altogether, whereas girls like Patricia began dabbling in courtship before *dipo*. And Rebecca, who was technically violating the *dipo* taboo, mitigated pregnancy risk by limiting the frequency of her sexual interactions before the rite.

Passing Through Dipo: New Permissions?

Even though commonly assumed that the social control function of *dipo* may be lost on contemporary Krobo girls, accounting for the girls' perspectives suggests *dipo* does influence their sexual decision-making before the rite, albeit with new limits and contingencies. A more significant disconnect between Krobo girls and the rest of the community concerns whether girls are conferred new sexual permissions after the rite. Departing from traditional interpretations of the rite, where *dipo* is a normative entrée to sexual debut, adults vehemently agreed that *dipo*

does not give girls a license to begin sexual activity. This position is predicated on the belief that girls are not granted full adulthood status upon completing *dipo*. Nelson, a grandfather, explains:

> It is not all about *dipo*. When you are initiated, you need to take your time [before having sex] so that you get a job, money, and help your parents. Your parents can help you based on what you did for them. When you are ready for marriage, the man will come forward. . . But right after the initiation, you must take your time.

Adults consider *dipo* a necessary but not wholly satisfactory condition to enter Krobo womanhood and, by extension, sexual activity. In contemporary Ghana, youth do not reach adulthood through a single rite of passage but rather through a series of other life markers, such as finishing school, achieving financial stability through employment, and entering a marriage. And, as Nelson shares, it is only after marriage that individuals should be allowed to commence sexual activity.

Much to the chagrin of many interviewees, Krobo girls seemed not to agree. One of the most salient emergent community-level narratives was the notion of the 'promiscuous' *dipo* girl. Observers frequently lamented that initiation marks a shift in girls' behaviors, where girls become emboldened to commence romantic sexual relationships and exhibit disobedience toward guardians. Most interviewees who expressed this concern ascribed these changes to girls adopting traditional interpretations, which grants girls adulthood status after passage. Two excerpts below demonstrate these sentiments:

> *Dipo* frees them to do whatever they want to do. Now, you are a woman. They will teach you how to prepare food, serve your husband, and send you to the stone to make you qualified. They move girls from childhood to adulthood, and that makes them mature. When the girls return from the rite, they try to do things that adults do.
> - Daniel, age 17

> A year after initiation, she changed. She saw herself as an adult and started being in romantic relationships. Before [the initiation], she wasn't like that. After we performed the

dipo rite on her, whenever I am having a discussion with her about going out and being in relationships, she tells me she is now an adult, and this is her age to function.

- Anne, the biological mother of Krobo initiate

It was not just a matter of perception that Krobo girls interpreted *dipo* as a license to begin sexual activity. Most Krobo girls, including those who remained abstinent after *dipo*, endorsed the traditional notion that girls are free to start sexual activity upon passage. And several Krobo girls claimed that *dipo* was their entrée to dating and sexual relationships. Validating the experiences of guardians like Anne, some girls further shared that they no longer legitimized parental authority after the rite, at least not in the same capacity.

Conflicting with the accounts of community members like Daniel and Anne, however, virtually no initiates described themselves as adults after *dipo*. Further, while some initiated girls articulated their transition into sexual activity after *dipo* as an earned freedom, others curiously described feeling passively pushed into sexual activity after the rite. An excerpt from an interview with Alanna, a 15-year-old initiate, captures the latter:

I was not happy about being initiated. . . Some people told me that if you are initiated, you will develop an attitude of following men and you will spoil. . . After the initiation, I realized what they were saying was true. It is not a good thing. . . After the initiation, I felt like they have removed something from my face. I changed. I don't know how to describe it. . . I changed from my old habit to a new habit. Before *dipo*, I said I would not play with boys, but now I play with them.

Of note is how Alanna describes *dipo* as a metaphysical change, which almost indescribably made her more sexually permissive in her attitudes and behaviors. In part, this theme of feeling changed through *dipo* and having limited agency in this process reflects the Krobo belief system, which reveres the rite for its spiritual ability to metaphysical shifts individuals through various states of personhood. It was nonetheless intriguing that girls evoked these spiritual notions to explain the changes in their sexual attitudes and behaviors after *dipo* but did not make corresponding claims of having transitioned to adulthood.

In probing further into notions of change and personal agency, it became clear that material conditions may be underlying initiates' feelings of being passively drawn into sexual relationships after *dipo*. A dialogue among sexually active girls in a focus group discussion exemplifies this possibility:

> Grace (age 18): Before the initiation, if [boys] call me, I don't go. But after the initiation, if [boys] call me, I will come. My grandmother said that she was done with me, so I took it as I am now okay to do whatever I want. . . My grandmother will not do any good things for you after the initiation. She will always advise me to live a good life, and I am doing that, but she will not give me money to go to school or provide me with my needs. I stopped going to classes at school. So, one of the students told me he would pay the class fees for me, and I agreed. That continued, and we became friends. Through that, we fell for each other.
> Julia (17): [*Dipo*] pushes you into it.
> Ruth (18): It is not only *dipo*, but your mother refuses to provide you with your need if you ask her. And your boyfriend gives you what you want, so if your parents ask you to stop with him, you can't, because if you do that, you will not get your needs met.
> Virginia (17): We have some initiated girls who say, "I want to complete my education before I fall in love with any man or get a good job before I do that." And we have some people who are initiated and fall in love with men. So, it's not related.
> Julia: Those people know how to handle their lives or behave well and have parents who care for them.

As the girls explain, whether *dipo* 'pushes' girls to seek boyfriends after passage depends on the household support girls receive. Girls who do not receive adequate household support have a greater need to validate *dipo* as the normative entrée to premarital sexual relationships where they can receive financial patronage from a boyfriend. Further, their increased disobedience after *dipo* is not about having matured into adulthood, as perceived across the community. Girls' disobedience is specific to respecting guardians' requests to refrain from premarital sexual relationships. And, as Ruth explains, girls only legitimize guardian authority so long as guardians provide enough support to prevent girls from needing a boyfriend.

For some girls like Grace, this push to enter a romantic sexual relationship after *dipo* was immediate because completing *dipo* marked the end of her grandmother's financial support. Grace's experience suggests her grandmother may have interpreted *dipo* as a passage to adulthood, which meant her grandmother no longer felt financially responsible for Grace after the rite. To be able to stay in school, Grace entered a relationship with a schoolmate who offered to cover the school fees left unpaid by Grace's grandmother. Here, it is essential to note that just as adult interviewees did not see *dipo* as a pathway to adulthood, none agreed that *dipo* should mark the end of financial support for girls, as would be suggested by Grace's situation. Many guardians nonetheless stated difficulties providing the same amount of financial support girls could get in romantic relationships and that guardians' inability to provide mitigates their influence on girls' sexual decision-making. These sentiments reflect a narrative common across Asesewa, where the loss of control over youth has much to do with poverty.

Initiates who abstained from sex after *dipo* also validated the importance of social support in shaping girls' sexual choices after passage. Eighteen-year-old Penelope explains her choice to remain chaste this way:

> I am the same. I don't believe that after *dipo* you must break your virginity . . . They believe when you are back [from the ceremony], you can have sex. But when I came back, I didn't see the need to. When I came out [of the ceremony], a lot of people were pressing me to take good care of myself: my teacher, my mother, and my friends. I make friends with people who are older than me, like older women and men. And they were pressing me to be chaste. *Dipo* didn't really affect me. I shouldn't give myself to any man.

Although endorsing the idea that girls *can* commence sexual activity after *dipo*, Penelope does not feel sex was something she 'needed' to do, a choice she ascribes to the support she receives from her mother and other adults in the community. Throughout her interview, Penelope further characterized her household as being financially stable enough to support her future dreams of attaining post-secondary education. As discussed among the focus group girls, support is critical in the decisions girls make after *dipo* regarding premarital sexual relationships. Because premarital pregnancies are a stumbling block to girls' long-term vocational and

educational goals, many aspire to avoid premarital relationships altogether. However, avoiding boys after *dipo* is markedly easier for girls like Penelope, who is well-supported by her household and has little incentive to enter a romantic sexual relationship.

Relatedly, the catalyzing influence of *dipo* on sexual behavior is not just about new opportunities to claim financial support from a boyfriend but also about protecting girls against the socioeconomic consequences of having one. Henrietta, an initiated 16-year-old, explains how her transition to sexual debut after *dipo* relates to the latter:

> [After the initiation] I saw that I have changed. . . I was like a new person in town. . . I am happy because I have been initiated into *dipo*. If you are not initiated and you get pregnant, you become disorganized; you are not happy. I am free. [Now], I have a boyfriend. . . Now, I am okay to have a boy. The initiation protected me from falling in love before I was initiated. [Before the initiation], I controlled myself from those things. If some proposed love to me, I insulted the person. . . After the initiation, I play with them. . . I know they will not throw me out of the house if I become pregnant.

As Henrietta explains, girls' behavioral changes after *dipo* relate to a new set of freedoms. Part of this freedom relates to being able to relax interactions with boys and begin exploring romantic sexual relationships. Another aspect of this freedom relates to girls being able to explore premarital relationships with the safety net of the household. Although premarital relationships have financial benefits, they also carry the socioeconomic risk of single motherhood. A common problem within the community is the ease at which boys evade responsibility for unexpected premarital pregnancies by denying paternity. Families provide considerable financial and instrumental support for teen girls to offset deficient paternal support. However, by traditional custom, only girls who conceive *after dipo* can expect support from their immediate households. By contrast, girls who conceive an illegitimate child risk being sent to distant relatives where the help may be far less adequate. In this way, passing through *dipo* unlocks girls two complimentary pathways of support; access to the short-term financial benefits of having a boyfriend and a critical familial safety net that will protect against the long-term socioeconomic consequences of premarital sexual relationships.

Quantitative Results

These qualitative findings raise questions about the complex relationship between dipo and sexual debut. Specifically, how strong is the connection between dipo and the entrance to sexual activity? Is there evidence that some girls may be enrolled into dipo earlier in anticipation of or concern for early sexual activity? How might household socioeconomic conditions moderate the relationship between dipo and sexual debut? To supplement the findings of the in-depth interviews, this section examines these questions quantitatively.

This analysis begins by exploring the respondents' characteristics, as reported in Table 1. Table 1 presents information on sexual activity and the dipo initiation rite using data collected across all three waves and baseline sociodemographic characteristics. Corresponding with nationally representative data from Ghana (Ghana DHS, 2015), at the study end, almost half of the participants were sexually active by age 19, and the average age of sexual debut among sexually active girls was about age 16. By the end of the study, nearly half of the participants reported having participated in an initiation rite, which occurred at the mean age of 11 years old. Not shown in Table 1, almost all Krobo girls (97.5%) were initiated by age 16. At baseline, participants were almost equally likely to identify as Krobo as they were with Ewe (45% and 43%, respectively), and the remaining participants (12%) identified as Dange, Ashanti, Akan, Ga, or another ethnic group. These distributions reflect the ethnic compositions of Agormanya and Juapong. Not shown in Table 1, 88% of Agormanya residents are Krobo, and only 4% are Ewe. By contrast, 82% of Juapong residents are Ewe, and only 2% are Krobo. The mean age of participants at wave one was 15.8 years old. About one-third had reached junior high by this time, but most were either still in primary school or had not attended school (54%). As is common in sub-Saharan Africa, almost half of the participants did not live with their biological parents, a quarter lived with both parents, and approximately one-third lived in single-parent homes. Not shown in Table 1, mothers headed between 80 and 87% of the single-parent homes across waves. Most guardians had a junior high level of education or less (about 85%). Although all adolescents were unmarried at wave one, approximately 10% entered a union during the study.

Table 1. Percent distribution and means of respondent characteristics

Characteristic	% or mean
Final wave totals	
Sexually active by age 19 (%)	
No	53.6
Yes	46.4
Age of sexual debut (mean)*	16.3
Dipo initiation (%)	
Not initiated	50.9
Initiated	49.1
Age of dipo initiation (mean)	11.1
Baseline sociodemographic characteristics**	
Ethnicity (%)	
Ewe	42.7
Krobo	44.7
Other	12.3
Household composition (%)	
One biological parent	30.3
Both biological parents	24.9
Neither biological parent	44.8
Guardian education (%)	
None	20.3
Primary	22.9
Junior	41.1
Senior or higher	15.7
Respondent highest education (%)	
None or primary	54.3
Junior high	34.2
Senior high or higher	11.5
Household wealth (mean)	0.46
Religious denomination (%)	
Christian	94.9
Muslim	5.1
Marital status (wave 3) (%)	
Not married/cohabiting	89.2
Married/cohabiting	10.8
Age group (%)	
Younger cohort	60.0
Older cohort	40.0
Age (mean)	15.8
Community (%)	
Agormanya (high HIV)	50.9
Juapong (low HIV)	49.1

*Calculated for sexually active participants only

**All data come from the baseline survey unless indicated otherwise

The bivariate associations shown in Table 2 provide preliminary confirmation of some of the key findings of the in-depth interviews. Notably, girls who are initiated are statistically significantly more likely than those who are not to be sexually active (57% versus 43%). Further, I find that those who reported sex before age 19 are more likely to be Krobo (p=0.000), poorer (p=0.000), and living without one or both biological parents (p=0.002). Other predictors of sexual debut are being older (p=0.000), being in a union (p=0.000), and residing in the high-HIV prevalence town, Agormanya (p=0.000). Bivariate comparisons indicate that girls who pass through *dipo* report an overall earlier *average* age of sexual debut (16 years old) than girls who do not pass through the rite (16.6 years old, p=0.020). The Kaplan-Meier curve in Figure 2 confirms these associations. A steep slope for *dipo*-initiated girls indicates their higher likelihood of reporting sexual debut than their non-initiated counterparts, particularly after age 14. This difference is statistically significant (p=0.000).

Table 2. Percent distributions and means of respondent characteristics by sexual debut with tests of difference (n=690)

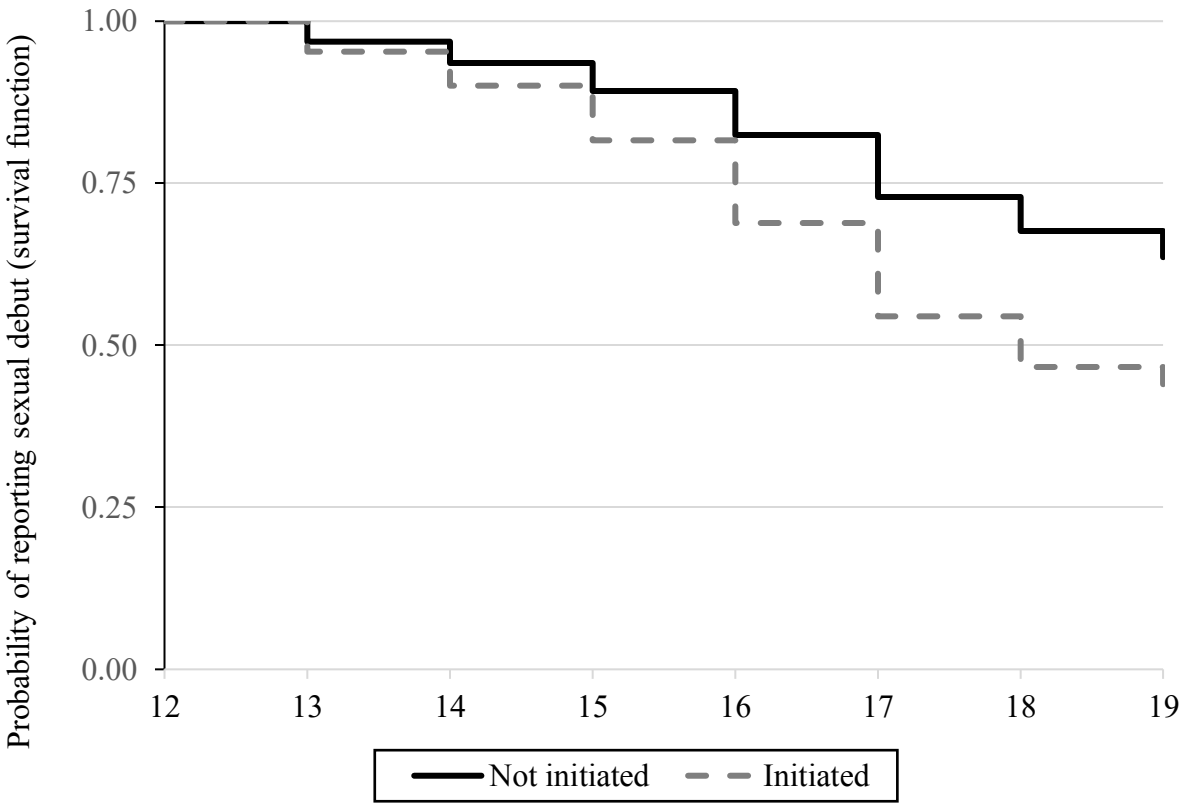
	Sexually active by age 19	
Characteristic	No	Yes
Dipo initiation status (wave 3)***		
Not initiated	63.0	42.7
Initiated	37.0	57.3
Ethnicity***		
Ewe	47.1	35.8
Krobo	39.0	54.3
Other	13.9	9.9
Household composition**		
One biological parent	30.0	30.7
Both biological parents	29.7	18.4
Neither biological parent	40.3	50.9
Guardian education*		
None	17.6	23.9
Primary	19.1	23.2
JHS	45.8	38.9
SHS or higher	17.4	14.0
Highest education***		
None or primary	64.7	39.6
JHS	28.2	43.0
Senior high or higher	7.1	17.4
Wealth (mean)***	0.49	0.43
Religious denomination		
Christian	93.9	95.0
Muslim	6.1	5.0
Marital status (wave 3)***		
Not married/cohabiting	98.9	77.6
Married/cohabiting	1.1	22.4
Age group***		
Younger	80.9	31.7
Older	19.1	68.3
Community***		
Agormanya (high HIV)	45.3	57.7
Juapong (low HIV)	54.7	42.3

*p<0.05, **p<0.01, ***p<0.001

Tests of difference: Chi-square and independent sample t-test

Note: data for the characteristics are drawn from the baseline survey unless indicated otherwise

Figure 2. Kaplan-Meier survival estimates of sexual debut by initiation status



Models 1 and 2 in Table 3 explore the strength of the association between *dipo* and sexual activity using logistic regressions. The models are identical, except that Model 1 excludes ethnicity from the sociodemographic controls. Constructing these models this way allows for an examination of the potentially confounding influence of ethnicity. Previous research suggests that Krobo women have a greater propensity to engage in sex work compared to other ethnic groups in the area. Initiated girls may have greater odds of commencing sexual activity not because of *dipo* but rather because of Krobo's distinct sexual norms, values, and practices. Model 1 demonstrates that girls who pass through *dipo* are 67% more likely to become sexually active than non-initiates (p=0.012). When incorporating ethnicity and *dipo* in Model 2, Krobo ethnicity is no longer associated with an earlier sexual debut (p=0.641), and girls who pass through *dipo* are still 60% more likely to report sexual debut than their non-initiated counterparts (p=0.041). These findings correspond with the observations made in the in-depth interviews, which suggest a robust effect of *dipo* on girls' sexual decision-making after the rite.

Model 3 in Table 3 explores the possibilities of dipo being performed in anticipation of sexual debut. The model also tests the potential of social desirability bias in reporting the timing of dipo and first sex. The in-depth interviews suggest that guardians may pre-emptively initiate girls who are most likely to become sexually active, and some girls may claim to have been initiated earlier to avoid the stigma of being sexually active before going through dipo. Model 3 tests the possible impact of these behaviors by postponing the age of *dipo* by one year. Lagging *dipo* by one year only slightly reduces the odds of sexual debut for *dipo* initiates (OR=1.57, p=0.039). This finding suggests the catalyzing influence of *dipo* is not specific to girls' who may be on the verge of becoming sexually active and may not be an artifact of misreporting.

Finally, to explore the potentially stronger link between *dipo* and sexual debut among disadvantaged girls, Model 4 and Model 5 in Table 3 test whether the relationship between *dipo* and sexual debut depends on the presence of biological parents or socioeconomic circumstance, respectively. Previous analyses indicate that girls living without parents are at higher risk of reporting sexual debut, and the in-depth interviews similarly suggest that girls may receive less sufficient support if residing with extended relatives. However, the coefficients of the interaction terms in Model 4 indicate that the risk of living without biological parents is not exacerbated by *dipo* (p=0.311). Similarly, unlike the in-depth interviews, which suggest girls with financial needs may be more likely to interpret *dipo* as a pathway to seek financial support in a romantic sexual relationship, Model 5 demonstrates no protective effect of socioeconomic status, as measured by guardian education. That is, *dipo*-initiated girls who have less educated guardians are not at higher risk of sexual debut than those with highly educated guardians.

Table 3. Odds ratios from logistic regression models predicting sexual debut during adolescence

Characteristic	Model 1	Model 2	Model 3	Model 4	Model 5
Dipo initiation	1.67**	1.60*		0.58*	0.45
Dipo initiation (one-year lag)			1.57*		
Ethnicity (Ewe)					
Krobo		1.16	1.20	1.17	1.13
Other		1.02	1.02	1.00	0.99
Household composition (one parent)					
Both parents	0.91	0.90	0.90	0.88	0.90
Neither parent	1.45**	1.43*	1.43*	1.70*	1.45*
Guardian education (no education)					
Primary	0.98	0.99	0.99	1.01	1.06
Middle	0.73	0.73	0.73	0.74	0.67
Senior high or higher	0.70	0.70	0.70	0.71	0.73
Dipo*household composition (one parent)					
Both parents				1.17	
Neither parent				0.75	
Dipo*guardian education (no education)					
Primary					0.88
Middle					1.16
Senior high or higher					0.91
Respondent education (none or primary)					
Middle	0.76*	0.76*	0.76*	0.76*	0.76*
Senior high or more	1.16	1.15	1.15	1.19	1.16
Mean household wealth	0.31***	0.32***	0.31***	0.31***	0.32***
Muslim/other religion	0.94	0.96	0.96	0.99	0.95
Married/cohabiting	3.56***	3.60***	3.60***	3.63***	3.60***
Age (12)	1.00				
13	2.59*	2.59*	2.56*	2.59*	2.59*
14	4.10**	4.14**	4.10**	4.14**	4.10**
15	6.96***	6.96***	6.96***	7.03***	6.96***
16	13.07***	13.20***	12.94***	13.20***	13.07***
17	19.30***	19.49***	18.92***	19.49***	19.30***
18	12.30***	12.43***	12.18***	12.55***	12.43***
19	7.46***	7.54***	7.32***	7.54***	7.54***
Community: Juapong (low HIV)	1.06	1.17	1.16	1.17	1.15
Pseudo R-squared	0.12	0.12	0.12	0.12	0.12
n (clusters)	690	690	690	690	690

*p<0.05, **p<0.01, ***p<0.001.

Discussion

The primary purpose of this research was to examine the assumption that *dipo*, Ghana's only remaining female initiation rite, fosters early sexual debut among its initiates. This question has garnered significant interest across Ghana, as initiates' earlier sexual debut may contribute to the high HIV and teen pregnancy rates observed among the Krobos who practice the rite (Anarfi, 2004; Steegstra, 2006). This study is the first to use longitudinal data to assess time-ordered associations between a rite of passage and the transition to sexual activity. Enriching the quantitative analyses, this research also draws from in-depth interviews with adolescent girls, their guardians, and the wider community to understand the contemporary symbolic meaning of *dipo* and how the rite may relate to girls' sexual decision-making. With this mixed method approach, this research also tests the validity of alternative possibilities, namely that the relationship between *dipo* and sexual debut may be spurious (Sauvé et al., 2002; Steegstra, 2006), an artifact of anticipatory behavior or misreporting (Boakye, 2010), or dependent on socioeconomic circumstance (Anarfi, 2004; Yarney et al., 2015).

This study uncovered a consistent and direct association between *dipo* and sexual debut across both data types. Confirming community narratives in this study and elsewhere (Boakye, 2010; Steegstra, 2006), Krobo girls validate *dipo* as a normative pathway to sexual debut, some of whom transitioned to sexual activity after completing the rite. In the quantitative analyses, initiated girls have 67% greater odds of reporting sexual activity compared to non-initiated counterparts and commence sexual intercourse, on average, about six months sooner. These statistical associations persisted when controlling for ethnicity, which suggests a robust association between *dipo* and earlier transition to sexual activity that cannot be explained by other Krobo norms or practices. While widely recognized across Ghana that *dipo* may continue to have implications for sexual debut and SRH risk, this is a novel finding in the academic literature on adolescent sexual debut from which initiation rites are mostly excluded.

Previous research suggests the catalyzing effect of *dipo* on sexual debut may be an instance of anticipatory effects, whereby guardians enroll their girls into *dipo* when girls appear to be on the verge of commencing sexual activity (Boakye, 2010). Qualitative accounts give some credence to this possibility. Krobo girls' accounts support community-level skepticism that modern youth do not respect the traditional *dipo* taboo regarding pre-initiation abstinence, at least not as much as older generations. Although girls endeavor to avoid violating the taboo and

its consequences, they are more concerned with preventing conception than avoiding sex, as only the former provides concrete evidence of the latter. Many girls avoid pregnancy by avoiding boys, dating, and sex altogether, but others find ways to dabble in courtship without getting pregnant. The behaviors of the latter prompt some guardians to rush their girls into the rite and feed the perception that Krobo girls would violate the taboo if guardians did not respond this way. However, the possibility of anticipatory initiation did not hold when examined quantitatively with the larger survey sample. Tellingly, *dipo* is still a significant predictor of sexual debut in the longitudinal analyses even after artificially delaying the reported age at *dipo* participation by a full year. The incongruence between qualitative and quantitative findings may suggest that community-level perspectives do not accurately represent how many girls' experiences represent the pre-emptive actions of guardians. That is, although some girls who transition to sexual activity after *dipo* were likely on the cusp of becoming sexually active, this may not be the reality for most, even as community narratives may suggest otherwise.

Another key finding from the in-depth interviews regards the motives for girls to commence sexual activity after *dipo*. By traditional standards, *dipo* is a life course ritual that metaphysically ushers participants from childhood to adulthood. Observers across the community contend that girls become sexually active and disobedient after *dipo* because they see themselves as adults. While virtually all Krobo girls validated *dipo* as a normative entrée to sexual romantic relationships, none considered themselves adults, and not all transitioned to sexual activity after the rite. Socioeconomic concerns – not traditional notions of *dipo* as a passage to adulthood – motivated girls to seek sexual relationships after dipo and to continue with them despite guardians' objections. In a context where premarital abstinence is not a practical reality for girls with financial needs and premarital relationships place girls at risk of single motherhood, completing the rite offers girls complimentary social support systems to address all economic problems. It is important to note that even as socioeconomic concerns were at the forefront of girls' sexual decision-making after *dipo*, the quantitative analyses failed to identify a moderating influence of household circumstances. Given the salience of poverty as a driver of earlier sexual debut here and a large body of extant literature (Handa et al., 2017; Kaufman & Stavrou, 2004; Madise et al., 2007), the discrepancy in findings likely reflects flaws with how household factors were measured in the longitudinal models. This limitation will be described in greater detail below.

The findings suggest that *dipo*'s influence on sexual decision-making is not lost on Krobo girls but that initiates adapt traditional customs to respond to some of the common struggles girls face in contemporary Ghana. Primarily, these struggles relate to poverty, single motherhood, and unreliable informal support systems to attend to either. These findings thereby draw attention away from *dipo* as a predictor of sexual debut and toward upstream factors that necessitate Krobo girls to maneuver through challenging environments using traditional customs. Herein lies an important caveat to the findings; although girls who pass through *dipo* may transition to sexual activity sooner than their non-initiated counterparts, these challenges exist for all girls regardless of their initiation status. Mitigating these risks in these communities, therefore, requires expanding focus beyond *dipo* to the complex intersection of individual, household, and structural factors that motivate some girls to enter sexual relationships early or hinder their ability to self-protect against the adverse SRH outcomes when they do commence (Bingenheimer & Stobeanau, 2016; Tenkorang & Maticka-Tyndale, 2014)

It is also essential to bear in mind that the rite does not necessarily encourage *early sex,* as public narratives from this and other studies would suggest (Steegstra, 2006; Yarney et al., 2015). Despite a widespread belief that initiates may have sex at very young ages, initiated girls typically begin having sexual intercourse around age 16, which is only six months sooner than non-initiates. These findings indicate that *dipo* has a nudging influence on the sexual decision-making process of girls in mid-adolescence. From a policy perspective, this is an important distinction because transitioning to sexual activity during mid-adolescence does not carry the same implications for safety and consent as it does for girls who become sexually active in childhood or early adolescence (Dixon-Mueller, 2008). Also concerning SRH risk, the six-month earlier sexual debut of initiates likely does not explain Ghana's sharp interregional differences in HIV rates, which are better accounted for by sex work migration (Sauvé et al., 2002). Notwithstanding, a six-month earlier sexual debut still has important SRH considerations, especially in Ghana, where serial monogamy (Ankomah, 1999; Van der Geugten et al., 2013) and low condom use is the norm (GHS, 2017). That is, six months of regular, unprotected sex may heighten the pre-existing risk of acquiring HIV and unwanted premarital pregnancies.

Even with these risks, dynamic cultural practices, like *dipo,* provide an opportunity to mitigate SRH challenges (Taylor, 2007). Initiation rites have long been modified or adapted in response to the HIV crisis (Kotanyi & Krings-Ney, 2009; Musengi & Shumba, 2013). Some, for

example, have sought to recentralize initiation rites to inculcate new societal norms related to sex (Groce et al., 2006; Kotanyi & Krings-Ney, 2009; Musengi & Shumba, 2013). The findings of this study suggest that it would not be useful to reframe *dipo* as a minimal but not wholly satisfactory prerequisite for sexual activity, as suggested by older cohorts of this study. Doing so would fail to address that girls legitimize *dipo* as an entrée to sexual relationships for economic reasons and less so for life course transitions. Rites like *dipo*, however, could be a viable opportunity to provide sex education. In a context where most adolescents do not receive adequate sex education in school or from parents (Asampong et al., 2013; Biddlecom et al., 2009), including a sex education component within initiation rites may be a more promising opportunity to fill these educational gaps. Using *dipo* as a mode of sex education would be particularly advantageous in cases like *dipo,* where Krobo girls participate in early adolescence, and participation is almost universal.

There are several fundamental limitations to consider when interpreting this study's results and contributions. As mentioned above, the discrepancies in some of the findings between the qualitative and quantitative data may reflect the latter's measurement issues, particularly regarding how socioeconomic status was measured. Guardian education may not be an adequate proxy for a girl's socioeconomic status. It is also possible that the baseline measures of guardian education or household composition do not accurately represent a girl's socioeconomic situation when she participated in *dipo* or began sexual activity. Similar analyses with more time-sensitive indicators of socioeconomic status may yield results more consistent with qualitative accounts here and in other studies.

Also of relevance are issues of self-reporting and generalizability. The findings assume that participants correctly reported key information. The possibility of social desirability bias may lend to underreporting sexual intercourse or misreporting that sexual debut followed *dipo* initiation. While it is difficult to verify the extent of this bias in the data, past research on self-reported sexual behaviors in other African settings suggests that this bias is likely minimal in practice for adolescent girls (Kelly et al., 2013). Misreporting the temporal ordering of *dipo* and sexual debut may also occur when participants are expected to recall past events, which could result in an over-inflation on the coefficient for *dipo* in the longitudinal analyses. Nevertheless, *dipo* retained its statistical significance even when the reported age of *dipo* was artificially delayed by an entire year, suggesting a robust association between the rite and sexual debut.

The other main limitation of the findings is that the data may be representative of adolescents in the towns from which the data is collected but may not necessarily represent the experiences of adolescents in Ghana or across sub-Saharan Africa. Similarly, while *dipo* shares many universal features with other initiation rites in Africa, the results of this study may not be generalizable to other initiation ceremonies. More research involving initiation customs is necessary to ascertain whether the findings of this study represent a larger pattern or are uniquely characteristic of *dipo*

Limitations notwithstanding, this study offers new insights into the role of traditional rites of passage in life course transitions among modern African youth. The findings suggest that initiation rites should be reconsidered as they have important implications for adolescent sexual decision-making, albeit in a way that is dependent on the structural environment. However, because of their dynamic nature, initiation rites may provide a practical and culturally relevant avenue to mitigate adolescent sexual and reproductive health risks.

Preamble to Chapter 5

Chapter 4 provided an illustration of how Krobo girls negotiate different sets of sociocultural norms, including modern religious norms prohibiting premarital sex and traditional norms that allow premarital sex so long as girls complete the *dipo* initiation rite. Chapter 4 shares similarities with Chapter 3 on religiosity by exploring the role of guardians in the sexual socialization process and their general inability to influence youths' sexual values and behaviors. Just as guardian beliefs and values had no bearing on adolescent sexual debut in Chapter 3, a common sentiment across guardian interviewees in Chapter 4 is how little control they have over girls' sexual choices, especially if a girl has passed through *dipo*. While many blame *dipo* for initiates' earlier transition to sexual activity, which Chapter 4 validates statistically, the interviews with girls add important nuance to this association. Notably, while girls interpret *dipo* as the normative pathway to sexual debut, the structural environment frames their decisions after the rite. Girls who receive ample household support have the imperative to continue evading romantic sexual relationships after *dipo*, which are commonly viewed as a pathway to single motherhood given low rates of youth condom use and boys' proclivity to deny paternity. By contrast, girls who have an immediate need for support have a greater incentive to interpret *dipo* as an alternative normative pathway to sexual relationships. Further, by traditional standards, passage also ensures girls familial safety nets if the premarital relationship leads to pregnancy and single motherhood. These findings touch upon several important themes, including the role of poverty in shaping adolescent decision-making, the importance of premarital relationships as informal support systems, and the uneven consequences of premarital relationships for boys and girls.

These themes reoccur in Chapter 5, which examines how the socioeconomic context informs the exchange dynamics among Ghanaian youth during courtship. As Chapter 4 demonstrates, boyfriends are an essential source of financial support for girls, who sustain boys' patronage with sexual intimacy. Although Ghanaian girls often rely on boyfriends for support, many do not need to because they are economically on par or even advantaged to boys during adolescence. While financial advantage may allow girls to opt out of premarital relationships altogether, many still participate in courtship. Girls' equal or advantaged standing to boys puts different sociocultural norms into conflict; gender norms that require men to act as providers to women and moral norms that necessitate wealthier individuals to provide to those with less to

maintain equity. Chapter 5 explores the contours of this conflict and illustrates how economic uncertainty, gender structures, and cultural mores foster a complex system of exchange that both destabilizes and reifies gender dynamics in adolescent courtship.

Chapter 5. Gender Norms, Moral Norms, and Exchange Dynamics in Ghanian Premarital Relationships

Abstract

In nonmarital relationships across sub-Saharan Africa, it is common for men to provide financial resources in exchange for sexual intimacy from women. Gender norms and moral norms of equity sustain this gendered exchange dynamic, reinforcing each other when men have an economic advantage. However, if women are on equal or higher economic standing, gender and moral norms may conflict because both genders are morally obliged to provide resources to those with less. It is unclear how individuals reconcile these conflicting norms in settings where men lack an economic advantage or what happens to the exchange dynamic when women have the providing power. To understand exchange in courtship, this study draws upon 99 in-depth interviews with adolescents and community members in a Ghanaian market town where boys and girls have similar socioeconomic standing. The results suggest that adolescents draw upon both moral and gender norms to create a complex system of rules in their exchange dynamics, leading to girls providing for their boyfriends frequently and in large magnitudes. Many common gendered dynamics become reconfigured when girls can provide, albeit not without uneven social and economic consequences for girls. These findings highlight how economic circumstances and moral norms shift the boundaries of gender relations in African courtship.

Introduction

Financial provision is fundamental to nonmarital sexual relationships in sub-Saharan Africa. The present literature documents economic transfers from men to women, both among older (and often married) 'sugar daddies' and young women and among agemates in premarital relationships (Kaufman & Stavrou, 2004; Luke, 2005; Moore et al., 2007; Poulin, 2007). Although a few studies also find instances of women giving gifts or money to their male partners, financial input from women is generally considered token or trivial (Kaufman & Stavrou, 2004; Nyanzi et al., 2001) or to reflect exceptional circumstances when in large magnitudes (Cole & Thomas, 2009b; Mojola, 2014b). Women are also expected to contribute to the relationship, but their primary currency is sexual intimacy. This exchange dynamic is so typical of courtship that scholars

commonly refer to nonmarital relationships as transactional sexual relationships (TSRs) (Stoebenau et al., 2016).

Men's stronger economic standing in Africa sustains the gendered configuration of TSRs via two types of norms. First, their advantage perpetuates gender norms, which sees men as providers and pursuant of sexual opportunities, and women as consumers and gatekeepers of sex (Dworkin et al., 2012; Lamont, 2014; Masvawure, 2010). Second, male economic advantage obliges men to provide for women under a moral norm that necessitates wealthier individuals to offer resources to those with less to maintain equity (Swidler & Watkins, 2007). For women, sex is a way they sustain men's patronage and satisfy obligations of reciprocity (Abrahams, 2007; Groes-Green, 2013).

However, the moral imperative to provide to those with less is not necessarily gendered; in TSRs, this role disproportionately falls on men because of their economic advantage over women (Swidler & Watkins, 2007). Women are also expected to become patrons to others when financially capable (Groes-Green, 2013; Vaa et al., 1989). In theory, then, gender and moral norms may conflict within contexts where women are not at an economic disadvantage. Although men have an economic edge on an aggregate level, this advantage is not fully realized during adolescence when youth are dependent on their households. Equal economic standing may be particularly common among youth in countries like Ghana, where girls and women have high employment rates and financial autonomy.

Because the literature on the moral economy and nonmarital relationships focuses on adult men acting as patrons to women (D. J. Smith, 2017; Swidler & Watkins, 2007), several questions remain unclear. First, how do adolescents grapple with gender norms vis-à-vis moral norms of equity in their premarital relationships? Second, to what extent does female financial advantage inform exchange dynamics in romantic relationships? To examine these questions, I draw upon 99 in-depth qualitative interviews involving adolescents, their guardians, and community stakeholders in a Ghanaian market town where many girls are relatively on par with boys economically.

Background

Gender and Moral Norms in Exchange Practices

Theorists have long acknowledged that giving is rarely an altruistic endeavor but is underpinned by an expectation of reciprocity (Bourdieu 1977; Mauss 1967; for a review of this

literature, see Cropanzano, 2005). Mutual benefits thereby form the core of most social relationships. Nonmarital sexual relationships in Africa are similar in this respect, where courtship rests on a delicate trade of currencies and constant surveillance for balanced reciprocation between partners (Bhana & Anderson, 2013). In examining the extensive literature on courtship in sub-Saharan, what men and women give and expect to get out of relationships appears to be highly gendered. Men do the lion's share of financial provision, whereas women primarily reciprocate with sexual intimacy (Maticka-Tyndale et al., 2005; Stoebenau et al., 2016). Some benefits of this exchange are also less tangible. For example, sexual intimacy is a means through which men receive love from women, and money is a means through which women receive love from men (Moore et al., 2007; D. J. Smith, 2017). Establishing sexual relationships with many women or highly desirable women also has an ancillary benefit of status for men among their male peers (Hunter, 2002; Muparamoto, 2012). Similarly, men's financial provision provides women the material basis to address their acute needs and elevate their social status through consumer goods like shoes, clothing, and makeup (Hunter, 2010; Masvawure, 2010).

Two social institutions uphold the TSR dynamic. The first is gender, which feminist scholars understand to be sustained by a mélange of individual, interactional and institutional factors (Risman, 2004). At the individual level, men and women internalize normative versions of masculinity and femininity, which are strengthened as men and women perform or 'do gender' in their interactions (West & Zimmerman, 1987). In heterosexual relationships, these norms see men as providers (Dworkin et al., 2012; Poulin, 2007; Vaa et al., 1989) and seekers of sexual experience (Hunter, 2002; Masvawure, 2010; Walker, 2005). In contrast, women are seen as consumers of material goods (Bochow, 2012; Friedman, 2001) and reactive to men's sexual advances (Lamont, 2014). Social norms that permit men to be older and wealthier than their partners – but not the other way around – help sustain these dynamics (Luke, 2003). Institutionally, economic structures provide the material basis of TSRs by granting men the means to assume a providing role in relationships (Hunter, 2002). In sub-Saharan Africa, men have access to better-paid work in the formal economy, while women are overrepresented in unstable and poorly paid informal sectors (Benería, 2003). Women also have greater responsibility for unpaid, time-constraining domestic activities and childrearing (Wodon & Ying, 2010). TSRs are thereby a nexus through which men and women exchange resources to perform

gendered roles and improve their social standing (Masvawure, 2010; Stoebenau et al., 2016).

The second social institution sustaining the TSR courtship pattern is what social scientists refer to as a patron-client 'moral economy,'[2] which forms the basis of social reproduction within less industrialized settings (Cheal, 1988; Groes-Green, 2013; D. J. Smith, 2017; Swidler & Watkins, 2007). In a moral economy, resource-rich individuals assume a patron position by sharing their resources with those with less (Cheal, 1988; Groes-Green, 2013; Guyer, 1993; D. J. Smith, 2017; Vaa et al., 1989). Receiving clients are similarly obliged to reciprocate with something of value in the future to ensure the relationship remains mutually beneficial (Bourdieu, 1977; Mauss, 1967; Nwafor, 2013). Moral norms underpin this patron-client system in sub-Saharan Africa, including those prioritizing equitable wealth distribution over individual accumulation, and endorse the principle of reciprocity (Groes-Green, 2013; Swidler & Watkins, 2007).

Scholars see TSRs as a manifestation of this moral economy. Men redistribute their resources to women to satisfy moral expectations of equity, and women, in turn, use sexual intimacy to secure men's patronage and meet expectations of reciprocity (Hunter, 2010; Swidler & Watkins, 2007). Importantly, however, it is not only men who are expected to assume a patron role in exchange relations; on the contrary, participants in exchange economies are primarily women, particularly among families and friends (Carrier, 2005; Groes-Green, 2013; Herrmann, 1996; Vaa et al., 1989; Vaughan, 2007).[3] TSRs may take on a gendered configuration because of economic factors that give men the ability to financially support women, leaving sexual intimacy as women's primary currency to reciprocate and maintain that social tie.

The Case of Adolescents

In this sense, men's economic advantage in sub-Saharan Africa sustains gender norms while solidifying their moral obligation to be patrons to women. However, while men have a clear economic advantage on an aggregate level in this region, their edge is not fully realized across all subpopulations, perhaps most notably adolescents. While many, if not most, adolescents in sub-Saharan Africa have some employment (GSS, 2014; Heintz, 2005), youth are still dependent on

[2] The term 'moral economy' has also been referred to as a 'compassion economy' (Abrahams, 2007) and is closely related to the concept of a 'gift economy'(Cheal, 1988)

[3] Nancy Hartsock (1983) and Genevieve Vaughan (2007) have argued that women's involvement in market relations are underrepresented in exchange literature because women's exchange practices are often non-voluntary familial obligations.

their households, especially if they are enrolled in school. Although boys tend to receive more financial support within their homes than girls (Nyanzi et al., 2001), there is relatively little son preference or discrimination against girls in African households (Gangadharan, 2003). Adolescents' economic status may be more closely linked to their household's economic circumstances than their gender. And while girls have more domestic work responsibilities than boys (Chant & Jones, 2005), most have not yet entered the time-intensive life stage of raising children until after adolescence (United Nations, 2019).

Further, men's economic advantage is attributed mainly to their greater representation in skilled or professional labor (World Economic Forum, 2013). Even as boys' employment in adolescence tends to be better paid than girls', this economic advantage likely does not accrue until adulthood, when they have completed high school or post-secondary education. Relatedly, gender disparities in employment are much lower during adolescence than in adulthood (Kolev & Sirvin, 2010). In some African countries like Ghana, girls have higher labor force participation than boys, likely reflecting Ghanaian women's dominance and relative success in the informal labor market (Heintz, 2005; Kolev & Sirvin, 2010; World Economic Forum, 2013). Overall, the male economic advantage may be less apparent among youth, particularly in African settings like Ghana, where girls have substantial earning power.

Economic equality between boys and girls may create conflicts between moral and gender norms in premarital relationships. Although gender norms dictate that boys provide financially and girls reciprocate with sexual intimacy, if girls are at an economic advantage, they presumably would be morally obliged to become the patron in romantic relationships. Should girls assume a patron role, it further begets the question of what boys are expected to reciprocate with, given the expectation for receivers to ensure the relationship remains mutually beneficial.

Examining the extant literature provides conflicting possibilities. On the one hand, evidence strongly suggests that gender norms dominate courtship, with moral considerations of equity being more or less absent. Most notably, the vast majority of studies on nonmarital courtship document men providing women and women reciprocating with sexual intimacy. Studies from Ghana and Nigeria correspondingly find that although economically active and autonomous, young West African women still expect men to fulfill a 'husband' role by acting as providers and will not accept a relationship that does not have material benefits (Krugu et al., 2017; D. J. Smith, 2017). Studies also suggest that individuals may be maneuvering around economic

constraints to maintain gender norms in selectively forming relationships based on wealth and age asymmetries. For example, some studies find that some women prefer older or wealthier partners, and some men prefer younger, economically disadvantaged women (Maticka-Tyndale et al., 2005; Muparamoto, 2012).

On the other hand, a smaller but growing body of research from rural and urban regions of sub-Saharan Africa indicates that equity ideals are not absent from romantic relationships and that economic considerations may shape what men and women exchange within nonmarital relationships. Studies across several African countries, including Ghana, find that some young adults expect provision in their romantic relationships to be based on equity, not gender (Ankomah, 1999; Kaufman & Stavrou, 2004; Spronk, 2009). Other research finds that when gendered economic disparities decrease, women take on patronage positions typically characteristic of men (Agadjanian, 2005; Trager, 1995; Vaa et al., 1989) and even become patrons to men themselves (Verheijen, 2011). In most studies, female patronage in nonmarital relationships is observed between older widowed 'sugar mommies' and younger, underemployed 'kept men' (Mojola, 2014b; Nyanzi et al., 2001, 2004). Other studies also find young women redistributing their financial gains from their older sugar daddies or wealthy ex-pat boyfriends to their agemate boyfriends (Cole & Thomas, 2009b; Groes-Green, 2013; Hunter, 2002). Interestingly, what some women in these studies seek in return for their patronage, and what some men use as currency to reciprocate women's provision, is sexual intimacy, love, companionship, and even domestic chores (Cole & Thomas, 2009b; Groes-Green, 2013; Mojola, 2014b; Nyanzi et al., 2004). In some ways, then, women's financial power may even lead to a reconfiguring of gendered exchange dynamics within nonmarital courtship.

It is unclear whether these studies of female patronage are exemplars of individuals adhering to the norms of Africa's moral economy or reflect sweeping changes in gender relations that have been gaining momentum in some African countries (Sennott & Angotti, 2016; D. J. Smith, 2017). These studies may also represent unique instances of individuals 'undoing gender' (Deutsch, 2007) when structural conditions shift to give women an unusually sharp economic advantage, as is the case with wealthy widows and women with ex-pat boyfriends (Cole & Thomas, 2009b; Mojola, 2014b). Put differently, reconstitution of gender and exchange practices may occur in small pockets of the population under exceptional conditions but perhaps is not common among adolescents where it is the norm for economic standing to fluctuate among boys

and girls. Complicating matters, studies on Africa's moral economy focus on exchange between adults, not adolescents (Groes-Green, 2013; Hunter, 2010; D. J. Smith, 2017; Swidler & Watkins, 2007; Vaa et al., 1989). It is thereby uncertain even to what extent adolescents evoke the principles of the moral economy within their relationships and allow economic considerations to shape exchange practices within romantic relationships. However, since the moral economy constitutes the fabric of social reproduction in Africa (Abrahams, 2007; D. J. Smith, 2017; Vaa et al., 1989), adolescents may also need to reconcile both moral and gender norms in courtship and base exchange on what each partner is capable of giving.

Methods

Setting

This chapter relies on fieldwork conducted over seven months in 2017. This fieldwork occurred in a market town called Asesewa (population: 20,000), located in the Upper Manya Krobo district (UMKD). The UMKD is a predominantly rural and agricultural area in southeastern Ghana, approximately 75 miles from Accra, the nation's capital. Like many rural areas of Ghana, the UMKD is poorly developed. Infrastructure is distinctly better in the region's market towns, including Asesewa, the district capital town. Asesewa is a town of vibrant commercial activity, especially on market days where buyers and sellers across the Manya Krobo district convene to trade and purchase foodstuffs and other goods twice a week. Because Asesewa has a large secondary school offering boarding, the town is also a draw for adolescents residing in villages lacking education infrastructure.

Asesewa is an appealing location to explore questions related to economic conditions and gender dynamics, given the employment patterns of men and women residing in the district and across Ghana more broadly. Although youth employment opportunities are inconsistent, adolescent boys and girls have similar employment rates (GSS, 2014). Boys often find work in odd jobs involving manual labor, whereas girls often sell in shops and markets alongside female kin.

Girls' participation in Asesewa's informal labor market reflects women's economic activity and financial autonomy across Ghana. With near equal employment rates between men and women, Ghana globally ranks high in female economic participation and opportunity, eclipsing most African countries and several Western countries (World Economic Forum, 2013). Although

men typically assume the role of primary provider, households are highly dependent on women's income (Heintz, 2005). Despite equal employment rates, the UMKD, like the rest of Ghana, lags in gender equality in educational attainment, particularly at the secondary, vocational, and tertiary levels (GSS, 2014; World Economic Forum, 2013). While more or less economically on par with boys during adolescence, girls' lower educational attainment catches up to them in adulthood, where they are disproportionately excluded from better-paid skilled and professional employment opportunities (GSS, 2014; World Economic Forum, 2013).

Sample

This research is based on 99 qualitative interviews I collected with the help of three local female research assistants. The research assistants were made available to me via a pre-existing project called Nutrition Links, located in Asesewa and jointly run by departments at McGill and the University of Ghana. Because of their previous involvement in the Nutrition Links program, the research assistants had extensive interviewing experience.

This research project's strength lies in the diversity of the interviewees. We conducted semi-structured interviews with 44 adolescent girls and boys, 20 guardians, and 15 local stakeholders, including ministry workers and individuals who hold prominent positions in the community. We also conducted four focus groups with an additional 20 adolescents, who were grouped by gender and sexual activity status. Table 1 demonstrates this project’s sample.

Table 1. Sample

Participant category	n
Adolescents	**44**
Sexually active girls	16
Sexually inactive girls	9
Sexually active boys	7
Sexually inactive boys	12
Guardians	**20**
Sexually active girls	12
Sexually inactive girls	4
Sexually active boys	2
Sexually inactive boys	2
Stakeholders	**15**
Religious leaders	5
Opinion leaders	2
Political leaders	3
Ministry workers	5
Focus groups	**20**
Sexually active girls	5
Sexually inactive girls	5
Sexually active boys	5
Sexually inactive boys	5

Sample total = 99

We purposively sampled youth from the town's six administrative communities to find adolescent participants for the one-on-one interviews. Research assistants stopped at each home during school hours and after school to recruit eligible participants. We sought male and female adolescents between the ages of 15 and 19. Adolescents could be sexually active or not, and we did not exclude those who were married or cohabiting from the study. Most adolescents, however, were not in a union at the time of the interview. The only exclusion criterion was language; participants needed to be able to converse in English or Krobo, the local ethnic language. This exclusion criterion applied to all categories of participants.

After interviewing the adolescents, we selected 20 of their guardians for participation. We purposively over-sampled guardians of adolescent girls because girls were the focus of a separate research project. The research assistants recruited guardians by returning to the adolescents' homes and asking to interview the person primarily responsible for the adolescent. Half of the

guardians were biological mothers (n=10), and the rest were biological fathers (n=3), relatives (n=5), and older siblings (n=2). The research assistants also sought 15 community stakeholders for interviews. We identified stakeholders by their prominent positions in the community and investment in adolescent well-being. Stakeholders were health and education ministry employees, religious leaders, political leaders, or opinion leaders (n=2). The research assistants recruited these individuals by approaching them directly or giving them a recruitment letter.

Finally, we used snowball sampling to recruit participants for the four focus groups. We asked participants from the early interviews if they would be interested in recruiting friends for a focus group discussion. We asked sexually active participants to recruit friends who were also sexually active and of the same gender and did the same for participants who were not sexually active. We gave these participants recruitment letters with contact information to give to their friends and composed the focus groups from there. I purposely kept each group small (n=5) and composed of friends to mitigate ethical concerns of confidentiality.

Across all categories of interviewees, all individuals who were contacted to be interviewed agreed to participate. The only exception was two adolescent boys who were too busy to participate. We offered participants a small incentive to participate, including stationery supplies, soaps, or small amounts of cash. The research was explained to the participants both verbally and via a consent form. All participants gave consent or assent to participate, and we also attained consent from guardians for adolescent participants under 18. Community leaders permitted this study as part of a broader nutrition research program underway in the Upper Manya Krobo district. Ethical approval for the study was granted by ethics boards at McGill University and the University of Ghana.

Interviews

I interviewed all local stakeholders except three who were not proficient in English. The research assistants conducted the rest of the one-on-one interviews and focus group discussions. I felt it was important the researchers conducted the interviews given the potential power differentials between myself and the interviewees. Interviewees would likely be more comfortable and candid when sharing potentially sensitive information with local women versus a foreigner. The one-on-one interviews were conducted at the Nutrition Links Centre or the participants' homes, at the participant's preference. The focus group interviews were held in the board rooms at the Nutrition Links Centre

I used a semi-structured interview style for the interviews. An interview guide provided the frame for the discussions, but the research assistants were encouraged to allow the conversation to flow organically. We had an English and Krobo version of the interview guide, the latter of which the research assistants translated together at the beginning of the fieldwork.

Several subtopics of the interview guide are of particular interest to this chapter (see Appendix for the complete guide). Adolescents in the one-on-one interviews were asked questions about their economic situations regarding their employment and any household financial support. We also asked a subset of questions related to love and romantic relationships, including how love is defined and expressed between partners, what makes a good partner, and the benefits or disadvantages of having one. To understand the essence of the moral economy, we asked adolescents to share their experiences related to giving money or gifts. Importantly, the questions were framed to make no a priori assumptions about the direction of giving between genders. We started by asking adolescents to share if they have ever given or received money or a gift outside of celebratory events like birthdays. From here, adolescents were asked to detail the context or nature of giving/receiving, including questions concerning what was given, why it was given, and where the patron got the money to provide. We further asked adolescents to share their beliefs specific to gender and provision, including whether girls should provide for boys and to what extent should provision between the genders be equal. The questions were similar for focus group discussions but slightly reframed to counteract confidentiality concerns. More specifically, we asked participants to reflect on the practices of youth across the community instead of disclosing their own experiences. Participants were nonetheless free to speak candidly about their own experiences, and many did.

Adult interviewees, including guardians and stakeholders, were asked to describe the nature of adolescent courtship in Asesewa. We asked them questions related to courtship norms and each gender's motives for seeking romantic relationships and sexual intimacy. These questions almost inevitably prompted conversations regarding sex and money transactions in premarital relationships. To avoid redundancy, I did not include further questions regarding financial exchange. We also asked adults to speculate on adolescents' version of love, including how they define and express it. Finally, we asked adults to share their personal perspectives of love, including its meaning and importance. These final questions on love lead to conversations

regarding the morality of giving, receiving, and equity, requiring no further questions regarding the moral economy.

The one-on-one interviews were audio-recorded and lasted between 60-90 minutes, and focus group discussions ranged between 90 to 120 minutes. With the help of the research assistants, each interview was translated and transcribed within three days.

Analysis

I used ATLAS.ti to program, organize, and code the interview transcripts. I first grouped the transcripts by interviewee type (adolescent girls, adolescent girls, guardians, and stakeholders). I moved between deductive and inductive coding techniques to code each line of the interviews. I drew upon previous literature, my research questions, and the interview guides to formulate codes deductively. For instance, I generated codes relevant to the standard TSR configuration, such as "boys give money" and "girls give sex." Along the way, I created codes based on themes I could not anticipate but were nonetheless inductively suggested by the data. Some of these codes signaled gender inversions like "girls give money" and "boys give sex" or community-level narratives related to the moral economy, such as "loving thy neighbor." After assigning codes to each interview transcript, I removed redundant or irrelevant codes and created a coding structure by combining thematically similar codes into subgroups.

In the analysis stage, I compared codes within categories of interviewees (e.g., adolescent girls) to identify themes and idiosyncrasies. Next, I compared codes between interviewee categories (e.g., adolescent girls versus boys; adolescents versus adults) to examine how themes may compare or contrast between groups. These analyses allowed me to identify community-level narratives and subgroup differences. Community-level narratives reflect themes that emerged across all categories of interviewees. By contrast, subgroup differences reflect themes specific to social locations, including those related to cohort or gender. I then expanded my analysis by comparing emergent themes with pre-existing literature.

I relied heavily on memos throughout each step of the process. I created a memo for each interview, summarizing the findings and making notes of any points of interest. I also created a series of memos specific to codes, where I described each code and kept track of any iterations of the code or its meaning. Finally, I maintained a set of analytic memos where I reflected upon emergent themes, derived my findings, and analyzed my results in relation to extant literature.

Within these analytic memos, I included interview excerpts that adequately captured the themes and findings.

Results

Reconfiguring Gender in a Moral Economy

"Thou Shalt Love Thy Neighbor": Female Provision and the Commitment to Equity

Like other African settings, love, sex, and money are integral elements of courtship in Asesewa. Consistent with prior studies, it is common for boys to provide money and gifts to current or prospective girlfriends. Although there was talk around the town about adult teachers or other men using money to access sexual relationships with teen girls, male provision is far more common among agemates in premarital relationships versus 'sugar daddy' relationships. Some girls were paired with slightly older and comparatively wealthier boys, such as those who had finished high school and were fully employed. Girls with weak household support and limited educational and vocational opportunities saw these premarital relationships as a pathway to marriage, which would confer them more permanent patronage under a providing husband. Most often, however, boys and girls of similar ages and socioeconomic standing formed relationships.

It was also frequently the case that girls had an economic advantage in their relationships, and it was ubiquitous for girls to provide for boys in courtship. Virtually every adolescent interviewee shared that girls often give gifts and money to boys, with about one-third of participants reporting female provision as part of their dating experience. Some participants spoke of girls using money or gifts to 'propose love' to boys, a colloquial term signifying the act of initiating a romantic relationship with a potential partner. As Audrey, a guardian, observes:

> Interviewer (intv): Do the girls ever propose love to the boys?
> Audrey: Yes.
> Intv: How do they do this?
> Audrey: It's in the way she approaches the boy. . . she'll buy gifts for the boy to get the boy's attention to what they want. Sometimes, they give [the boys] money . . . I experienced this with one of my children. When he sits at the back of the house, you will see the girl with him. I saw that several times.

Female provision was not only part of the initial stages of courtship but also practiced within established romantic relationships. In some cases, girls capped their contributions to small expenses, such as buying food or drink for their boyfriends. However, many were spending non-trivial amounts, purchasing higher ticket items for their boyfriends, such as shoes, watches, and other material goods. Girls would also periodically give their boyfriends cash upon request, sometimes as much as 50 GHC ($8.50 USD) in a single transfer. Although presumably less common, some girls even covered high essential costs like school fees, hospital fees, and medicine.

Girls had access to resources through various channels. Some girls would save money from boyfriends to give back as gifts. Others came from comparatively wealthier households, giving them regular access to pocket money or material goods if the family owned a provision shop. Many girls also had an independent income from market trading or selling food or water on the roadside. Although their amounts were small, their employment opportunities nonetheless gave them some expendable income.

When asked to explain why girls give money and gifts to boys during courtship, adolescents frequently articulated provision as an obligatory act of love. In describing romantic love, Julia, a sexually-inactive 15-year-old, states:

> If you love him and he needs something, you will give it to him. If he is sick, you will send him to the hospital. Also, if a poor person does not have clothing and you have more, you can give them your clothing so that the poor will benefit from the rich.

Within a stream of thought, Julia equates tending to a boyfriend's financial needs to the financial needs of a more impoverished community member. By assuming a patron role, Julia adheres to a moral code that places responsibility on individuals with resources to reduce economic inequality through redistribution. This obligation was not unique to adolescent girls but reflected a community-level moral code, which sees provision as a necessary display of 'loving thy neighbor.' In Asesewa, the redistribution of resources was integral to many relationships among community members. Money was constantly changing hands among youth,

irrespective of gender or relationship status.[4] Although amounts given among youth were often small, the ease at which youth assumed a patron position to their peers was remarkable, considering none of the adolescents in this study had what could readily be regarded as high or consistent income.

As an extension of the local moral economy, adolescents saw female provision in romantic relationships as a seemingly unexceptional practice. Of note is the ease with which gender norms lose their salience when girls become morally obliged to assume a providing role. Nathaniel, a sexually active 17-year-old boy, explains:

> We are all human beings, and someone may be in need of something. If the girl has it, she needs to give it to the boy, and the boy will also give to the girl. [When] you give out a gift to someone, there is an affection for this person in need – that is why I am giving out this thing. If you don't have that affection, you can never give.

Of note is the way Nathanial emphasizes a similarity over difference between boys and girls; because financial need and desire for upward mobility are universally experienced among adolescents and not limited to gender, a commitment to economic equity ultimately transcends provider masculinity within romantic relationships. Like girls, boys face financial hardship because of household poverty and inconsistent youth employment opportunities in Asesewa. Romantic relationships grant boys a safety net to protect against economic fragility and give girls a chance to demonstrate love and affection by attending to their partners' needs with provision. In some cases, the safety net girls offer is critical to boys' well-being. One boy, for example, shared that his girlfriend paid a large hospital bill for a sudden and severe illness he experienced, an expense neither he nor his family could afford. In other cases, girls simply address boys' 'needs' for status-elevating consumer goods such as clothes, jewelry, and electronics. It was thereby of practical interest to both genders to rely on their romantic partners to address acute needs and material desires, and the moral obligation of both boyfriends and girlfriends to assist their partners in this way.

[4] Perhaps attesting to the pervasiveness of exchange among youth, several guardians accepted that at least some of the pocket money given to their adolescents would be redistributed among peers, either to help those in need or to pay back someone for their past generosity.

Female Providing Power, the Reciprocity Principle, and Exchange Dynamics

As in other settings, youth in Asesewa see provision as part of a mutually beneficial exchange system, where the receiver is equally obliged to reciprocate with something of value. Because reciprocation is an expression of love and commitment, the stability of romantic relationships in Asesewa is closely predicated on both partners perceiving the ongoing exchange of rewards to be continually balanced, if not favorable. Many romantic relationships in Asesewa mirror gender dating dynamics common to sub-Saharan Africa, where the balance rests on boys financially providing for girls, girls reciprocating with sexual intimacy, and both genders deriving intangible benefits from their respective gains.

When girls have providing power, however, what girls and boys expect to give and receive within romantic relationships shifts in some fundamental ways. Some of these shifts appear as a reconstitution of gendered courtship patterns among adolescents. Just as economic conditions destabilize provider masculinity in premarital romantic relationships, they also may inform what is exchanged between boys and girls in ways that depart from standard gender norms.

One of the most salient features of relationships predicated on female provision is that sex loses its status as the primary currency in which girls maintain mutuality in their romantic relationships. Economically advantaged girls reported using sex *or* money to sustain their boyfriends' provisions. Girls were outspoken in explaining that they use money as a tool to beget more money from their boyfriends, seeing their provision as an investment or a way to ensure that their boyfriends will provide in the future. This pattern was succinctly summarized in a dialogue between sexually active girls in a focus group discussion:

Julia (age 17): If he helps me today, I will help him tomorrow.
Grace (age 18): If he refuses to help me, I will also not help him.

This give-and-take narrative in romantic relationships is familiar; the delicacy of maintaining mutuality is a salient feature of all relationships where exchange occurs and persists within relationships where girls provide. However, what is striking among the youth in Asesewa is how romantic relationships rest on equity in financial flows when girls can financially provide, not just the balanced trade of sex and money.

While money becomes a resource for girls to maintain a mutually beneficial relationship, sex becomes a currency some girls may expect in return from their boyfriends. It was common for interviewees to speculate that girls are primarily motivated to establish romantic relationships for sexual pleasure, using money to initiate and sustain relationships for these ends. Anita (age 15, sexually active) explains:

> If the girl sees the lifestyle of the person, then she will tell him, "I love you," and she will send money to the boy because she wants to feel the taste of his body. . . Sometimes girls give boys like GHC 50 or buys clothing and shoes for them. . . the girl wants to feel the way he has sex with her.

Some boys correspondingly acknowledged that satiating a girl's sexual needs is a pathway to getting gifts and other financial rewards from her. For example, one story shared among sexually active male focus group discussants was of a girl who promised her boyfriend a laptop for the enjoyable sex he delivered. It is important to note, however, that sexually active girls did not articulate their provision as motivated by or contingent on receiving sexual pleasure from boys – these were claims made by other categories of interviewees. This discrepancy may indicate a misrepresentation of girls' intentions by the wider community. Alternatively, it is also possible girls were more comfortable articulating sexual desire through the discourse of love, which adolescents often conflate with sexual intimacy in dialogue.

Some of the benefits girls expect for their provision are less tangible, including status. Two excerpts from interviews with adolescent boys illuminate this:

> If a boy is the best player on a football team, she wants to say that's her boyfriend . . . Some of the ladies feel big if their boyfriends are the stars of the town or school. They even feed them with their own money. Those boys don't spend their money on girls, but the girls spend their money on those boys.
>
> - Jonathan (age 17, sexually active)

Luke (age 18, sexually active): Madam, the girls give themselves to me. I don't propose to them. They rush to love me, mostly at school. They are always close to me. They want to be where I am.

Intv: How do they indicate they love you?

Luke: They buy me gifts when they come to school.

Like men who use money to get girlfriends with desirable feminine qualities, girls also use their financial ability to lay claim to partners who are popular and have masculine qualities that will elevate girls' social standing. In Asesewa, idealized boys are top students or star athletes, as Jonathan explains. Because of their high desirability on the dating market and the social benefits girls reap from claiming these boys as their boyfriends, girls inundate high-status boys with gifts with limited expectations to reciprocate with anything tangible. For some girls, then, status comes not from acquiring material goods from boyfriends but rather from giving material goods to boyfriends who provide the girls status in other ways.

Participants claimed that girls use money not only to obtain a high-status boyfriend but also to secure love and commitment from boys more generally. While providing girls explain their provision as an act of love, other interviewees suggest girls offer money in hopes that boys will reciprocate love and stay in relationships. Many boys validated this view, including Noah and David, who candidly explain that their emotional sentiments within relationships are motivated by and contingent on girls' provision:

[She gives me gifts] because she loves me, and thinks if she gives me those things, I will love her more . . . if she is buying you those things or gives you money, you will be happy to be with her or love her more.

- Noah (age 18, sexually active)

David (age 17, sexually active): I receive gifts from girls . . . sometimes, she loves you, likes you. . . she wants your attention, or she wants you to propose love to her.

Intv: Do those things get your attention?

David: Yes.

Intv: What if you don't love her?

David: You will love her.

Not only were boys' emotional sentiments underpinned by a sense of pragmatism, but it was also the case that boys and girls pragmatically sought partners most likely to fulfill their respective financial and emotional needs. For boys, this meant seeking girlfriends from comparatively wealthier households. Boys frequently acknowledged that the most desirable girls in Asesewa are those capable of providing boys the material life they could not acquire by virtue of their lower socioeconomic location. Girls from families who owned provision shops were particularly coveted as these girls had access to consumer goods and phone credit. By comparison, some girls actively improve their bargaining position in romantic relationships by providing for boys who may be more financially incapable of rejecting the provision and leaving the relationship. Some cited village boys boarding at schools in Asesewa as good prospects for girls because of the boys' more distant connection to kin and household financial support.

The Structural and Normative Edges of Female Provision

Even as poverty acts as an equalizer between boys and girls during courtship, seemingly to the point where gender norms lose relevance, there were nonetheless limits on the extent to which it was acceptable for youth to depart from proscribed gender roles. Gender norms and structural gender inequalities inform these boundaries. Some limitations manifest within youth courtship culture, where adolescents reconcile moral and gender norms by setting parameters on female provision. Other limits manifest in community-level narratives concerning the acceptability of exchange dynamics in relationships where girls have the providing edge. As reverend Frederick reflects, these community narratives often evoke gender double standards: "You'll hear of a girl who has given to a boy, and it brings a problem. . . but when a boy gives to a girl, there is no comment." This section explores the normative edges of female provision in TSRs and the social and structural factors that sustain gender roles despite the moral imperative for youth to forsake them.

"The Fingers Are Not All Equal": Parameters of Female Provision in Premarital Relationships

Even if economically advantaged girls provide for boyfriends to satisfy moral norms, gender norms that configure men as providers were not absent from the dialogue among adolescent interviewees. Moral ideals of equity are considered in tandem with provider masculinity,

informing expectations of how much each gender should provide within courtship. Adolescents almost unanimously agreed that boys should give more than girls, which they justified on two considerations. The first consideration relates to structural factors, which intertwine with notions of equity. As Anne (age 18, not sexually active) explains:

> You give according to your strength - how much you can afford. The fingers are not all equal . . . Assume you earn 3000 GHC each month. You decide to give 100 GHC to your girlfriend. Your girlfriend earns 2000 GHC each month. You don't expect her to provide for you.

Adolescents frequently drew on notions of economic inequality, acknowledging that boys' employment is typically better paid even if the instability of youth employment sometimes places girls at a relative advantage. Participants also acknowledged that although trivial in adolescence, this financial advantage gains momentum throughout life and culminates in wide gender economic disparities in adulthood. Because economic strength differs by gender, and provision is an act of offsetting upstream structural inequalities, it follows that the direction and magnitude of giving also vary by gender, necessitating boys to provide more than girls in premarital relationships.

The second consideration draws upon gender normative ideals. David, a sexually active 17-year-old, explains it this way:

> If you want to give money to a boy, the girl need not provide most. If the boy is in need, the girl can only support . . . A boy needs to give more to the girl because, during creation, Adam was created first. God gave most authority to men, so men should provide more to women.

Here, David evokes an essentialist notion of gender and power common across the interviews with adolescents and the wider community. Adolescents understood the power in a relationship as contingent on being a breadwinner; a position naturally conferred on men. David roots this essentialist belief in Biblical narratives, but most gave no further explanation beyond suggesting men's authority in a household is natural.

These gender normative ideals and structural inequalities create parameters on female provision in premarital relationships, as Anne and David describe. When girls have resources and their boyfriends are without, girls are morally obliged to attend to a boyfriend's needs and material desires. Outside of moments without money, boyfriends must endeavor to assume the providing role. When boyfriends have resources, girlfriends *can* continue to provide, but they are no longer morally obliged to do so, not even in amounts that would technically sustain equity. In this sense, girls are meant to "only support" as supplementary safety nets in boys' short-term moments of need. In contrast, boys must assume the role of the primary provider in all other circumstances to meet ideals of provider masculinity. Although common for girls to take a providing role within their premarital romantic relationships, this pattern reflects the frequency in which girls must act as a safety net until boys reach the financial stability of adulthood.

Female Providing Power and the Limits of Exchange

Even as adolescents create an exchange system socially permitting girls *and* boys to address their economic needs via romantic relationships, female provision within premarital relationships was nonetheless a source of contention across the community. The discomfort was not specific to female provision per se. Across Asesewa, it is a norm that households rely on women's earnings as an essential supplementary safety net to men's financial contributions. Given high rates of divorce and single motherhood across Ghana, it is also common for households to be solely subsistent on women's income. For girls to not provide for boys in times of need would thereby violate fundamental moral codes and misalign with the gender roles typical to Ghanaian households.

Interviewees across the community were more specifically critical of what girls seek in reciprocation when they can act as patrons to boys. Some of the exchange dynamics predicated on girls having providing power upend other gender norms or exacerbate gendered structural inequalities. Concerning the former, there was a community-wide disdain for girls who use their economic edge to access sexual pleasure. Whether or not girls' use of money for sex was real or perceived, this exchange dynamic was frequently a point of caution among interviewees. Capturing this tone, adolescent interviewees Maria and Noah warn:

> She is controlling you . . . If you need something and she gives it to you, if she needs sex, you have to also satisfy her. If you don't do it, she'll tell you, "Next time, if you need

money, don't come to me." And because you need that money, you have to do it . . . The girl also wants you for something.

- Maria (age 16, not sexually active)

Girls give money to boys to have sex with them. Normally, this happens at school. The girls force the boys to have sex with them.

- Noah (age 18, sexually active)

The theme of the predatory providing girl mirrors a common sexual double standard, which places greater expectations of sexual restrictiveness on women versus men. As captured in the excerpts, scenarios of girls using their economic advantage to initiate or sustain sexual relationships are often articulated as ones of force, whereby girls use the reciprocity principle to trap unwilling male victims into sexual relationships. By contrast, it is not only the norm within premarital relationships that boys provide money with the expectation of sex in return. But even when this arrangement exists out of necessity – that is, when economically vulnerable girls enter relationships with boys primarily for financial need – the exchange of sexual intimacy for boys' patronage is considered complementary and not parasitic, at least when it occurs between agemates. These differential characterizations suggest an intolerance for girls to depart from normative gender roles in courtship, particularly those which expect women to be passive respondents to men's sexual advances and gatekeepers of sexual intimacy. Providing girls pose a unique threat because not only are they transgressing sexual norms regarding female modesty, but their economic edge over boys empowers them to do so.

There was also discomfort with girls providing money with the expectation that boys would reciprocate in kind with love and commitment. Guardians and stakeholders were particularly contemptuous of this dynamic. This contempt was specific to cases of girls using household resources to provide for boyfriends, not girls who did so with their earnings. Adults often characterized boys as disingenuously using notions of love and commitment to hook wealthier girls into providing for them and girls as blind participants of a parasitic exchange. Adults considered this pattern an illegitimate use of the principles of the moral economy that only serves to aggravate structural gender disparities and household poverty across Ghana. Walter and Magdalena, local ministry workers, describe the problem this way:

Walter: Love should be like a relationship to help your partner when they are in need when you have [resources]. You just help the person freely without anything you've been looking for to replace it. That is my understanding of love. To help someone who is in need without any replacement.
Intv: Do you think adolescents use that definition of love?
Walter: No, they don't use it. They only mean love as give and take. You give me something, and I'll also give you my private part.

[Adolescents] don't understand love. He knows this girl doesn't have money, but he's always convincing her to get him some. Where is she going to get that money? She will always be lying, deceiving her parents, and taking their money for him . . . he doesn't love her. He will stay with her for two months, three months, a year, then go away. And nobody holds him accountable for anything; he is free to live his own life. He is going to find another woman. One man can get two or three ladies pregnant, and nobody asks him anything. That is Ghana.
- Magdalena

These excerpts reflect several emergent themes of the adult interviews. As outside observers of premarital courtship, adults perceive that adolescents do not understand the true meaning of love and the essence of giving. Older cohorts see lust and money as the basis of adolescent romantic sexual relationships, as evidenced by the transient pattern of serial monogamy characteristic of youth dating culture. As Walter does, adults often juxtapose adolescents' dissolute version of love with 'real love,' which aligns closely with the moral principles of 'loving thy neighbor.' To adults, real love focuses on giving rather than taking and lends to relationships far more stable and less instrumental than adolescents'.

The concern with modern dating culture is that girls and their families will be on the losing end of exchange if girls act as financial patrons to boyfriends under the auspices of love, commitment, and mutuality. This concern is contextualized within broader gender struggles across Ghana that contribute to the country's growing rates of single motherhood and household poverty. It is frequent for boys to deny paternity of premarital pregnancies to evade the

responsibilities of fatherhood, and there is limited institutional recourse for women to receive child support from men when marital unions dissolve. The disproportionate ease at which boys and men can move between relationships is particularly relevant to families of adolescent girls, as families absorb the instrumental and financial responsibilities of childrearing left by fathers of premarital relationships.

Even with the economic advantage that allows girls to be providers in their romantic relationships, these gender dynamics nonetheless render this advantage a risk factor for other structural inequalities. Single motherhood is a pre-existing concern for families of all adolescent girls in premarital relationships, but the risk and socioeconomic cost compound when girls misappropriate household resources to support their boyfriends.[5] As Magdalena explains, boys who prompt their girlfriends to siphon household funds are acting in self-interest and doing so under pretenses. Such boys are most likely to renege on promises of commitment, especially if unexpectedly faced with fatherhood and the attending financial responsibilities. Relationships predicated on female provision place households at an immediate loss of financial resources and the longer-term economic costs of aiding single teen mothers as they raise children without paternal support.

Discussion

The primary purpose of this research is to explore the dynamics of premarital TSRs in a Ghanaian market town, where many girls have a comparable, if not sometimes better, economic standing than boys. This economic parity theoretically creates conflicts between norms that guide the exchange dynamics of African courtship. Gender norms necessitate men to be financial patrons to women, who reciprocate with sexual intimacy to have their material needs and desires met by men (Luke, 2005; Stoebenau et al., 2016). Men's economic advantage in Africa sustains these norms, making this exchange configuration the dominant practice in sub-Saharan African courtship (Stoebenau et al., 2016; Swidler & Watkins, 2007). Yet, moral norms of equity dictate that relative wealth, not gender, determines the patron-client positions within Africa's social

[5] Adult interviewees often illuminated this concern through a retelling of a story of a high school girl, who reportedly used 900 GHC (~$150 USD) of her household's money to 'sponsor' her boyfriend instead of paying her school fees. Also common, interviewees shared stories of girls stealing goods and phone credit from their families' provision shops to give to their boyfriends.

fabric (Abrahams, 2007; Carrier, 2005; Vaa et al., 1989). In contexts like Ghana, where it is not uncommon for adolescent girls to have a financial edge over boys, girls would theoretically have a moral obligation to assume the provider role in their relationships. This paper explores the contours of this conflict, seeking to understand how youth grapple with these norms and how these norms may dictate exchange dynamics between boys and girls.

The first part of this research explores whether adolescents apply equity norms within their courtship culture and how such norms may inform exchange dynamics between boys and girls. The findings suggest that, like adults in other settings (Swidler & Watkins, 2007; Vaa et al., 1989), adolescents are active participants in a local moral economy and incorporate equity norms within their premarital relationships. Because girls sometimes have an economic edge over boys, it is not uncommon that girls provide for boys' needs and material desires in the spirit of love and equity. Female provision is not seen as an affront to provider masculinity, indicating that moral norms may dominate gender norms under certain economic circumstances.

Corresponding with past research on adult women who provide for men (Cole & Thomas, 2009b; Groes-Green, 2013; Mojola, 2014b), new patterns of exchange emerge when girls have providing power. These changes suggest that what boys and girls give and expect to get out of their relationships may be more closely predicated on their ability to assume a providing role versus normative gender roles. For economically empowered girls, sex loses its status as the primary currency they bring to relationships. Instead, money becomes a tool they use to beget more money, initiate and sustain sexually satisfying relationships, and secure the intangible rewards of status, love, and commitment. Alternatively, sex, emotional sentiments, and the promise of status become currencies boys use to access girls' financial resources for their upward mobility.

Although these exchange patterns suggest a reconstitution of gender norms within adolescent premarital relationships, there are limits to the degree to which individuals may freely depart from proscribed gender roles. The second part of this study explores these boundaries. Although morally obliged to offer financial support, gender norms and structural inequalities restrict female provision to moments where boyfriends have no resources. In all other circumstances, boys are expected to assume the providing role, and girls have no moral obligation to maintain further equitable balance. Gender normative limits are also evident in community-level

narratives which evoke sexual double standards. Notably, although acceptable for boys to use their financial edge to access sexual intimacy, girls face great scrutiny for doing the same.

Finally, though a financial edge may confer girls agency and power to have boyfriends meet their desires, broader gender struggles across Ghana constrain this advantage. This issue may be particularly relevant for wealthier girls who adults perceive to be using household resources to provide for boyfriends expecting love and commitment in return. Adults are wary of the pragmatism that underlies exchange in adolescent relationships, which they feel lacks the essence of the moral economy where giving should be prioritized over receiving. Boys who seek the patronage of wealthier girls may be most likely to renege on promises of love and commitment if unexpectedly faced with fatherhood and have great latitude to do so in Ghana. Despite any financial power within their relationships, providing girls are at risk of an unbalanced exchange that places households at risk of short-term economic loss and long-term economic consequences of single motherhood.

Comparing the results of this study against the large body of research on exchange in nonmarital relationships, these findings are exceptional and correspond with a smaller subset of the literature which sees female provision as token or trivial or is relegated to a side finding vis-à-vis male provision (Kaufman & Stavrou, 2004). Instances of women providing in large capacities are understood as unique case studies of structural circumstances upending gender relations and not necessarily situated in men and women adhering to the moral codes of equity and reciprocation in Africa's moral economy (Cole & Thomas, 2009b; Groes-Green, 2013; Mojola, 2014b; Nyanzi et al., 2004). Only recently have scholars considered exchange in nonmarital relationships as part of this moral economy (Groes-Green, 2013; Hunter, 2010; Poulin et al., 2016; Swidler & Watkins, 2007) and not just constitutive of men and women 'doing gender' (West & Zimmerman, 1987). This study is one of the first to understand exchange in adolescent relationships as an expression of this moral economy. It was perhaps in using the moral economy as a starting point of the analysis – and not making a priori assumptions about the direction of giving – that provision in adolescent relationships appeared far more bidirectional than observed elsewhere.

Perhaps the most striking finding is just how unexceptional it is for girls to provide, even in large magnitudes. Of theoretical consideration is whether adolescents in this study are 'undoing gender' (Deutsch, 2007) or if patterns of exchange are not as staunchly gendered as the current

literature suggests. The results of this study would suggest that female provision in Ghana may be a matter of continuity, not change. That neither adolescents nor older cohorts in this study articulated female provision as an affront to masculinity or femininity provide credence for this, which reflects Ghanaian women's longstanding role as economic providers. In this sense, although female provision of this scale may be unexceptional within the community, it may still be exceptional to places like Ghana, where women have relatively high economic activity and financial autonomy. Female provision of this magnitude in Ghana may also be unique to adolescents, where gendered economic disparities are minimal than in adulthood, particularly among youth in market towns where girls are economically active. Exceptions notwithstanding, the findings suggest that female provision may occur more frequently across sub-Saharan Africa than characterized in the present literature and that moral commitment to equity and social reproduction may have long been at the forefront of relations between men and women in this region (Abrahams, 2007; Vaa et al., 1989).

The findings also draw attention to the fluidity of masculinities and femininities (Connell & Messerschmidt, 2005; Schippers, 2007) and how material conditions shape what people want and need out of relationships. Sometimes men want material things, and sexual desire may be at the forefront of women's motivations in relationships (Jewkes & Morrell, 2012; Mojola, 2014b; Sennott & Angotti, 2016). But the limits to which men and women can diverge from their respective roles differ, even as a moral system and economic circumstances motivate such departures. These differing limits suggest there is more latitude for boys to cope with economic deprivation by departing from provider masculinity than for girls to capitalize on financial empowerment by departing from feminine ideals of sexual self-restraint and modesty (Jewkes & Morrell, 2012). The findings similarly suggest that although roles may change in some ways, they do not offset the consequences of other persistent gender norms. Despite girls' economic edge and providing power, norms that permit men to move between sexual relationships do not protect girls from disproportionately bearing the consequences of such relationships, like pregnancy. Even if conditions allow for gendered sexualities to be 'reconsidered' (Sennott & Angotti, 2016), gender as a structure still limits the agency of men and women in different ways and to differing degrees (Jewkes & Morrell, 2012).

On methodology, the study has several limitations. The first limitation concerns the validity of community-level narratives, on which some key findings are based. Some participants made

observations of girls that did not necessarily correspond with the girls' perspectives. The validity of community-level perceptions should always be considered when interpreting the data, especially in a setting where sexually active girls face far more scrutiny than their male counterparts. The second and related concern is the issue of self-reporting. Although we endeavored to create a research setting to reduce discomfort and power imbalances between interviewers and participants, one cannot assume participants were fully candid and transparent in detailing their opinions and experiences. Nowhere is this concern more relevant than studies exploring sensitive topics like sexual relationships in settings with high levels of religiosity. Girls may be less candid in sharing their romantic sexual lives with researchers, a consideration that needs to be at the forefront when interpreting the results. Finally, as with all studies relying on non-representative samples, there may be limits on how generalizable the findings are to adolescent populations outside of Asesewa or Ghana. Even more broadly, it is essential to bear in mind that Ghana stands apart from other sub-Saharan African countries for its high levels of female economic independence. The findings may not have as much relevance to gender relations among men and women in other parts of Africa.

Limitations notwithstanding, this study is a reminder that gender is a social arrangement and does not operate outside of other social structures related to class, material well-being, and social reproduction (Hunter, 2010). Situating exchange in nonmarital relationships within the socioeconomic context highlights how men and women are often more similar than different in their material wants and needs, even in the most seemingly robust gender configurations. Contextualizing TSRs as part of the social fabric of African society also demonstrates how men and women are sometimes connected in non-gendered ways. At the same time, the study also shows that even as masculinity and femininity are malleable to the cultural context, gender norms still limit the extent to which individuals can depart from proscribed roles without social or economic consequences.

Chapter 6. Conclusion

African adolescents' decisions about romantic sexual relationships have longstanding health, social, and economic implications for themselves and the broader African region (Ali et al., 2018; Chandra-Mouli et al., 2015; Melesse et al., 2020). Even as a large body of literature has sought to understand adolescent sexual decision-making in sub-Saharan Africa, several essential areas remain underexplored. In this dissertation, I drew upon rich longitudinal and qualitative data from peri-urban market towns in Ghana to examine three sociocultural factors potentially important to youth sexual culture yet not well understood. In the three standalone chapters, I more specifically assessed how religiosity, traditional initiation rites, and local moral codes inform the romantic sexual lives of youth in this Ghanaian setting.

Research Summary

Research consistently demonstrates that highly religious individuals abstain from sexual activity longer than those who are less religious or not religious (Landor et al., 2011a; Rostosky et al., 2004; Shaw & El-Bassel, 2014b). However, several intricacies of this relationship are not well understood, particularly in the African context, where very little research has been conducted despite the region's high religiosity (Pew Research Center, 2010; Trinitapoli & Weinreb, 2012). One of the first intricacies I explored in this chapter is how different expressions of religiosity may relate to abstinence. In the first paper, I utilized longitudinal data involving 1,204 adolescent participants and their guardians to investigate the association between religiosity and abstinence among Ghanaian youth. My findings demonstrate that intrinsic but not extrinsic religiosity is associated with sexual activity. That is, adolescents who place high personal importance on their faith are more likely to abstain from sex than those who do not, whereas being highly active in religious institutional life does not deter sexual activity.

The next question of interest explores potential mechanisms underlying the association between religiosity and delayed sexual debut. A theory that receives support in Western research is that highly religious individuals refrain from sexual activity because they hold conservative sexual attitudes, which they adopt from their religion's proscriptions (Merton & Rossi, 1950; Rohrbaugh & Jessor, 1975). Curiously, I do not find evidence in my Ghanaian sample that sexual attitudes are related to either dimension of religiosity. Further, higher intrinsic religiosity is still associated with decreased odds of being sexually active when controlling for sexual attitudes.

Conceptually, these findings suggest two things. First, although religious messaging about sex may be pervasive, other sociocultural norms inform Ghanaian youths' sexual attitudes. Second, religion still has an influential role in sexual decision-making in ways that have little to do with one's personal views toward sex.

The final exploration of this chapter expands the scope of analysis to include the religiosity and sexual attitudes of guardians and peers, who extant literature identifies as key influential actors in adolescent sexual decision-making. My analyses specifically seek to answer two interrelated questions about the role of the social network: 1) to what extent does network religiosity versus sexual attitudes predict adolescent sexual activity? 2) *whose* religiosity or sexual attitudes is most strongly related to sexual debut? To assess these questions, I use guardians' self-reported religiosity and sexual attitudes and adolescent-reported indices of guardian sexual attitudes, peer religiosity, and peer sexual attitudes. I find a prominent role of both peer religiosity and sexual attitudes, which are as strongly related to sexual debut as adolescents' religiosity and sexual attitudes. By contrast, guardian characteristics play a minimal role in adolescent sexual activity. Neither guardians' religiosity nor self-reported sexual attitudes have a relationship with their adolescents' sexual debut. Guardian-perceived sexual attitudes predict sexual debut but not when assessed with peer-level variables. Conceptually, this suggests that although adolescents may project their sexual attitudes onto their guardians and peers, what they think their peers believe heavily influences their sexual decision-making.

The primary purpose of the second paper was to examine whether female participants of the Krobo *dipo* initiation rite become sexually active significantly sooner than non-participants, as is widely assumed across Ghana. The perceived problem with dipo is that Krobo girls are initiated at much younger ages than in the past yet continue to interpret the rite as the normative entrée to adulthood and sexual activity, per traditional custom. This interpretation is an affront to contemporary moral norms that condemn premarital sex and possibly a public health issue, as Krobo girls' supposed sexual permissiveness may be fuelling the unusually high HIV rates in the Krobo communities.

However, there are different important possibilities or contingencies in this story. First, Krobo girls' sexual behaviors and the community's high HIV rates may reflect other Krobo sexual norms and practices, including Krobo women's proclivity to engage in sex work. Further, the catalyzing influence of dipo on sexual activity may be capturing the transition to sexual

activity among girls on the cusp of commencing sexual activity. Substantiating this possibility, past research suggests some guardians purposively initiate their girls when girls show signs of becoming sexually active to avoid violating traditional taboos about pre-initiation intercourse. It is also possible that the socioeconomic environment may play an essential role in how girls interpret dipo. Because sexual relationships are a means through which girls receive financial support, girls who receive deficient household support may be more inclined to interpret dipo as the normative entrée to sexual activity.

To examine these possibilities, I combined in-depth interviews with 99 adolescent girls and community members with longitudinal survey data from a separate sample of 690 adolescent girls who reside in districts where the rite is practiced. The findings provide substantial evidence that dipo fosters sexual activity among its initiates. Time-ordered analyses indicate that initiates have 67% greater odds of becoming sexually active by age 16 than non-participants and transition to sexual activity, on average, six months sooner. This difference in timing suggests that although the rite does not encourage very early sexual activity, as is widely assumed, it nonetheless accelerates entry into sexual activity for girls in mid-adolescence. The effect of dipo on sexual debut held when controlling for ethnicity. While the in-depth interviews provide evidence that guardians may be pre-emptively initiating girls who show signs of becoming sexually active, the effect of dipo on sexual activity still held when accounting for this using the larger sample size of the survey data.

Correspondingly, Krobo girls in the in-depth interviews endorsed the belief that passing through dipo permits them to commence sexual activity. However, contrary to popular perception, initiates do not interpret the rite as a passage to adulthood or become sexually active on these grounds. Instead, socioeconomic conditions inform their interpretations. In a context where romantic relationships are a source of financial support, yet premarital sex is reproved, some girls justify dipo as an acceptable alternative pathway to sexual debut to have their economic needs met by a boyfriend. And because traditional customs dictate that pregnancies are only legitimate upon completing dipo, passage simultaneously gives girls greater assurance that they will receive childrearing support from their families should their premarital relationships lead to single motherhood. Together, this chapter demonstrates that *dipo*'s influence on sexual decision-making is not lost on Krobo girls, but that initiates adapt traditional customs to respond to some of the everyday struggles girls face in contemporary Ghana.

The final paper focused on the exchange dynamic common to non-marital relationships across sub-Saharan Africa, commonly referred to as transactional relationships (TSRs). Scholars suggest that gender norms and men's economic advantage sustain a pervasive courtship pattern where men provide financial resources to women, who reciprocate with sexual intimacy. Although less acknowledged, some scholars also see TSRs as part of Africa's moral economy, where individuals form a mutually-beneficial relationship based on economic asymmetries to sustain social equity. In this sense, men's economic advantage maintains provider masculinity and makes them morally obliged to be financial patrons to women. However, the moral imperative to become patrons to those with less is not gendered, and there is no sharp economic asymmetry between Ghanaian adolescent boys and girls. Theoretically, Ghanaian adolescents may face conflicting norms in their premarital relationships: gender norms that require men to provide to their female partners and moral norms that require girls to provide to their male partners if girls are economically advantaged. Because female provision is regarded to be uncommon and research on Africa's moral economy focuses on adults, not youth, it is unclear how Ghanaian adolescents reconcile these norms and what financial advantage may mean for exchange practices in premarital relationships.

I use in-depth interviews with adolescents and community members to examine these unknowns. The results provide evidence that adolescents deprioritize gender norms vis-à-vis moral norms of equity. Girls with financial means provide for their boyfriends in great frequency and magnitude to honor a community moral code that prioritizes equity over provider masculinity. When girls have providing power, some exchange dynamics typical to courtship become revised. Notably, girls use their financial advantage to secure sex, love, status, and commitment from boys, while poorer boys seek committed relationships with girls who can address their financial needs and material desires. Even as poverty acts as an equalizer between boys and girls during courtship, seemingly to the point where gender norms lose relevance, there were nonetheless limits on the extent to which youth could depart from gender roles. Adolescents maintain gender ideals by necessitating that boys provide more in their relationships, and girls face greater scrutiny when they use their financial means to access sexual relationships. Further, even as girls may be equal or more advantaged than boys in courtship, gender norms that allow boys to evade responsibility for childrearing place girls at risk of shouldering the economic consequences of teen pregnancy.

Contributions and Future Research

Above all, this dissertation provides novel contributions to the research on adolescents' sexual and romantic lives in sub-Saharan Africa. The three chapters respond to a common theme, which relates to a general lack of research on critical areas related to adolescent sexual decision-making. Perhaps most pronounced is the absence of literature on religiosity and sexual debut in sub-Saharan Africa, a gap that exists despite this region's high religiosity and the pervasiveness of religious norms in sexual messaging. The contribution of my first paper is primarily through the richness of the longitudinal survey, which includes multi-dimensional measures of religiosity and indicators for familial and peer spheres of influence. With this data, I delineated if and how different forms of religious expression relate to sexual attitudes and behaviors. I also pinpointed which agents of religious socialization may have the most significant influence on adolescent sexual decision-making. Consequently, I make new contributions to the literature by demonstrating the association between intrinsic religiosity and abstinence in a less-researched setting and exploring the mechanisms that may underpin this relationship.

This research is one step toward building a body of research on religiosity and sexual behavior in sub-Saharan Africa. Although similar literature from Western populations is far more advanced in volume and breadth, I see the path forward as quicker and more efficient for African research than it was for the West. It has only been in recent decades that Western research has made its most significant gains by creating multi-dimensional measures of religiosity and using indicators for familial and peer influence. With better data, social scientists could use the sophisticated econometrics necessary to test theoretical frameworks and mechanisms rigorously. Even as the state of African research represents that of Western research decades back, forwarding African research involves the simpler task of applying the tools and frameworks that now exist and adapting them to an African context, as I have done in this thesis. Including indices of religiosity on survey instruments – and not just denomination – is perhaps the best starting point. I see an opportunity to apply measures of religiosity within the nascent body of research examining peer dynamics and family processes and adolescent sexual behavior in Africa (Bingenheimer et al., 2015; Bingenheimer & Reed, 2014; Kabiru & Orpinas, 2009b; Okigbo et al., 2015; Sidze et al., 2015; Tsala Dimbuene & Kuate Defo, 2012). Doing so would allow researchers to explore, for example, how religiosity may be related to other peer and family characteristics associated with sexual decision-making, such as cohesion and

communication. Also important, future research could examine how family or peer religiosity may be related to other types of sexual decision-making, such as condom use or the number of sexual partners. As with my current research, this proposed research could speak to the interests of the many stakeholders vested in the sexual well-being of youth across sub-Saharan Africa.

Given the fading role of traditional initiation rites within contemporary youth sexual culture, it is understandable social scientists do not prioritize rites of passage as predictors of sexual debut. Still, as Ghanaians have long assumed and my research suggests, it is inaccurate to assume initiation rites are no longer relevant to life course transitions and sexual decision-making. My mixed-method chapter contributes to this literature by being the first to use longitudinal data to confirm that passing through a rite is still associated with the transition to sexual activity. The contribution of this chapter also lies in integrating survey findings with community-wide in-depth interviews, elucidating why girls continue to interpret the rite as entrée to sexual debut. The qualitative portion of this study was critical in demonstrating that 'tradition' does not mean static, even though it is assumed so in public discourse. The way initiates selectively interpret the rite to maneuver around modern socioeconomic challenges and competing norms captures this dynamism. The primary message of this chapter is that traditional cultural practices may not have lost their relevance for youth sexual decision-making but rather that youth adapt their meanings to the contemporary landscape.

These findings call for a need to reconsider initiation rites – or even traditional cultural practices more broadly – as potentially essential facets of modern youth sexual culture. A practical starting point would be to understand how many initiation rites are currently practiced in sub-Saharan Africa, as this is difficult to ascertain in the current literature. Doing so would allow social scientists to gauge the extent to which initiation rites may represent the normative pathway to adulthood and sexual activity across Africa. In contexts where rites are still practiced, I see value in future research examining these practices more closely to understand their current symbolic meaning, particularly from adolescents' perspectives. As my research suggests, the meanings of the rite may differ between the community and initiates, the latter of whom may dynamically adapt these meanings to satisfy the needs and norms of their structural environment and modern youth sexual culture. Understanding how initiation rites may inform sexual decision-making would allow stakeholders to capitalize on the rites as tools to address adolescent SRH issues.

Compared to the literature on modern religion or traditional customs, research on TSRs is far more advanced. Still, it is surprising how few studies situate exchange dynamics in courtship as part of Africa's moral economy, given how core the moral economy is to social reproduction. And even within the smaller body of work on TSRs and the moral economy, adolescents are absent despite exchange being a norm in youth courtship. The main contribution of this chapter is its use of the moral economy as the starting point for understanding exchange dynamics in youth sexual culture. In making no a priori assumptions about the direction of giving between boys and girls – but instead seeking to understand how and why money is exchanged across the community – I uncovered significant complexities within courtship not commonly observed within the extant literature. These complexities grant essential insights into the contours of gender within premarital relationships, demonstrating how youth rework gender norms to adapt to moral and socioeconomic climate, but also the ways gender as a social structure is limited in its malleability.

This research, therefore, adds to a smaller but growing body of literature on TSRs and Africa's moral economy. My research stands with a small collection of studies within this literature that examine large financial flows from young women to boyfriends (Cole & Thomas, 2009b; Groes-Green, 2013; Hunter, 2002) or situates exchange between partners as part of a moral economy (D. J. Smith, 2017; Swidler & Watkins, 2007). Male provision is undoubtedly more common across sub-Saharan Africa, which both explains and justifies why female provision in courtship receives less attention. As I argued in my paper, it would nonetheless be an important direction for future research to examine the possibility that girls and women may be providing more frequently and in larger magnitudes than appears in the current literature. I also see an opportunity for future research to focus on female providing power in sexual decision-making and SRH risk. The relationship between resources, bargaining power, and sexual safety in TSRs has received some attention in the social sciences (Kaufman & Stavrou, 2004; Luke, 2006; Luke et al., 2011; Moore et al., 2007) and generally suggests that women's financial dependency reduces their sexual agency and ability to negotiate safe sex. The next logical iteration of my research would be to investigate whether providing girlfriends are more successful in demanding monogamy or condom use from their partners than girls with limited providing power. These inquiries would offer compelling theoretical insight into gender and

power dynamics in heterosexual relationships and practical knowledge for those seeking to address sub-Saharan Africa's complicated SRH issues.

Limitations

There are several key limitations of this research. This research relies entirely on self-reported data, which is vulnerable to recall errors, social desirability bias, and other validity issues. The recall issues are significant for the time-ordered analyses of this study, which rely on participants to provide a temporally accurate account of life events and accurately recall past socioeconomic circumstances. Social desirability may be a salient issue in this study because of the sensitive nature of discussing sexual behaviors in a highly religious setting. It is commonly assumed that men may exaggerate their sexual experience, whereas women may underreport, although some studies suggest this bias is not as pronounced as thought (Clark et al., 2011; Hamilton & Morris, 2010; Kelly et al., 2013). It may also be the case that adolescents may have exaggerated their religiosity. Although care was taken to minimize discomfort and reduce power imbalances between the interviewers and participants, it is nonetheless possible participants were not entirely candid in their responses on these issues. It is also important to note that in seeking to understand youth sexual subculture, my research sometimes relied on others' perceptions. The religiosity paper, for example, depends on adolescents' perceptions of their peers' attitudes and religious practices. Similarly, in the qualitative chapters, I relied on the perspectives of guardians and other community members. I was careful to identify which findings represented these perceptions. Notwithstanding, it is still important to reiterate that some key findings rely on perspectives that may not be valid representations of reality. The other main limitation of this study relates to generalizability. The in-depth interviews rely on non-representative samples, and the survey data is only representative of the adolescents from which the town is collected. The findings derived from each type of data may not represent the experiences of adolescents in Ghana or across sub-Saharan Africa more broadly.

Concluding Remarks

Despite these limitations, this research demonstrates how religiosity, initiation rites, and moral expectations inform youth sexual culture in Ghana. Across the chapters, I demonstrate how Ghanaian adolescents navigate competing social structures as they make decisions about

sex, love, and relationships. Youth encounter many kinds of tensions in the process. Some of these tensions are ideological, including ideals of sexual conservatism versus permissiveness, tradition versus modernity, and equity versus gender roles. Some tensions exist between differing socializing influences, like family, peers, and the wider community. I also draw attention to the way the structural environment frames how youth navigate these competing social structures, influences, and norms. Of most salience in rural Ghana is the role of poverty and lack of formal social safety nets, which necessitates adolescents to move between diverse modes of informal social support to have their needs and desires met, including premarital relationships. Together, these factors shape the landscape of youth sexual culture, creating diverse opportunities and constraints for adolescents as they explore romantic sexual relationships during this formative life course stage.

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Appendix

Semi-Structured Interview Guide

VERSION 1: Adolescent interview guide

Demographic information

First, I want to ask you a few questions about yourself:

1. How old are you?
2. Where were you born?
3. How long have you lived in Asesewa?
4. Do you stay in Asesewa throughout the whole year?
5. What is your ethnicity?
6. Are you currently in school?
    a. If yes: Which school do you go to?
7. What is the highest grade of school you have completed?

Financial Support

8. Do you currently do any work for which you earn money? What type?
9. Who do you currently live with?
    a. Where is/what happened to your parent(s)?
    b. Do you still receive financial support from your nonresidential parent?
10. Is your parent/guardian able to support all of your financial needs?
11. Is there anything that you want or need that your parents cannot provide for you? If so, what types of things?

Religion information

Now let's move on to some questions about your religion in your life:

12. Do you consider yourself to be religious?
13. What type of denomination do you affiliate with?
14. How regularly do you go to church or mosque?
15. Do you participate in any other religious-related activities, such as choir or bible group?
16. Do you like church/mosque? What do you like about it? What do you dislike about it?
17. Is church/mosque important to you? Why or why not?
18. What kinds of things do you learn in church/mosque?

Dipo

19. [Females only] Have you ever been through the dipo initiation rite?
    a. If yes:
        i. How old were you when you went through this rite?
        ii. Would you say you yourself wanted to go through this rite, or that you went through it because of someone else's wishes?
        iii. Tell me about how you felt after the dipo ceremony. Did you feel the different? Same? How?
        iv. Tell me about how you felt around men and boys before you went through dipo. Did this change after you initiated? If yes, how?
        v. Were there specific parts of the ceremony that you liked? Disliked?

b. If no:
    i. Do you have plans to go through the dipo initiation rite?
    ii. Do you want to go through dipo?

20. [For all] What does it mean for a girl to be initiated through dipo?
21. Do you think dipo important for girls? Why or why not?
22. Do you think dipo is important for your community? Why or why not?
23. Are girls who go through dipo different than girls who do not, or are they the same?
24. If you have a girl child, would you initiate her? Why or why not?
25. Is your religion related to dipo rites? In what ways does it relate or not relate?
26. Can a girl still be considered a good Christian/Muslim if she has gone through the dipo rites?
27. [Boys only] When you are ready to marry, how important is it that your future wife has been initiated?

<u>Love and relationships</u>

I'd like to move on to learning more about your relationships with boys/girls in this community:

28. Do you currently have a boyfriend/girlfriend?
    a. If yes:
        i. Is this your first boyfriend/girlfriend?
            1. If no:
                a. How many boyfriends/girlfriends have you ever had?
                b. How long do your relationships typically last?
        ii. How long have you and your boyfriend/girlfriend been together?
        iii. What do you like about your boyfriend/girlfriend?
        iv. Is love important for a relationship? Why or why not?
        v. Are you in love with your boyfriend/girlfriend? What does it mean to be in love?
        vi. How does your boyfriend/girlfriend show love for you? How do you show love for your boyfriend/girlfriend?
    b. If no:
        i. Have you ever had a boyfriend or a girlfriend?
            1. If yes:
                a. Was this your only boyfriend/girlfriend?
                    i. If not:
                        1. How many boyfriends/girlfriends have you ever had?
                        2. How long do your relationships typically last?
                b. How long were you together with your most recent boyfriend/girlfriend?
                c. What did you like about your boyfriend/girlfriend?
                d. Is love important for a relationship? Why or why not?
                e. Were you in love with your boyfriend(s)/girlfriend(s)? What does it mean to be in love?

f. How does your boyfriend/girlfriend show love for you? How do you show love for your boyfriend/girlfriend?

2. If no:
    a. Do you want to have a boyfriend/girlfriend? Why or why not?
    b. Is love important for a relationship? Why or why not?
    c. Do you want to be in love with someone in the future? Why or why not?
    d. What does it mean to be in love?
    e. How should men show love towards women? How should women show love towards men?

29. What are some good things about having a boyfriend/girlfriend? What are some bad things?
30. What makes someone a good boyfriend/girlfriend? What makes someone a bad boyfriend/girlfriend?
31. Do your closest friends have boyfriends/girlfriends?
32. Do you know any boys or girls in this community who have ever had sex? By sex, I mean penetration of the penis into the vagina.
33. Have you yourself ever had sex?
    a. If yes:
        i. The first time you had sex:
            1. Was it before or after the dipo ceremony?
            2. Was it with a boyfriend/girlfriend? If not, what was your relationship with the person you first had sex with?
            3. Why did you have sex with this person?
            4. Did you want to have sex? Why or why not?
        ii. Are you happy you have ever had sex? Why or why not?
        iii. Have you ever been given/received a gift or money for sex?
        iv. Do you think it is easy to abstain from sex? Why or why not?
        v. What would happen if you got pregnant with a boyfriend/your girlfriend got pregnant?
        vi. Would this becoming pregnant with a boyfriend/girlfriend be a good thing? A bad thing? Why?
        vii. What would happen if you get pregnant with a casual encounter?
        viii. Would becoming pregnant with a casual encounter be a good thing? A bad thing? Why?
    b. If not:
        i. Do you want to have sex? Why or why not?
        ii. Are you happy that you have never had sex? Why or why not?
        iii. Do you think it is easy to abstain from sex? Why or why not?
        iv. Does being religious help you abstain from sex? If so, in what ways? If not, why not?

v. [If participated in dipo] Did dipo play a role in helping you abstain? Why or why not?

34. Do you believe that people should wait for marriage to have sex? Why or why not?
35. Are there any reasons why sex before marriage is okay?
36. Do you believe that people should wait until dipo to have sex? Why or why not?
37. Do you think it is easy to abstain from sex? Why or why not?

Money and Gift Exchange

38. Besides giving someone a gift for their birthday, have you ever given a gift or money to a boy/girl?
39. How often do you give money/gifts to boys/girls?
40. What kinds of gifts?
41. Why did you give the gift/money?
42. Where did you get the money to give the boy/girl or to buy a gift for them?
43. Have you ever received a gift or money from a boy/girl?
44. What kinds of gifts?
45. Why did that person give you money/gifts?
46. Where did that person get that money to give you money or buy you a gift?
47. Do you think girls should give money and gifts to boys? Why or why not?
48. [If yes] Do you think girls should give boys equal amounts of money and gifts that boys give to girls? Why or why not?

Other Messages

49. Do you learn anything in church about romantic relationships? What kinds of things does your church teach you about romantic relationships?
50. Do you learn anything in church about sex? What kinds of things does your church teach you about sex?
51. What kinds of messages do social workers in this community tell you about premarital sex?
52. What kinds of messages do teachers in this community tell you about premarital sex?
53. What kinds of messages do nurses or doctors in this community tell you about premarital sex?

VERSION 2: Stakeholder interview guide

Demographic information

First I want to ask you a few questions about yourself:

1. How long have you lived in Asesewa?
2. What is your ethnicity?
3. How long have you been a [chief/queen mother/social worker/teacher/health practitioner]?
4. Please describe to me your involvement with the youth in this community.
5. What do you think are the biggest challenges that youth in this community face?

6. What are your opinions on sex before marriage?
7. Are there any conditions under which sex before marriage is acceptable?

Religion & Dipo

I want to understand what kind of commitment youth in this community have towards religion

8. In what ways are the youth involved/not involved in the church community?
9. Do you think religion is important to youth in this community? Why or why not?
10. How widespread is the practice of dipo among adolescent girls in this community?
11. How old are girls when they typically go through dipo?
12. Would you say girls in this community want to go through this rite, or that they go through it because of someone else's wishes?
13. Can you please tell me everything you know about the dipo rite, including what happens during the ceremony?
14. Do you think dipo is important for girls? Why or why not?
15. Do you think dipo is important for your community? Why or why not?
16. Do you think the dipo ceremony changes the girls who go through it? Do you see any noticeable differences between girls who go through dipo and those who don't?
17. In what ways is the dipo ceremony related or is not related to sexual behaviors among youth in this community?
18. Is your religion related to dipo rights? In what ways does it relate or not relate?
19. Can a girl still be considered a good Christian if she has been initiated into dipo? Please explain.

Relationships

Now let's talk about the relationships between boys and girls in this community.

20. Do youth in this community value having a boyfriend/girlfriend?
21. How do romantic relationships start?
22. How long do romantic relationships last?
23. What motivates boys to seek romantic relationships? In other words, what do you think boys want from relationships?
24. What motivates girls to seek romantic relationships? What do you think girls want from relationships?
25. What do you think it means when an adolescent says they are 'in love'?
26. How do you think boys in relationships show love? How do you think girls in relationships show love?
27. Do you think being 'in love' is important?
28. What does being 'in love' mean to you?
29. In what ways are romantic relationships between boys and girls in this community good or bad?
30. Describe the sexual relationships of youth in this community. For example, do they typically occur within the context of monogamous couples? Casual encounters?
31. In your opinion, do you think youth in this community value abstinence before marriage?
32. How widespread do you think sex is among adolescents in this community?
33. What motivates adolescent boys to have sex?
34. What motivates adolescent girls to have sex?

35. What does it mean for a girl to be sexually active in this community?
36. What does it mean for a boy to be sexually active in this community?
37. What would happen if a girl became pregnant with a boyfriend?
38. Would this be a good thing or bad thing? Why?
39. What would happen if a girl became pregnant with a casual encounter?
40. Would this be a good thing or bad thing? Why?
41. What would happen if a girl became pregnant before dipo?
42. Do you think dipo is related to sexual behaviors among youth in this community? Why or why not?
43. Do you think girls in this community wait until they have passed dipo to have sex?
44. What does it mean for a girl to be initiated through dipo?
45. Do you think dipo important for girls? Why or why not?
46. Do you think dipo is important for your community? Why or why not?
47. What types of messages do you think youth in this community receive regarding sex from [church community/chiefs/queen mothers/social workers/teachers/health practitioners?
48. What types of messages do you think youth in this community receive regarding romantic relationships from [church community/chiefs/queen mothers/social workers/teachers/health practitioners?
49. What types of approaches do leaders/employees like yourself take to prevent premarital sex among adolescents?
50. Does your approach change or stay the same if you believe an adolescent is sexually active? Please explain.
51. Why do you think some adolescents abstain from sex while others do not abstain?
52. Do you think religion is helping in promoting abstinence among youth? Why or why not?
53. What are the biggest challenges that leaders like yourself face when addressing sexual health issues of youth in this community?

VERSION 3: Parent/guardian interview guide

Demographic information

First, I want to ask you a few questions about yourself:

1. How long have you lived in Asesewa?
2. What is your ethnicity?
3. Do you consider yourself to be religious?
4. What type of denomination do you affiliate with?
5. What is your current marital status?
6. What do you do for a living?
7. How many employed adults live in this household?
8. How many nights in a typical week do you spend in this household?
9. Do you travel for work? How often do you travel?
10. What is your relationship to [*name of adolescent participant]*?
11. What type of financial support do you provide for [*adolescent*]?
12. What types of financial support does [*adolescent*] receive from other adults?
13. Are there any financial needs that [*adolescent*] has that are not met?

Religion & Dipo

I want to understand what kind of commitment youth in this community have towards religion

14. In what ways is your adolescent involved/not involved in the church community?
15. Do you think religion is important to your adolescent? Why or why not?
16. Is the practice of dipo widespread among adolescent girls in this community?
17. How old are girls when they typically go through dipo?
18. [If adolescent is a girl] Has your adolescent been initiated through dipo?
    a. [If yes] How old was she when she was initiated?
    b. [If yes] Would you say she wanted to go through this rite, or that she wanted to go through it because of someone else's wishes?
    c. [If yes] Did you personally wish for her to go through the dipo rite? Why or why not?
    d. [If yes] Did you see any noticeable differences in your adolescent after she went through the dipo rite? Please explain.
    e. [If yes] Do you consider your adolescent to be an adult now that she has gone through dipo? Why or why not?
    f. [If yes] Do you believe your adolescent is ready for sexual activity now that she has been initiated? Why or why not?
    g. [If yes] Has your financial support for her changed since she has been initiated? Why or why not?
19. Would you say other girls in this community want to go through this rite, or that they go through it because of someone else's wishes?
20. Do you think dipo is important for girls? Why or why not?
21. Do you think dipo is important for your community? Why or why not?
22. Is your religion related to dipo rites? In what ways does it relate or not relate?
23. Is it possible to be a good Christian and still practice traditional dipo rites? Why or why not?
24. In what ways is the dipo ceremony related or is not related to sexual behaviors among youth in this community?

Relationships

Now let's talk about the relationships between boys and girls in this community.

25. Do youth in this community value having a boyfriend/girlfriend?
26. How do romantic relationships start?
27. How long do romantic relationships last?
28. What motivates boys to seek romantic relationships? In other words, what do you think boys want from relationships?
29. What motivates girls to seek romantic relationships? What do you think girls want from relationships?
30. Does your adolescent have a boyfriend/girlfriend?
    a. [If yes] Do you approve of this relationship? Why or why not?
    b. [If no] Would it be okay for your adolescent to be in a relationship? Why or why not?
31. Do you think your adolescent is sexually active?

32. What is your opinion on sex before marriage?
33. Is sex before marriage okay for girls as long as they go through dipo?
34. Is sex before marriage okay if two people are in love and in a committed relationship?
35. What do you think it means when an adolescent says they are 'in love'?
36. How do you think boys in relationships show love? How do you think girls in relationships show love?
37. Do you think being 'in love' is important?
38. What does being 'in love' mean to you?
39. In your opinion, do you think youth in this community value abstinence before marriage?
40. How widespread do you think sex is among adolescents in this community?
41. What motivates adolescent boys to have sex?
42. What motivates adolescent girls to have sex?
43. Do you speak to your adolescent about sexual issues? Why or why not?
    a. [If yes] What types of things do you talk about?
44. Do you take any measures to prevent your adolescent from engaging in premarital sex?
45. Why do you think some adolescents abstain from sex while others do not abstain?
46. Do you think religion is helping in promoting abstinence among youth? Why or why not?
47. What do you think are the biggest challenges that youth in this community face?
48. What are the biggest challenges that parents/guardians like yourself face when addressing sexual health issues adolescents in this community?