“Child marriage” declines as social change?
The influence of global priorities, social determinants and norms in changing adolescent marriages in southcentral Uganda, 1999-2018

Esther J. Spindler

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Abstract

Over the last 20 years, adolescent health researchers, practitioners and advocates have zeroed-in on the global problem of 'child marriage.' Defined as a formal or informal marital union before 18 years, child marriage affects both boys and girls, but disproportionally affects girls. Globally, child marriage is noticeably prevalent but on a downward trend, with the proportion of 20-24 year old women marrying before 18 years decreasing from 25% to 19%, from 2008 to 2020 (UNICEF, 2018; 2022). Extensive research has shown the adverse consequences of marrying during adolescence, ranging from increased risk of maternal mortality and birth complications, intimate partner violence (IPV), adverse mental health and intergenerational poverty outcomes (Burgess et al., 2022; Clark, 2004; Nour, 2009; Otoo-Oyortey & Pobi, 2003; UNICEF, 2018). From a rights perspective, child marriage is considered a violation of girls' and boys' 'right' to fully consent into marriage before reaching age of majority, internationally recognized as 18 years of age (Bruce, 2003; Nour, 2009). As such, child marriage is recognized as a human rights violation under several international treaties, including the Convention on the Rights of the Child (CRC).

The term 'child marriage' is commonly used to convey the human rights violations that early marital practices have for under-age girls and boys. While the term 'child marriage' has mobilized consensus and solidarity toward the issue, this terminology also homogenizes the issue of marriage as a problem affecting the 'girl child' with little to no agency in the marriage decision-making process. More specific to Uganda, this 'child marriage' terminology can be problematic where marriage more commonly occurs during middle to late adolescence (15-19 years) and when adolescents may exert varying degrees of agency and consent in the marital decision-making process. Except for Chapter 1 which explores 'child marriage' global and national movements, I

intentionally use the terminology ‘adolescent marriage’ (as marriage before age 18), rather than ‘child marriage,’ throughout this dissertation.

Despite the global push to ‘end child marriage’ over the last decade, there is limited research about how broader social and structural factors may be driving declines in adolescent marriage (Muthengi et al., 2021; Plesons et al., 2021). In particular, we have a limited understanding about how global efforts, social processes and norms might work together to drive marriage declines among adolescents. Through a mix of policy, quantitative and qualitative methods, this dissertation examines the policy, structural and social mechanisms that have contributed to declining adolescent marriage among adolescent girls in the context of southcentral Uganda.

Chapter 1 begins with a broader contextual lens, examining the political evolution of the global ‘child marriage’ movement, and how the ‘problem’ of child marriage was then taken-up by government and civil society actors in Uganda. This chapter is informed by 20 key informant interviews with Ugandan and global stakeholders working on child marriage and a desk review of over 130 documents gathered across four years. This chapter highlights how the global ‘child marriage’ movement marked a political shift in adolescent girl funding, repackaging the issue of early marriage as an issue of ‘child protection.' The focus on child protection, rather than adolescent sexuality, was instrumental in mobilizing attention from liberal and conservative funders in the Global North and policy-makers in the Global South. In the priority country of Uganda, multiple factors influenced the national policy uptake of child marriage, including: 1. Regional campaigns that created consensus among Eastern and Southern African country leadership to address child marriage; 2. The availability of national data that showed the reach and severity of child marriage within Uganda; 3. The cultural and political appeal of child marriage as

an issue of 'child rights', rather than one of 'sexuality,' and; 4. A network of government leaders, academics, international non-governmental organizations (INGOs) and civil society organizations (CSOs) who coalesced behind the issue in Uganda.

Chapter 2 focuses-in on the southcentral region of Uganda, leveraging close to 20 years of quantitative data to understand how social and structural factors are affecting adolescent marriage declines in the region. Using data from 13 surveys (1999-2018) of the Rakai Community Cohort Study (RCCS), I couple decomposition and causal inference methods to assess how social determinants and adolescent pregnancies have contributed to adolescent marriage declines among 15 to 17 year old girls. I find that both marriages and pregnancies among adolescent girls substantially declined over the last 20 years, from 24% to 6%, and 28% to 8%, respectively, between 1999 and 2018, as a result of educational and economic improvements. Among all social determinants, girls' secondary schooling was more closely associated with lower risk of marriage and pregnancy (aOR marriage = 0.09; 95%CI=0.07, 0.12; aOR pregnancy = 0.14; 95% CI=0.11; 0.19). In the causal mediation analyses, lower pregnancy rates partially explained the positive effect of higher secondary schooling on lower risk of adolescent marriage. Decomposition analyses showed that the declines in adolescent marriage between 1999 to 2018 were primarily attributed to pregnancy declines, and to a lesser extent, improvements in education and SES. These findings reemphasize the sizeable role of education in preventing adolescent marriages, in line with Uganda's national educational investments such as universal primary education (UPE). Yet, these findings also underline the importance of adolescent pregnancy prevention to delay age at marriage.

In the same region of southcentral Uganda, Chapter 3 uses secondary ethnographic data to more deeply explore the social mechanisms and norms that have contributed to changes in

adolescent marriages. I qualitatively explore how the region's social and economic changes have affected social norms about adolescent sex, courtship, and marriage in Rakai, Uganda. This analysis is informed by 16 focus group discussions and 15 key informant interviews conducted in 2018 with younger and older women and men, ranging from 16 to 77 years old. In comparing generational perspectives, I identify a 'normative transition', in which new structures are transforming courtship and marriage processes for young people. First, the HIV epidemic significantly weakened family structures, and in the process, courtship and marriage guidance previously provided by families and elders; second, the loss of land ownership in between generations has made marriage preparations more difficult for young people; and third, new social spaces outside the family home – including discos, mobile phones and schools - have expanded young people's romantic geographies prior to marriage. These changes have reduced the importance of the family institution in the marital decision-making process, while increasing young women's and men's autonomy in engaging in premarital sex, choosing their partners, and delaying marriage. Although these changes have delayed age at marriage beyond adolescence, this transition has introduced unanticipated challenges for young people as they enter adulthood, including lack of overall parental, familial and elder guidance in their relationship and marriage formation processes.

Taken together, these findings highlight the complexity of adolescent marriage changes and prevention efforts at the global, Ugandan, and southcentral region of Uganda. First, global and national 'child marriage' movements played a significant role in the uptake of child marriage as an issue of 'child protection', rather than one about 'sexuality' in Uganda. Yet looking at the context of southcentral Uganda, adolescent pregnancies and adolescent marriages declines appear to be closely linked, highlighting the importance of conceptualizing adolescent marriage as not

just a child protection issue, but one of adolescent sex and sexuality. Lastly, I find that broader structural and social changes in Rakai have substantially changed adolescent norms around sex, courtship, and marriage, delaying age at marriage in between generations. However, young people are encountering new challenges as they enter adulthood and romantic relationships in the absence of pre-existing elder and familial systems and networks. Additional research should focus on understanding the unintended consequences of catalyzing norm change and delaying age at marriage, including how these changes might affect familial and community relationships and kinships.

Twenty years into the global push to end 'child marriage', this dissertation research provides new insights into the complex structural, social and sexuality drivers of adolescent marriage changes in Uganda. Despite the substantial progress in adolescent marriage declines, this research points to key gaps that will need to be addressed to improve adolescent SRH rights and needs in Uganda, the East African region, and beyond. Of particular importance is the need to center adolescent sexuality within current child marriage efforts, as well as focusing on the broader social changes affecting adolescent relationship formation, rather than exclusively focusing on age at marriage as a marker of social change.

REFERENCES

Bruce, J. (2003). Married Adolescent Girls: Human Rights, Health, and Developmental Needs of a Neglected Majority. *Economic and Political Weekly*, *38*(41), 4378–4380. JSTOR.

Burgess, R. A., Jeffery, M., Odero, S. A., Rose-Clarke, K., & Devakumar, D. (2022). Overlooked and unaddressed: A narrative review of mental health consequences of child marriages. *PLOS Global Public Health*, *2*(1), e0000131. https://doi.org/10.1371/journal.pgph.0000131

Clark, S. (2004). Early Marriage and HIV Risks in Sub-Saharan Africa. *Studies in Family Planning*, *35*(3), 149–160. https://doi.org/10.1111/j.1728-4465.2004.00019.x

Muthengi, E., Olum, R., & Chandra-Mouli, V. (2021). Context Matters—One Size Does Not Fit All When Designing Interventions to Prevent Child Marriage. *Journal of Adolescent Health*, *69*(6), S1–S3. https://doi.org/10.1016/j.jadohealth.2021.09.018

Nour, N. M. (2009). Child Marriage: A Silent Health and Human Rights Issue. *Reviews in Obstetrics and Gynecology*, *2*(1), 51–56.

Otoo-Oyortey, N., & Pobi, S. (2003). Early marriage and poverty: Exploring links and key policy issues. *Gender & Development*, *11*(2), 42–51. https://doi.org/10.1080/741954315

Plesons, M., Travers, E., Malhotra, A., Finnie, A., Maksud, N., Chalasani, S., & Chandra-Mouli, V. (2021). Updated research gaps on ending child marriage and supporting married girls for 2020–2030. *Reproductive Health*, *18*, 152. https://doi.org/10.1186/s12978-021-01176-x

UNICEF. (2018). *Child Marriage: Latest trends and future prospects*. UNICEF. https://data.unicef.org/resources/child-marriage-latest-trends-and-future-prospects/

UNICEF. (2022). Child Marriage Database. Last updated May 2022. UNICEF. Retrieved from: https://data.unicef.org/topic/child-protection/child-marriage/

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Dedication

To Pete, mi media naranja.

Pour Liliane Lelaidier-Marton. Je t'aime.

Introduction

Over the last 20 years, adolescent health researchers, practitioners and advocates have zeroed-in on the global problem of 'child marriage.' Defined as a formal or informal marital union before 18 years, child marriage affects both boys and girls, but disproportionally affects about 19% of women and girls worldwide (UNICEF, 2022). Extensive research has shown the adverse consequences of marrying during adolescence, ranging from increased risk of maternal mortality and birth complications, intimate partner violence (IPV), and intergenerational poverty (Clark, 2004; Nour, 2009; Otoo-Oyortey & Pobi, 2003; UNICEF, 2018; Wodon et al., 2017). Given its global reach and adverse outcomes, child marriage has received substantial attention and funding, particularly in Global South countries such as Uganda.

Globally, child marriage is recognized as a human rights violation under a number of international treaties, including the Convention on the Rights of the Child (CRC) (Bruce, 2003; Nour, 2009). The framing of child marriage as a human rights issue originated in the early 2000s, rooted in the following rationales: first, the documented 'magnitude' of adolescent marriages around the world showed severity of the problem at a global scale; second, girls who married below 18 years were unable to fully exercise their 'right' to consent into marriage before reaching adulthood, and third; emerging research showed the wide-ranging 'consequences' of child marriage on girls well into adulthood, and often, in between generations (Bruce, 2003).

The terminology 'child marriage' is commonly used within human rights and adolescent sexual and reproductive health (SRH) circles to mark the human rights violation associated with marital practices during adolescence. Although now normative across research and practice discourse, this terminology was originally employed by child rights advocates to draw policymakers' attention toward the 'shocking' issue of child marriage (Vilán, 2022). While the

term ‘child marriage’ has enabled consensus and solidarity toward the issue, this terminology also homogenizes the issue of marriage as a problem affecting the ‘girl child’ who has little to no agency in her marriage decision (Efevbera & Bhabha, 2020). Although this assumption may hold in certain contexts and situations, research shows that the issue of marriage during adolescence is diverse and context-specific, with differing levels of adolescent agency in the marriage decision-making process (Lokot et al., 2021; Taylor et al., 2019).

More specific to the context of Uganda, this ‘child marriage’ terminology can be problematic where early marriage more commonly occurs during middle to late adolescence (15-19 years), rather than in early adolescence (10-14 years). As such, this term may not appropriately reflect the evolving development, agency, and capacity of middle to older adolescents - who are no longer children but not quite fully-formed adults. Apart from Chapter 1 which explores the ‘child marriage’ global movement, I intentionally use the terminology ‘adolescent marriage’ (marriage before age 18) rather than ‘child marriage,’ throughout this dissertation.

The drivers of adolescent marriage are complex, inter-related and context-dependent; yet universally sustained by social and gender inequities (Raj, 2010). Risk factors for adolescent marriage include structural conditions such as poverty and poor access to schooling, social inequalities, adverse family circumstances such as orphanhood, and social and gender norms about ideal marriage age (Chae, 2013; Jain & Kurz, 2007; Mathur et al., 2003). Although adolescent marriage affects both boys and girls, adolescent marriage is a gendered pattern that especially disadvantages girls. Often, young women enter marriage early due to limited educational and economic opportunities – and because of teenage pregnancy. For example, evidence from Uganda suggests that adolescent pregnancies are a driving factor of adolescent marriages (Bantebya et al., 2014; Stoebenau, 2015).

Globally, adolescent marriage is on a downward trend, although these trends pre-date the COVID-19 pandemic. Between 2008 to 2020, the proportion of women between the ages of 20 to 24 years married before the age of 18 decreased from 25% to 19%, with the largest reductions in South Asia (UNICEF, 2018; 2022). To-date, adolescent marriage is most prevalent in West and Central Africa (37%), followed by Eastern and Southern Africa (32%) and South Asia (28%; UNICEF, 2022). Several East African countries have made significant strides in reducing adolescent marriage prevalence over the last decade, including Ethiopia, Rwanda, and Uganda. In Uganda, the primary study location for this research, marriage under 18 years among 20 to 24 year old women dropped from 46% to 34% in just 10 years, from 2006 to 2016 (UBOS 2007; 2018).

At the national level, Uganda has experienced significant economic growth and implemented policies that have contributed to young people's improved educational, marital and life outcomes, particularly for girls. In 1995, legal age at marriage was raised to 18 years for men and women under the Ugandan constitution, although exceptions were allowed with parental consent. Under Uganda's Children Act Amendment, the minimum legal age of marriage was subsequently set to 18 years for both boys and girls with no exceptions or parental consent (2016). In 1997, the Ugandan government implemented a universal primary education (UPE) policy, followed by universal secondary education (USE) in 2007. These policies reduced school fees and boosted school enrollment for girls, but inadvertently lowered education quality due to higher student enrollments and teacher shortages (Deininger, 2003). Multiple studies have since demonstrated the impact of the UPE policy on positive outcomes for Ugandan girls, including increased years of education and delayed age at marriage (Deininger, 2003; Koski et al., 2018). Over the same time, Uganda experienced significant economic growth and poverty reduction, with

the proportion of those living in poverty declining from 56% in 1992 to 21% in 2017 (UBOS & UNICEF, 2018).

Dissertation contribution and overview

Despite the growth of adolescent marriage research and programs over the last decade, there are important evidence gaps that this research sets out to address. First, there have been noticeable declines in adolescent marriage declines globally and in East Africa, yet there is limited research about how broader shifts in social and structural factors may be driving these declines. In line with this, global researchers, practitioners, and policy-makers have identified several key research gaps related to adolescent marriage. First, there is limited understanding of macro-level factors driving large-scale adolescent marriage declines, and; second, there are scant analyses that have adequately teased out the relationship between teenage pregnancy and marriage, particularly among adolescents (Plesons et al., 2021). In response, this dissertation research examines this process of social change – vis-a-vis adolescent marriage and pregnancy changes – to better understand how global and national advocacy efforts, societal changes and norms might work together to affect marital declines among adolescents in the context of Uganda.

The changing social and structural environment of Rakai, in southcentral Uganda – coupled with the partnership of the Rakai Health Sciences Program (RHSP) – provided a unique opportunity to unpack how policies, structures and norms have affected girls' marital behaviors in the region. Rakai, Uganda, has been the center of HIV research, treatment and prevention efforts for the last 30 years, following the start of the HIV epidemic in the region in the late 1980s. Research in Rakai shows rising socioeconomic status, increasing school enrollment, and improving SRH adolescent outcomes, including significant declines in adolescent marriages and pregnancies over the past two decades (Santelli et al., 2019). The region is also home to the Rakai

Community Cohort Study (RCCS), a population-based, open-cohort survey that has collected demographic and SRH-related data from adults and adolescents since 1994, as well as an extensive portfolio of qualitative and ethnographic research studies on HIV and SRH with both younger and older adult populations.

Spanning over a period of four years, this dissertation is on one hand 'independent' research guided by a multidisciplinary academic committee, while at the same time, a cross-continental collaboration with RHSP researchers and experts in Uganda. All aspects of this research were developed and carried out in close collaboration with research partners at RHSP in Uganda and Columbia University in the United States and is nested within the five-year SSTAR Project (Structural and Social Transitions among Adolescents and young adults in Rakai), a partnership between RHSP, Columbia and Johns Hopkins Universities.

Nested in this partnership, this dissertation research examines the policy, social and gender mechanisms that have contributed to declining adolescent marriage among adolescent girls in southcentral Uganda through a mix of policy, quantitative and qualitative approaches.

Chapter 1 begins with a wider contextual lens, examining the political evolution of the global 'child marriage' movement, and how the 'problem' of child marriage was taken-up by government and civil society actors in Uganda. The concept for this chapter came from a more reflexive starting point, as I set out to reflect and critique my own interest in embarking on the issue of 'child marriage' in a cultural context outside my own. More specifically, I questioned my role as a Global North researcher in taking part of a larger global movement that appeared to be more increasingly focused on 'ending child marriage.' Based on 20 key informant interviews with Ugandan and global actors and an extensive desk review, this chapter sets out to explore difficult, but important questions related to global health and power, including how global issues like child

marriage become global political priorities; the role of global actors, including myself, in shifting and molding adolescent sexual and reproductive health (SRH) agendas in global health contexts, and the mechanisms and negotiations that Global South government and civil society actors undertake to take up global priorities like 'child marriage.'

Shifting from the global to regional, **Chapter 2** focuses on understanding the social and structural factors affecting adolescent marriage declines in the southcentral region of Uganda. Using quantitative data from 13 surveys (1999-2018) of the RCCS, I couple decomposition and causal inference methods to assess how social determinants and adolescent pregnancies have contributed to adolescent marriage declines among 15 to 17 year old girls. This chapter provides new insights about: 1. The larger level social improvements over 20 years – like education, orphanhood, and socio-economic status (SES) – that have affected drastic declines in adolescent marriage; 2. The extent that adolescent pregnancies help explain declining trends in adolescent marriages in Rakai, Uganda.

Making use of existing ethnographic data from Rakai, **Chapter 3** more deeply explores the social mechanisms and norms that have contributed to changes in adolescent marriages in southcentral Uganda. Using 16 focus group discussions and 15 key informant interviews conducted in 2018 with younger and older women and men, I qualitatively explore how the region's social and economic changes have affected social and gender norms about adolescent sex, courtship, and marriage in Rakai, Uganda. This chapter provides important insights into the community-level, generational perspectives around changes in adolescent marriages in Rakai, including how larger societal changes catalyzed a 'normative transition', delaying age at marriage but introducing unexpected challenges for young people along the way.

References

Bantebya, G. K., Muhanguzi, F. K., & Watson, C. (2014). *Adolescent girls in the balance: Changes and continuity in social norms and practices around marriage and education in Uganda* (p. 184). Overseas Development Institute (ODI).

Bruce, J. (2003). Married Adolescent Girls: Human Rights, Health, and Developmental Needs of a Neglected Majority. *Economic and Political Weekly*, *38*(41), 4378–4380. JSTOR.

Chae, S. (2013). Timing of Orphanhood, Early Sexual Debut, and Early Marriage in Four Sub-Saharan African Countries. *Studies in Family Planning*, *44*(2), 123–146.

Clark, S. (2004). Early Marriage and HIV Risks in Sub-Saharan Africa. *Studies in Family Planning*, *35*(3), 149–160. https://doi.org/10.1111/j.1728-4465.2004.00019.x

Deininger, K. (2003). Does cost of schooling affect enrollment by the poor? Universal primary education in Uganda. *Economics of Education Review*, 15.

Efevbera, Y., & Bhabha, J. (2020). Defining and deconstructing girl child marriage and applications to global public health. *BMC Public Health*, *20*(1), 1547.

Jain, S., & Kurz, K. (2007). *New insights on preventing child marriage: A global analysis of factors and programs*. ICRW. https://www.icrw.org/publications/new-insights-on-preventing-child-marriage/

Koski, A., Strumpf, E. C., Kaufman, J. S., Frank, J., Heymann, J., & Nandi, A. (2018). The impact of eliminating primary school tuition fees on child marriage in sub-Saharan Africa: A quasi-experimental evaluation of policy changes in 8 countries. *PLOS ONE*, *13*(5), e0197928.

Lokot, M., Sulaiman, M., Bhatia, A., Horanieh, N., & Cislaghi, B. (2021). Conceptualizing "agency" within child marriage: Implications for research and practice. *Child Abuse & Neglect*, *117*, 105086. https://doi.org/10.1016/j.chiabu.2021.105086

Mathur, S., Greene, M., & Malhotra, A. (2003). *The Lives, Rights, and Health of Young Married Girls*. International Center for Research on Women (ICRW).

Nour, N. M. (2009). Child Marriage: A Silent Health and Human Rights Issue. *Reviews in Obstetrics and Gynecology*, *2*(1), 51–56.

Otoo-Oyortey, N., & Pobi, S. (2003). Early marriage and poverty: Exploring links and key policy issues. *Gender & Development*, *11*(2), 42–51. https://doi.org/10.1080/741954315

Plesons, M., Travers, E., Malhotra, A., Finnie, A., Maksud, N., Chalasani, S., & Chandra-Mouli, V. (2021). Updated research gaps on ending child marriage and supporting married girls for 2020–2030. *Reproductive Health*, *18*, 152. https://doi.org/10.1186/s12978-021-01176-x

Raj, A. (2010). When the mother is a child: The impact of child marriage on the health and human rights of girls. *Archives of Disease in Childhood*, *95*(11), 931–935.

Santelli, J., Chen, I., Spindler, E., Nalugoda, F., Lindberg, L., Lutalo, T., Wawer, M., Ssewamala, F., Grilo, S., Kreniske, P., Hoffman, S., & Kagaayi, J. (2019, September). *Improvements in social determinants and declines in adolescent pregnancy and child marriage in rural uganda, 1994–2018 | Request PDF*. RCPCH and SAHM Adolescent Health Conference.

Stoebenau, K. (2015). *"Girls are like Leaves on the Wind": How gender expectation impact girls' education—A closer look from West Nile, Uganda*. ICRW. https://www.icrw.org/wp-content/uploads/2016/10/141011-ICRW-MacArthur-Final-Web-R.pdf

Taylor, A. Y., Murphy-Graham, E., Van Horn, J., Vaitla, B., Del Valle, Á., & Cislaghi, B. (2019). Child Marriages and Unions in Latin America: Understanding the Roles of Agency and Social Norms. *Journal of Adolescent Health*, *64*(4), S45–S51. Scopus.

Uganda Bureau of Statistics (UBOS) and Macro International Inc. (2007). Uganda Demographic and Health Survey 2006. Calverton, Maryland, USA: UBOS and Macro International Inc.

UBOS and ICF. (2018). Uganda Demographic and Health Survey 2016. Kampala, Uganda and Rockville, Maryland, USA: UBOS and ICF.

UBOS & UNICEF (2018) Going beyond Monetary Poverty: Uganda's Multidimensional Poverty Profile. UNICEF Uganda.

Uganda Children Amendment Act (2016). "The Children (Amendment) Act, 2016." The Republic of Uganda.

UNICEF. (2018). *Child Marriage: Latest trends and future prospects*. UNICEF. https://data.unicef.org/resources/child-marriage-latest-trends-and-future-prospects/

UNICEF. (2022). Child Marriage Database. Last updated May 2022. UNICEF. Retrieved from: https://data.unicef.org/topic/child-protection/child-marriage/

Vilán, A. (2022). The evolution of the global movement to end child marriage. *Journal of Human Rights*, *21*(2), 227–244. https://doi.org/10.1080/14754835.2022.2030208

Wodon, Q., Savadogo, A., Yedan, A., Edmeades, J., Kes, A., John, N., Murithi, L., Steinhaus, M., & Petroni, S. (2017). *Economic Impacts of Child Marriage: Global Synthesis Report* (p. 99). ICRW.

Chapter 1: "The political drivers of global and national priorities: The case of child marriage in Uganda"

Introduction

In 2011, a group of global leaders, private foundations and advocates gathered at the annual Clinton Global Initiative meeting in New York to announce the launch of a new global partnership aimed at tackling the invisible problem of "child marriage." At the time, child marriage – defined as a formal or informal union in which one of the partners is under 18 years old – was impacting "the lives of 10 million girls" (Ford Foundation, 2011), yet was sidelined from mainstream development conversations despite international non-governmental organizations (INGO) efforts to raise attention to the issue. At the 2011 event, the group of "Elders," the Ford Foundation, the Nike Foundation and Novo Foundation formally announced the creation of Girls Not Brides, a global partnership of donors and organizations with the goal of raising $3 million US dollars and creating 150 member groups in at least 20 countries within the next year (Ford Foundation, 2011). Ten years later, the Girls Not Brides partnership would help propel a global child marriage network, comprising 1,500 member groups in over 100 countries (Girls Not Brides, 2021). No longer sidelined from development policy agendas, the movement to 'end child marriage' would evolve into a mainstream development issue codified into global governance structures, including the United Nations Sustainable Development Goals (SDG Target 5.3). Over a decade after the launch of the global coalition, this paper shares the story behind child marriage as a global movement; and how the issue of child marriage was then taken-up and prioritized by government and civil society actors in Uganda.

The global reach and harmful effects of child marriage have helped mobilize attention toward the issue. Child marriage affects both boys and girls, but disproportionally affects girls. Globally, 19% of women 20-24 years old report being married before age 18, equating to one in five women worldwide (UNICEF, 2022). Global evidence suggests a range of adverse outcomes for girls who marry before 18 years: they are at increased risk of maternal mortality and birth complications, intimate partner violence (IPV), and intergenerational poverty, among other adverse outcomes (Clark, 2004; Nour, 2009; Otoo-Oyortey & Pobi, 2003; UNICEF, 2018; Wodon et al., 2017). At the same time, the risk factors for child marriage are complex, inter-related and context-dependent, ranging from structural and social inequities such as poverty and inequitable access to schooling, to adverse family circumstances such as orphanhood, and social and gender norms about the ideal marriage age (Chae, 2013; Jain & Kurz, 2007; Mathur et al., 2003; Raj, 2010). Although child marriage affects both boys and girls, child marriage is a gendered pattern that disadvantages girls. Often, young women enter marriage early due to limited educational and economic opportunities – and in some contexts like Uganda - because of premarital teenage pregnancies.

Child marriage is widely recognized as a human rights violation under a number of international treaties, including the Convention on the Rights of the Child (CRC) and the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) (Bruce, 2003; Nour, 2009; Vilán, 2022). Earlier international treaties, including the 1948 Universal Declaration of Human Rights, recognized the right to "free and full consent" to marriage, albeit without minimum age at marriage specifications (Vilán, 2022). Later international conventions like the CRC (1989) and CEDAW (1979) recognized minimum age at marriage as 18 years, however, it was only in the early 2000s that 'child marriage' was identified as a human rights violation linked to both CRC and CEDAW conventions. At that time, global advocates, researchers

and practitioners argued for the more explicit inclusion of 'child marriage' in international charters under the following premises, first, girls who married below 18 years were unable to fully exercise their 'right' to consent into marriage before reaching adulthood, second, the documented 'magnitude' of adolescent marriages around the world showed severity of the problem at a global scale; and third; emerging research showed the wide-ranging 'consequences' of child marriage on girls well into adulthood (Bruce, 2003).

Today, the term 'child marriage' is ubiquitously used throughout literature –intentionally and unintentionally – to signal the human rights consequences that early marital practices have for under-age girls and boys (Bruce, 2003). While some researchers and practitioners informally acknowledge the thorny nature of universal terms like 'child marriage,' other scholars defend its use. On one hand, terminology like 'child marriage' helps harmonize and consolidate global efforts around the problem, while other terminologies like 'early marriage', 'forced marriage' or 'adolescent marriage' may contribute to differing understandings of the issue at hand (Efevbera & Bhabha, 2020). Most controversial in this linguistic debate is the conflation of 'child marriage' with 'forced marriage.' While some have argued that children are unable to 'consent' to marriage and therefore enter marriages forcefully, other groups have argued for a broader interpretation of 'child marriage', instead proposing the terminology, "child, early and forced marriage (CEFM)". In contexts like Uganda, where child marriage more commonly occurs during later adolescence (17 to 19 years), the 'child marriage' terminology can be problematic. Specifically, this term may not appropriately reflect the evolving development and capacity of middle to older adolescents - who are no longer children yet not fully mature adults. Recognizing the complexity and power of language, I use the terminology 'child marriage' through the remainder of this paper, since this

paper ultimately aims to examine the phenomenon of 'child marriage' rather than "child, early and forced marriage (CEFM)" or "early marriage" as global and national movements.

What we know about the global child marriage movement

Using the case study of child marriage, this analysis focuses on the ideologies and power structures that shape the development of global and national 'problems,' priorities and solutions. In line with postcolonial feminist thinking, problems are by no means inherent or 'natural'; rather, problems are social constructs, molded by social processes, ideologies and value systems, particularly in the case of so called 'harmful traditional practices' such as child marriage (Anitha & Gill, 2018). Once identified, a problem undergoes a 'framing' and 'meaning-making' process, in which policy actors and other stakeholders consider definitions and depictions of the 'problem' that might convince the general public to also take up the issue (Nelson & Oxley, 1999). The framing of the problem – such as stating that 650 million girls to-date have been married as 'child brides' (Girls Not Brides, 2021) - can be powerful communication tools to sway political opinion and attract public support. In the area of global health and international development, western neoliberal value systems play a critical role in creating, framing, and solving problems across geographical and cultural boundaries. In the case of women and girl-focused development, the 'problem' may be homogenized across diverse contexts, as a singular issue of 'oppressed' women who are held back by their 'repressive' culture (Mohanty, 1988). For example, 'harmful traditional practices' like child marriage are commonly framed as a 'cultural' problem, rather than a product of structural inequalities (Anitha & Gill, 2018; Bessa, 2019).

To-date, a small body of political science research has examined the evolution of child marriage as a global movement (Bessa, 2019; Murdie et al., 2019; Shawki, 2015; Vilán, 2022), and the tensions between global and national norms (Cloward, 2014). Taken together, this research

shows how the child marriage movement has effectively portrayed the issue of child marriage as an issue of 'human rights.' Shawki argues that both INGOs and civil society organizations (CSOs) advanced the issue of child marriage through a 'normative reframing', reframing the issue of child marriage as an issue of 'human rights' to counter existing norms from conservative groups, while also portraying child marriage as a 'cross-cutting' issue linked to economic development, education and violence against women (Shawki, 2015). Murdie and colleagues examine how child marriage became an international norm through a review of published documentation over several decades, identifying a broader reframing of the issue toward one about 'human rights,' as well as an issue of 'child rights' (2019). The authors also identify the extensive influence of INGOs in producing evidence and documentation on child marriage over this time period, as well as influencing media coverage over the issue (Murdie et al., 2019). Lastly, Vilán shows that the effectiveness of the child marriage movement can be attributed to intentional advocacy 'tactics', framing child marriage as an issue of human rights, as well as choosing shocking imagery, statistics and testimonies to generate empathy and attention from policy-makers (2022).

Overall, this body of work provides critical insights into the global child marriage movement, but less about how national countries and local communities have taken-up the issue of child marriage (apart from Cloward, 2014; Vilán, 2022). This paper contributes to this existing evidence base by more closely looking at how one country – Uganda - responded to the global movement against child marriage. Distinct from previous political science lenses, my analysis is also substantially informed by public health thinking, using health policy frameworks to identify and assess the extent that different factors enabled the uptake of child marriage as a global movement and national priority in Uganda.

Conceptual framing: What determines global political priorities?

In this analysis, I use Shiffman and Smith's health policy framework to examine the political factors contributing to the prioritization of child marriage first at the global level, and then in Uganda (2007). Their policy framework aims to understand why some global health initiatives receive priority from international and national political leaders, while others do not. More specifically, Shiffman and Smith propose four different features that make-up a global political priority, including the power of **actors** connected with the issue; the power of **political contexts** to inhibit political support, the power of **ideas** used to define and describe the issue; and, the power of **characteristics of the issue** such as the number of people at risk to a particular problem (Shiffman & Smith, 2007). Successful global political priorities do not necessarily need all these dimensions but having each of these components enhance the likelihood that such initiatives become a political priority. The role of power is also central to this framework; power dynamics and hierarchies influence all four above elements and help determine whether collective action efforts can bring about public health priorities.

As detailed in Table 1, the four framework dimensions – actors, political contexts, ideas, and issue characteristics – are composed of 11 sub-elements that shape the salience of each feature in each global political priority. For the first dimension, several factors help define the ***power of actors***; these include, *political community cohesion (sub-element 1)* or the degree of coalescence among individuals involved with the problem at hand; *leadership (2)* or the presence of individuals who act as champions for the problem and can unite the policy community around the problem; the presence of *guiding institutions (3)* that effectively coordinate and lead initiatives to address the problem, and; the *mobilization of civil society (4)* and grassroots organizations who exert pressure on political authorities to address the problem. Moving onto the second dimension, actors

operate in ***political contexts*** and environments that influence their decision to champion a problem as a political priority. Within these political contexts are *policy windows (5)* or moments when conditions align favorably for a particular problem and when a window of opportunity exists for advocates to influence policymakers. Actors also operate under a *global governance structure (6)* with varying degrees of supportive norms and/or institutions that can provide a platform for effective collective action toward addressing the problem (Shiffman & Smith, 2007).

The third and fourth elements of the political determinants framework are ***ideas*** and ***issue characteristics***, which represent how stakeholders understand, agree, and portray the problem at hand, and how specific features of the problem contribute to the urgency to address it, respectively. Within the ***ideas*** dimension, different stakeholders might have varying degrees to which they agree on the problem's *internal frame (7),* or the definitions, causes and solutions to the problem. On the other hand, public portrayals of the problem, *or external frames (8),* might influence the degree to which the problem resonates with external audiences, including political leaders who control financial resources. Within the last ***issue characteristics*** dimension, specific features of the problem are molded and defined by whether there are *credible indicators (9) or* clear measures that showcase the severity of the problem; by how *severe the problem (10)* is itself, or the magnitude of the problem burden, and by the existence of *effective interventions (11)* which are cost effective, evidence-based, and effective in addressing the problem (Shiffman & Smith, 2007).

Child marriage in Uganda

Over the last decade, Uganda has been at the center of child marriage policies, legal frameworks, and programs. The country made notable strides in reducing child marriage prevalence, with prevalence dropping from 46% to 34% between 2005 and 2016 (Uganda Bureau of Statistics (UBOS) 2007; 2018). In 1995, legal age at marriage was raised to 18 years for men

and women under the new Ugandan constitution, although exceptions were made with parental consent (MGLSD & UNICEF Uganda, 2015). Under Uganda's Children Act Amendment, the minimum legal age of marriage was later set to 18 years for both boys and girls with no exceptions or parental consent (2016). The government of Uganda has committed to several international frameworks including the goal of eliminating early marriage by 2030 under the Sustainable Development Goals (SDG 5.3), as well as regional commitments to end child marriage by 2020 (Uganda National Planning Authority, 2016). In 2015, Uganda's Ministry of Gender, Labour and Social Development launched the *National Strategy to End Child Marriage and Teenage Pregnancy*, developed in partnership with global organizations such as UNICEF and Girls Not Brides (MGLSD & UNICEF Uganda, 2015).

Uganda has a history of implementing broader public programs that are in line with larger international development initiatives. In 1997, Uganda was one of the first countries to implement a universal primary education (UPE) policy, followed by universal secondary education (USE) in 2007. Uganda's UPE implementation in 1997 was motivated in part, by broader global initiatives in the 1990s, such as the United Nations Millennium Development Goals (MDGs), which included a goal on achieving universal primary education by 2015 (Ssewamala et al., 2011). Multiple evaluations of UPE found that the removal of primary school tuition fees led to an increase in school enrollment and years spent in school, and a decline in child marriage among young women (Deininger, 2003; Koski et al., 2018; Moussa & Omoeva, 2018; Nishimura et al., 2008). In 1998, the year after UPE, Uganda was one of the first Global South countries to receive debt relief from the World Bank and International Monetary Fund (IMF)'s structural adjustment programs (SAPs) under the Highly Indebted Poor Countries (HIPCs) initiative (Ssempala et al., 2020). This $650 million debt alleviation helped finance the subsequent government expenditures toward UPE and

USE (Bategeka & Okurut, 2006). Lastly, Uganda experienced significant economic growth and poverty reduction between the 1990s to 2000s, but economic growth stalled by the late 2010s. As such, international and national stakeholders have proposed "investing in Uganda's youth," and in particular girls, as a strategy to boost economic growth (World Bank, 2017; 2020).

Within this context, this policy analysis examines why and how the issue of child marriage became a political priority at the global level and then assesses the political factors that shaped the uptake of child marriage as a 'problem' that needed to be addressed in Uganda. My analysis is informed by 20 key informant interviews with Ugandan and global stakeholders, and an extensive review of policy documents, technical reports, research literature, and national newspapers from 2009 to 2021.

Methods

I used a policy review approach to trace the development of child marriage policies globally and in Uganda. The policy review approach is a suitable methodology that can chart the evolution, actors and political processes of global development issues like child marriage; examples of other policy review analyses include reviews of national sexuality education policies, and health professional interactions and hierarchies over time (Badejo et al., 2020; Shiffman et al., 2018). Given the vast global and national boundaries of the desk review, collecting every single document on child marriage was an impractical task. Instead, I undertook a process tracing methodology, identifying and analyzing different sources of textual and key informant data to uncover the political processes of child marriage within and between global and Ugandan spaces. This process tracing method is commonly used in qualitative social science research to minimize bias,

examining alternative explanations and multiple data sources to reveal social, political and historical processes of particular policies (Collier, 2011; Shiffman, 2007).

My analysis is informed by 20 key informant interviews and a desk review of 138 documents. For the desk review, I gathered global donor and non-governmental organization (NGO) reports, Ugandan government documents, reports and peer-reviewed literature, and Ugandan newspapers archives from 2009 to 2021. I originally intended to examine the period between 1997 to 2021 for this review. Uganda's government began investing more intensely in schooling and social programs for youth (including UPE), in the late 1990s and early 2000s (Behrman, 2015; Deininger, 2003). However, my search only yielded documents on child marriage dating back to 2009. As a result, my final search included documents from 2009 to 2021. Subsequently, I conducted 20 key informant interviews in late 2021 and early 2022 with researchers, advocates and policy-makers conducting child marriage work globally (n=10) and in Uganda (n=10) to triangulate desk review data with global and Ugandan informant perspectives.

Data gathering process for the desk review

For the desk review, I gathered documents across three categories: 1. Primary documents, reports and press releases from global funders, INGOs, and Ugandan government ministries; 2. Technical reports and peer-reviewed articles on child marriage programs and research in Uganda; and 3. Uganda news archives from the New Vision, The Observer and the Daily Monitor newspapers. The three source gathering processes are detailed below and summarized in Table 2.

Source category 1. Primary documents, reports, and press releases from global donors, INGOs, and Ugandan government ministries on child marriage policies and advocacy. Program and advocacy reports were extracted using search terms like 'child marriage,' or 'child, early and forced marriage (CEFM),' from the following INGO websites: Girls not Brides; UNICEF;

DREAMS; Plan International; Straight Talk Foundation, Raising Voices, Joy for Children Uganda, and; UNFPA and UNICEF Global Programme to End Child Marriage. Donor reports and press releases were extracted from child marriage funders including USAID, Gates Foundation and Ford Foundation. Primary documents were retrieved from Ugandan government ministry websites, including Ministry of Gender, Labour and Social Development; Ministry of Education and Sports, and; Ministry of Health. As well, child marriage laws were reviewed by looking at Ugandan legal libraries. I reviewed the quality of documents under each category, excluding a total of 97 documents. These included INGO blogs or report briefs that did not include information about child marriage more specifically or were duplicates of other documents. A total of 41 documents published between 2010 to 2021 were included in the final analysis.

Source category 2. Technical reports and peer-reviewed articles on child marriage program implementation, evaluation, and research in Uganda. Electronic searches were conducted for peer-reviewed and grey literature (technical reports) published on ProQuest, Web of Science, Pubmed and Embase databases, as well as INGO websites. Search terms included a combination of "child marriage" or "early marriage" or "child, early and forced marriage;" or "forced marriage" or "adolescent marriage" or adolescent pregnancy" or "early pregnancy" or "teenage pregnancy" *and* "Uganda." Inclusion criteria for peer-reviewed literature included papers that: 1. addressed the issue of child marriage or teenage pregnancy; 2. were conducted in Uganda, and; 3. were published between 1997 to 2021. For grey literature on child marriage programs, website searches of organizations known to work on child marriage in Uganda were included, including Population Council, ICRW, Save the Children, and Plan International. Two team members – the author and a research assistant - searched and screened all reports and articles separately. Any full text articles that did not meet the above eligibility criteria were excluded from

the review. A total of 12 peer reviewed articles and 12 reports published between 2009 to 2021 were included in the final review.

Source category 3. Newspaper archives. Three Ugandan newspaper archives – Daily Monitor, New Vision, and Observer - were searched for relevant news clippings about child marriage. These three newspapers were chosen since they are the most read newspapers in Uganda. I conducted the search using the ProQuest online search engine and included a combination of "child marriage" or "early marriage" or "child, early and forced marriage;" or "forced marriage" or "adolescent marriage" or adolescent pregnancy" or "early pregnancy" or "teenage pregnancy" *and* "Uganda." During the screening process, I placed less emphasis on the quality of the news pieces since I was interested in examining how news agencies, government actors, donors and CSOs publicly communicate about and portray the issue of child marriage (rather than the 'quality' of their message). A total of 73 news articles were included in the final analysis, published between 2013 and 2021.

Data collection of key informant interviews

Key informants were selected based on their involvement and expertise in child marriage research, policy, and/or programs both in Uganda and globally. Half of key informants were child marriage stakeholders based in Uganda (n=10), while the other half were based in Global North institutions and countries, such as the United States and United Kingdom (n=10). The selection of these participants was based on the desk review of child marriage policies and programs conducted over the last four years. As well, snowball sampling among key informants was used as part of the selection process: during their interview, participants were asked to recommend other key informants to be interviewed. As shown in the sample of participants in Table 3, Ugandan key informants included stakeholders from CSOs (n=4), academic institutions (n=2), government

ministries (n=2), INGOs (n=1) and UN organizations (n=1). Global North key informants included stakeholders from INGOs (n=3), UN organizations (n=3), academia (n=2) and funding institutions (n=2).

During interviews, participants were asked about their experiences with child marriage work in their respective contexts. I used a semi-structured key informant guide for all interviews, focusing on participants' perspectives on: 1. The key actors, political contexts, policy windows, milestones and challenges related to child marriage; and; 2. The issues and debates surrounding child marriage. Two separate interview guides were developed for 1. Experts on child marriage in Uganda, and; 2. Experts conducting child marriage work at the global level (see Appendix 2 for interview tools). A total of 19 interviews were conducted remotely via zoom video conferencing software. One participant preferred to share their answers via email correspondence; their data were recorded and included in the analysis. All participants were informed about their rights as research participants and consented into the study via a digitally signed consent form. Each interview took approximately 1 hour and was conducted in English. Interviews were recorded and transcribed.

Analysis

My analysis framework is based in the 'determinants of political priority for global initiatives' framework developed by Shiffman and Smith (2007) which highlights four dimensions of global political priorities: 1. Actor power, 2. Ideas, 3. Political contexts, and 4. Issue characteristics (see Table 1). I developed a thematic analysis matrix adapted from Shiffman and Smith's framework (2007), using Microsoft Excel for key informant interviews, primary documents (document source 1), and grey and peer-reviewed literature (document source 2), and Evernote software for newspaper archives (document source 3). For each key informant interview

and document source, excerpts and texts were synthesized and coded in their respective matrix using Shiffman and Smith's (2007) political determinants for global initiatives framework. As per Shiffman and Smith's framework dimensions shown in Table 1, the analysis matrices included the following themes from their framework: 1. Actor power (*sub themes:* political community cohesion; leadership; guiding institutions; civil society mobilization); 2. Ideas (*sub themes:* internal language/frame; external language/frame); 3. Political Context (*sub themes:* policy window; national governance structure and frameworks). 4. Issue Characteristics (*sub-themes*: credible indicators; severity of the problem; evidence of effective interventions). Documents were coded in chronological order by year of publication to document the evolution of policy discussions according to each thematic area (actor power, ideas, political context and issue characteristics). Using the same thematic areas, key informant interviews were analyzed by global vs. Ugandan perspectives, as well as by type of key informant (e.g., academic stakeholder, INGO stakeholder, government stakeholder, funding stakeholder, CSO stakeholder).

Positionality and ethical review

The original idea for this paper was driven by my desire to interrogate my own motivations and interest on the topic of child marriage. Not surprisingly, my first exposure to the topic of child marriage in 2014 aligned with the increased global focus on child marriage. As I immersed more deeply into the topic by 2018, it became important to question and unpack the larger global assumptions around child marriage, including my own. On one hand, my prior immersion in child marriage interventions and research gives me a unique perspective into the global motivations and power dynamics behind the child marriage movement. On the other, my positionality and experience as a Global North researcher embedded in an elite academic institution inevitably biases my perspective and views on child marriage. Recognizing, reflecting and verbalizing my

biases was a central part of my data review, analysis and interpretation process, using different opportunities to share my work with both global and Ugandan stakeholders. Gathering key informant perspectives from global and Ugandan experts engaged in child marriage work at a much deeper level than my own was an important component of reducing my biases and ensuring that the story I shared was reflective of the multiple, complex and diverse perspectives on child marriage. During the analysis process, I systematically reflected on how my subjectivity might bias the knowledge production process. Although not a perfect solution, I developed a memo system in excel, which included the use of note memos to document my reflections and question my biases throughout the data analysis process.

Lastly, this research was submitted and approved by the Uganda Virus Research Institute's (UVRI) Research Ethics Committee (REC), the Uganda National Council for Science and Technology (UNCST), and the Institutional Review Board (IRB) at Columbia University's Irving Medical Center under the Structural and Social Transitions of Adolescents (SSTAR) project IRB application (NIH R01HD091003).

Results

In the below results, I first describe how and why child marriage evolved into a global political priority. Framed within the global push to end child marriage, I then examine how national government and civil society actors negotiated and took up the issue of child marriage in the context of Uganda.

I. Child marriage: the rise of a global political priority

Using Shiffman & Smith's framework, I identified the salient political factors that contributed to the development of child marriage as a global policy issue from the mid 1990s

onward. As shown in Table 4, these political determinants are organized into three movement phases: 1. Evidence generation about the girl child (2001-2010); 2. Policy momentum and community building (2011-2014), and 3. Movement mainstreaming (2015-present). During the first 'evidence generation' phase, both ideas and issue characteristics dimensions were pivotal in generating attention toward the issue of 'child marriage' through the production of research that showed the prevalence and severity of child marriage across different contexts. In the second 'policy momentum and community building' phase, global actors and policy window dimensions were key in mobilizing momentum toward the issue, through the creation of global coalitions like Girls Not Brides in 2011, and high-level global meetings like the London Girls Summit in 2014 which mobilized funding toward the issue. Last, the third 'movement mainstreaming phase' marked the strengthening of grassroots CSO networks working on child marriage with the support of Girls Not Brides and other funders, as well as the more formal incorporation of child marriage into global governance mechanisms through the inclusion of a child marriage-specific indicator in the Sustainable Development Goals (SDGs) in 2015.

Coupling document sources with global key informant perspectives, I contextualize below how the different political determinants shown in Table 4 - actor power, political context, ideas and issue characteristics – characterized each of three child marriage movement phases.

Phase 1. Evidence generation about the girl-child (1994-2010)

The mid-1990s signaled an international political shift toward women and girl's rights, following the 1994 International Conference on Population and Development (ICPD). Although literature on early marriage date back to the 1950s (Efevbera & Bhabha, 2020), research on 'early marriage' began more formally in the post-ICPD era, as global development actors turned their attention toward girls' and women's SRH rights. During this ***evidence generation phase***, evidence

on the severity and consequences of early marriage became more common in the mid- to late-2000s, as both internal and external framing began to shift from 'early marriage' toward the harmful traditional practice of 'child marriage.'

This evidence generation phase was critical in raising attention toward the issue. Consistent with the growing political interest toward investing in 'girls' in the 2000s, a growing number of studies showed consistent associations between girls' adolescent marriage and their later adverse health and wellbeing (Bruce, 2003; Clark, 2004; Jensen & Thornton, 2003; Mathur et al., 2003; Otoo-Oyortey & Pobi, 2003; UNICEF, 2001, 2005). The consequences of early marriage appeared to be far reaching and severe, ranging from increased risk of intimate partner violence, maternal and child mortality to intergenerational poverty. At the same time, global data showed that early marriage was stubbornly prevalent across a range of contexts, from 70% to 75% of women reported first marrying before 18 years in South Asia, and 50 to 60% of women marrying before 18 years in sub-Saharan Africa (Jensen & Thornton, 2003).[1]

As evidence built around the prevalence and consequences of 'early marriage' in the 2000s, the International Center for Research on Women (ICRW) – a US-based INGO - embarked on a rebranding campaign to advocate for a new term -- 'child marriage' (key informant interview [KII], January 28, 2022; Mathur et al., 2003). This new terminology more explicitly called out the human rights violations associated with early marriage under the Convention on the Rights of the Child (CRC), and more accurately reflected how early marriage was being operationalized and measured at the time -- as age at first marriage before 18 years (KII, January 28, 2022).

[1] In their analysis, Jensen & Thornton use national demographic health survey (DHS) datasets to measure age at first marriage among women aged 25 to 49 years old across different regions and countries. The authors stratified their analyses by four birth cohorts (1950-1954; 1955-1959; 1960-1964; 1965-1970), thus presenting regional prevalence 'ranges' among women 25 to 49 years old born within different birth cohorts.

More importantly, however, the reframing of 'early marriage' into 'child marriage' was a political strategy. During the more conservative political environment of the George W. Bush administration, US-based INGOs struggled to fund and support comprehensive SRH programs for adolescents and young women (KIIs, January 2, 2022; January 28, 2022). Thus, the concept of 'child marriage' was both politically attractive and 'safe' to more conservative lawmakers and policy-makers wary of funding SRH programs for adolescent girls and young women, as one key informant explained:

> *"The child marriage agenda really came about because of the conservative movement's hesitancy around adolescent sexual and reproductive health. Child marriage was a way to tackle the issues of adolescent SRH and keep them on the agenda."*
>
> – **Global North Key Informant, INGO Sector**

In contrast to the more ambiguous terminology of 'early marriage', the rebranded problem of 'child marriage' appealed to both conservative and liberal ideologies, promoting the issue of adolescent marriage as a 'child protection' issue that needed to be urgently addressed. Although this new term was distinct from 'forced marriage', the 'child' in 'child marriage' insinuated a lack of consent in the marital process with human rights implications. Backed by increasing evidence on the drivers and consequences of child marriage, global advocates and INGOs began more commonly calling out child marriage as a "hidden" global phenomenon that needed to be urgently addressed by the mid- to late-2000s (UNICEF 2001; 2005).

Phase 2. Policy momentum and community building (2011-2014)

In the early 2010s, powerful global actors answered the calls to tackle the 'invisible' issue of child marriage. During this ***movement building phase,*** global leaders and private foundations played a pivotal role in mobilizing new funding to 'end child marriage' through high-level global

meetings and national government commitments. At the same time, global and regional indicator comparisons began prioritizing 'hot spot' countries like Uganda in need of funding to tackle the issue of child marriage.

In 2009, a newly formed group of prominent global leaders – called The Elders – were searching for a cause that could jumpstart their commitment to work on gender equality worldwide.[2] Triggered by former US president Jimmy Carter's decision to abandon his religion 'for gender equality' (Carter, 2009), the Elders' new mission to address harmful religious and cultural norms was a departure from their global human rights work, and not quite politically attractive (KII, February 7, 2022). The Elders' search for a new cause aligned well with INGO campaigns raising awareness about the invisible problem of 'child marriage.' One member of The Elders recalled how they came across the issue of 'child marriage' in the late 2000s:

> *"I had lunch with [XXX] who you might know from the [XXX] Foundation and who had set up [XXX girl campaign]. At some point, we started talking about child marriage. The two words 'child' and 'marriage' are very clear about what the issue is. But, despite having worked on human rights and development issues for many years, I had actually never come across the issue. It was not being discussed in international development meetings, nor in the corridors of the United Nations. So, we left lunch and googled child marriage. Note that this was all happening at a time before we had smart phones. Anyway, this number comes up, stating that annually 10 million kids were being married off as children. I almost fell off my chair. I thought 'how can a problem that is so enormous, and having such a devastating impact on the lives of girls, be ignored? Why are these millions of child brides invisible?"*
>
> **– Global North Key Informant, Foundation Sector**

As shown in the excerpt above, the concept of 'child marriage' appealed to private foundations. The attraction to the issue of child marriage was three-fold: the terminology 'child

[2] Created in 2007 by former South African president and anti-apartheid hero Nelson Mandela, past and current members of The Elders include Archbishop Desmond Tutu, former UN secretary Ban Ki Moon, former US president Jimmy Carter, and former Liberian president Ellen Johnson Sirleaf, among other prominent figures. For more information about "The Elders", see: https://theelders.org/

marriage' could be easily grasped by private foundations and board members, donors understood that child marriage was connected to broader cross-sectoral development goals, like girls' education, maternal and child mortality and gender-based violence (GBV) prevention, and lastly, it was 'severe,' affecting many girls worldwide (KIIs, January 17, 2022; February 7, 2022). As emphasized by multiple key informants, the idea of 'child marriage' easily *'tugged at the heart strings,'* including those of private foundations (KIIs, December 7, 2021; December 9, 2021; January 3, 2022).

By 2011, The Elders formed Girls Not Brides, a global coalition aimed at tackling the problem of child marriage through fundraising, government, and civil society mobilization. Although publicly launched at the 2011 the annual Clinton Global Initiative meeting in New York, Girls Not Brides was created earlier that year in Addis Ababa, Ethiopia, with the participation of global leaders and 60 CSOs from around the world, with the following objectives: 1. Raising awareness and developing solutions to end child marriage; 2. Mobilizing funding and resources toward the issue; 3. Improving collaboration and learning between different CSOs working on the issue (KII, February 7, 2022). Under the auspices of global leaders like Princess Mable van Orange of the Netherlands and Archbishop Desmond Tutu of South Africa, Girls not Brides played a critical role in the movement to end child marriage in subsequent years, by strengthening CSO partnerships in countries like Uganda and mobilizing funding commitments from Global North governments like Canada and the Netherlands, and private foundations like the Gates Foundation, Ford Foundation and Novo Foundation (Girls Not Brides, 2016; Walker, 2017; KII, February 7, 2022).

The power and influence of global leaders played a critical role in ensuring the success of the global child marriage partnership. The use of prominent 'Elders' as advocates to end child

marriage attracted both government and CSO attention to the issue -- as one Global North key informant stated, *"when you have high level leaders like Desmond Tutu engaged, people pay attention"* (KII, December 14, 2021). Further, the visibility of respected and famous 'elders' from the Global South at the forefront of the cause ensured that the issue would not be perceived as a *"Western"* concept, but rather as a universal child protection issue that Global South actors could rally behind (KII, February 7, 2022).

Ultimately, the birth of Girls not Brides catalyzed new energy and mobilization toward the issue of child marriage. In the following years, key policy windows and events that helped mobilize high level support for the issue included the United Nations General Assembly resolution to designate October 11th as the International Day of the Girl Child, choosing child marriage as its first ever campaign in 2012 (Svanemyr et al., 2012). In 2014, the United Kingdom and UNICEF hosted the London Girls Summit, a pivotal conference that helped mobilize funding and national government commitments toward ending child marriage and female genital mutilation (FGM) 'within one generation' (MGLSD and UNICEF Uganda, 2015), and that included high-level government ministry officials from around the world, including Uganda.

Phase 3. Movement mainstreaming (2015-Present)

The issue of child marriage evolved into a global political force by the mid- to late-2010s. During this third ***movement mainstreaming*** phase, global advocacy groups like Girls Not Brides pushed for the inclusion of child marriage into more formal global governance mechanisms, including the sustainable development goals (SDG Target 5.3), which committed signatory countries to end child marriage by 2030. During this mainstreaming phase, political community cohesion strengthened significantly, as several guiding institutions partnered together to become the 'experts' on the issue of child marriage.

During this period, several guiding institutions partnered to spearhead global child marriage work including Girls Not Brides, UNICEF, UNFPA and WHO. These organizations convened expert meetings throughout the early to mid-2010s to review progress on research and programs on child marriage (Plesons et al., 2021). Since the mid-2010s, Girls Not Brides continued to play a key role in mobilizing child-rights and women-focused CSOs across the world to focus on the issue of child marriage, mobilizing over 1,500 member CSOs from over 100 countries. In Uganda for example, Girls Not Brides began organizing CSOs in 2013, two years after the creation of the global coalition (KII, January 26, 2022). Since 2018, new public-private partnerships have also emerged, raising awareness about the problem of child marriage within private sectors in Global North contexts. For example, the more recent VOW Initiative partners with private companies in the US wedding industry to solicit individual donations through wedding registry websites; such donations are used to support the Girls First Fund (GFF) and affiliated grassroots CSOs tackling child marriage in Global South contexts, including Uganda (VOW for Girls, 2022).

In 2015, child marriage was included into Sustainable Development Goal (SDG) Target 5.3, aiming "to eliminate all harmful practices, such as child, early and forced marriage and female genital mutilations by 2030," due to the advocacy of multilateral institutions like UNICEF, Global North government champions such as the Canadian government and global coalitions like Girls Not Brides (Girls Not Brides, 2016; KII, January 28, 2022). The inclusion of child marriage in the SDGs marked the formal incorporation of child marriage into the global development governance structure, setting a directive for all countries to end child marriage by 2030.

At the time, debates over the inclusion of child marriage into the SDGs primarily encompassed scope and measurement issues. First, some advocates argued for a separate indicator on child marriage – separate from female genital mutilation; however, both were ultimately

included in the same indicator since both were considered 'harmful traditional practices' and culturally related to one another, as female genital mutilation signaled the precursor to child marriage in some cultural contexts. Second, debates ensued over whether to include marriage under 15 years and marriage under 18 years as two separate indicators; ultimately, only one indicator – marriage under 18 years -- was kept, as some argued that including a marriage indicator for marriage under 15 years would allow governments to unfairly declare "victory" over child marriage, without fully addressing child marriage among 15 to 17 year old's (KII, January 28, 2022).

The incorporation of child marriage into the SDGs provided a universal goal that propelled funding and resources toward programs that could end child marriage in priority countries. Among various programs, SDG Target 5.3 led to the birth of the UNICEF-UNFPA Global Programme to Accelerate Action to End Child Marriage in 2016, a large-scale and multi-lateral effort working in 12 priority countries with high prevalence of child marriage (UNFPA & UNICEF, 2019). Uganda was included among these 12 countries – it was considered a 'hot spot' country for child marriage, the Ugandan government was developing a national strategy to end child marriage, and national leadership seemed eager to tackle the issue of child marriage. From 2015 onward, Uganda would receive significant attention and funding to tackle the issue of child marriage through the UNICEF-UNFPA Global programme, Girls Not Brides, USAID, and other funding streams.

Looking at the case of Uganda as a priority country, I next explore how the global cause of child marriage trickled down to national policies and local implementation, assessing the mechanisms behind child marriage policy uptake in Uganda.

II. Taking-up the cause of child marriage in Uganda: Political mechanisms and gaps

In the early 2010s, findings from an African human social development report trickled across Ugandan newspaper headlines, alarming readers that 'two million Ugandan minors were forced or lured into marriage.' Moreover, the report identified Uganda among the 15 'worst' countries with the highest prevalence of child marriages in the African region (Kasujja, 2014; Masinde, 2014; Mugisa & Nabatanzi, 2013). Presented at the 2013 Women Deliver global conference in Kuala Lumpur, the African human social development report findings came as a 'slap in the face' to the Ugandan government who had set minimum age at marriage laws to 18 years under its constitution as early as 1995 (Mugisa & Mwesigwa, 2013). At the time of the report's release, Girls Not Brides had already begun organizing CSOs in Uganda through the Uganda Alliance to End Child Marriage; and in 2014, Uganda's Ministry of Gender, Labour and Social Development representatives attended the high-level Girls Summit meeting in the United Kingdom, where Uganda pledged their commitment to end child marriage, and where the new joint UNICEF and UNFPA global multi-country program was announced to tackle child marriage in 12 priority countries, including Uganda. The following year, Uganda's Ministry of Gender, Labour and Social Development launched the first ever *National Strategy to End Child Marriage and Teenage Pregnancy* in Uganda, developed in partnership with UNICEF and Girls Not Brides, engraving the issue of child marriage into national government policy (MGLSD & UNICEF Uganda, 2015).

The timeline in Figure 1 visualizes the above events, showing how Uganda's increased focus on child marriage intersected with the global child marriage movement (bottom of the figure in blue). This alignment is not coincidental, but rather reflects the increased prioritization of child marriage in Uganda in response to global advocacy. At the same time, Uganda set minimum age

at marriage laws and generated research on 'early marriage' in the 1990s and 2000s, pre-dating most of the global realigning around 'child marriage.' For example, Uganda had already set minimum age at marriage to 18 years with the adoption of the 1995 Ugandan constitution, although these laws allowed legal loopholes for marriage under 18 years with parental consent. The global focus on child marriage, did however, contribute to the tightening of these laws. For example, the minimum legal age of marriage was set to 18 years for both boys and girls with no exceptions or parental consent under the Children's Amendment Act much later in 2016. This amendment was passed due to the advocacy efforts of local CSOs organized under the Girls Not Brides national partnership, consistent with larger global child marriage efforts (KII, January 26, 2022). As well, awareness and research about 'early marriage' in Uganda in the mid- to late-2000s pre-dated the increased global funding and mobilization toward the issue. As several key informant stated, the issue of *"early marriage has always been there",* but has received increased attention under the umbrella of 'child marriage' due to increased global funding and resources by the mid- to late-2010s (KIIs, December 9, 2021; February 3, 2022).

The policy developments shown in Figure 1 occurred in the context of vast social, economic and normative changes in Uganda. According to multiple key informants, national public discourse around child marriage appeared to have changed from a *"normal"* to an *"abnormal"* practice over several decades (KIIs, December 9, 2021; February 3, 2022; February 8, 2022). Commonly, key informants suggested that legal frameworks - such as age of majority and sexual defilement laws - contributed to increased awareness about child rights and child marriage, although some key informants argued that awareness of these laws dissipated at the community level (KII, January 25, 2022; February 8, 2022). As carefully stated by one key informant, these legal frameworks *"supported"* a general shift in child marriage but had not

necessarily *"driven"* these changes (KII, February 3, 2022). Several key informants instead pointed to the role of education as the biggest protective factor of child marriage, with universal primary education (UPE) being the *"best thing"* for delaying age at marriage (KII, December 30, 2021; January 6, 2022). Other key informants pointed to the larger societal and economic transformation occurring in Uganda, including increased urbanization, the growth of the boarding schooling system, and the gradual erosion of parents' involvement in children's lives and marital decisions (KIIs, January 6, 2022; February 3, 2022; February 3, 2022). To a lesser extent, key informants pointed to the contribution of adolescent specific programming, including the mobilization and work of CSOs working on child marriage, as well as SRH and family planning programs that have focused on teenage pregnancy prevention (KIIs, February 3, 2022; February 3, 2022).

Although key informants recognized a shift in national norms around child marriage, they pointed to persistent challenges that upheld child marriages across different Ugandan communities. These drivers were regionally specific and not uniformly distributed, broadly encompassing: the use of child marriage as a social safety net for girls in poor households, the continuation of harmful gender norms and practices like bride price, the lack of employment opportunities for girls and women, the weakening of the family structure and parenting roles in children's lives, the influence of religious and cultural leaders in perpetuating child marriages, the lack of sexuality education and services available for girls and boys, and the plurality of customary and formal laws governing marriage, and the rise of 'come we stay' or informal cohabitation marriages, among other factors (KIIs, January 6, 2022; February 3, 2022; February 8, 2022).

In the context of these vast social changes and challenges, I assess below how key political mechanisms influenced the uptake of child marriage as a larger policy priority in Uganda. I then examine the challenges in translating national political priorities into local implementation.

Taking-up the cause of child marriage in Uganda

Multiple political factors influenced the uptake of child marriage in Uganda, in line with Schiffman and Smith's determinants framework. First, the larger global and regional ***political context*** was instrumental in motivating Ugandan attention toward the issue. At the regional level, African Union campaigns and conventions created consensus toward addressing child marriage among countries in the Eastern and Southern Africa region – helping to connect global advocacy to national efforts. Second, the availability of national and sub-regional data on child marriage showed the national reach and severity of the problem, strengthening mutual understanding about the ***characteristics of the issue*** at hand. Third, the ***portrayals and framing*** of child marriage as an issue of 'child rights' and 'child protection', rather than one of 'sex' and 'sexuality,' enabled broader community acceptance around the issue, including from more conservative religious and political leaders. Fourth, a strong network of government leaders, academics, INGOs and CSOs coalesced behind the issue, and under the directive of powerful ***actors*** at the highest levels of government.

Political context. Regional coordination among African countries helped translate global campaign efforts into national policy support for child marriage in Uganda. Following high level global meetings on child marriage, influential political bodies like the African Union organized regional events on the African continent. Organized by the African Union in 2015, the "First African Girls' Summit on Ending Child Marriage" convened member states to secure commitments and funding toward the issue of child marriage on the African continent (African

Union, 2015). The Summit was organized in response to the 2014 London Girls Summit, which mobilized high-level funding and government pledges to end child marriage at the global level. At the Summit, several African leaders – including First Lady Janet Museveni of Uganda – committed pledges to tackling the issue of child marriage (KII, January 26, 2022).

Under the leadership of First Lady Museveni, the Ministry of Gender, Labour and Social Development launched the *National Strategy to End Child Marriage and Teenage Pregnancy* in Uganda that same year, with funding support from UNICEF. The national strategy was launched in coordination with the African Union's campaign to end Child Marriage, and on the Day of the African Child, under the theme "25 years after the adoption of the African Children's Charter: Accelerating our collective efforts to end child marriage in Africa" (Agaba, 2015; Nantume, 2015; MGLSD & UNICEF Uganda, 2015). As mentioned by several key informants, the regional coordination and campaigns promoted both *"competition"* and *"shaming"* of member states with high prevalence of child marriage, motivating national commitment from countries like Uganda toward national plans (KIIs, January 21, 2002; January 26, 2022). Thus, regional coordination and competition provided a favorable environment for policy uptake of child marriage in Uganda, consistent with the importance of broader policy windows and governance structures in catalyzing collective action toward an issue (Shiffman & Smith, 2007).

Characteristics of the issue. In the context of this regional pressure, data on the national prevalence and magnitude of child marriage played a sizeable role in bringing the issue to the forefront of Ugandan newspaper pages, CSO advocacy efforts and government desks. As African regional campaigns intensified, Uganda was singled out as one of several 'hot spot' countries with high prevalence of child marriage, triggering attention to the issue of child marriage across different media outlets. The dissemination of statistics such as '2 million girls in Uganda will get

married before they reach the age of 18 years' led to alarming newspaper headlines about the 'silent national killer' and 'rampant' problem of child marriage in Uganda (Agaba, 2015; Mone, 2014). According to key informants, these data were a *"wake up call"*, catalyzing national government ministries and leadership, including First Lady Museveni, to develop the national strategy around child marriage (KII, January 20, 2022). Further, UNICEF's sizeable role in these data dissemination – a highly respected global agency engaged in child protection in Uganda – helped generate acceptance of these data by policy-makers and CSOs (KIIs, January 6, 2002; January 25, 2022).

At the same time, respected researchers and academic institutions within Uganda were generating new national evidence on child marriage. An influential formative study by Makerere University, in partnership with the Overseas Development Institute (ODI), showed the sub-national complexity and pervasiveness of child marriage across different regions of Uganda (Bantebya et al., 2014), helping to inform the development of the *National Strategy to End Child Marriage and Teenage Pregnancy* one year later (KIIs, January 6, 2022; January 20, 2022). As well, the use of Uganda Bureau of Statistics (UBOS) data to measure the prevalence of child marriage helped generate national acceptance of child marriage. As mentioned by several key informants, these UBOS data were nationally-owned data that came from a *"a local machinery"* in Uganda and were thus trusted and respected by policy-makers (KIIs, December 9, 2021; January 6, 2022). Thus, both national data ownership and research production were pivotal in defining the issue characteristics at hand (as per Shiffman & Smith's framework, 2007), helping to legitimize the case behind child marriage, and creating a sense of urgency to address the issue.

Ideas and framing. The external framing of child marriage as a 'child protection' issue was well-aligned with Uganda's history of participating in several child-centered policies and

covenants, including the CRC in 1989 and the African Charter on the Rights and Welfare of the Child in 1992 (ACRWC; 1990; MGLSD & UNICEF Uganda, 2015). Uganda's ratification of these conventions was controversial in the early 1990s; the covenants had high government level acceptance but were not part of rigorous debates or dialogue at national, regional or community levels. The ratification of these covenants sparked debates about the tensions between global legal frameworks and community norms, as shared by one key informant who involved in those discussions at the time, *"When you begin to unpack what this means in terms of what these standards mean…We were asking ourselves, what do these standards mean? And how do they fit into the local context and with community norms and realities??"* (KII, February 3, 2022).

Despite these initial contestations in the 1990s, the concept of the 'child' became more visible in Uganda in the following decades, leading to an increased awareness about child rights at both policy and community levels (KIIs, December 9, 2021; January 21, 2022; February 3, 2022). As shared by several key informants, higher awareness about child rights and laws, both through CSO mobilization work and the increased focus on children's education following UPE, generated increased understanding about child rights within local communities (KII, February 3, 2022; February 3, 2022). Today, the focus on the 'child' persists within both child marriage policy texts and CSO campaigns. In Uganda's *National Strategy to End Child Marriage and Teenage Pregnancy f*or example, child marriage was frequently cited as a human rights violation that robs 'children of their childhood' (MGLSD & UNICEF Uganda, 2015). Similarly, the Girls Not Brides membership network has been dominated by child rights organizations, consistent with the framing of child marriage as a 'child rights' issue both globally and in Uganda. As such, the public framing of 'child' marriage contributed significantly to the uptake of the cause in Uganda, consistent with Shiffman & Smith's emphasis on public framing within the political prioritization process (2009).

Importantly, this child protection framing also made child marriage more "*politically palatable,"* relative to the more controversial issue of adolescent sexuality in Uganda which is considered an external *"Western"* issue (KII, January 6, 2022), and a source of "moral panic" in Uganda (Moore et al., 2021). As shared by key informants and other policy analyses, sexuality education efforts in Uganda have long been challenged by religious organizations and leaders, who simultaneously hold power and influence within policy circles, while also owning many of Uganda's private boarding schools (KII, January 25, 2022; January 26, 2022; Moore et al., 2021). As child marriage efforts advanced in 2018 in Uganda, a new comprehensive national sexuality education framework failed in parliament due to resistance of religious leaders, cultural leaders, and community parent groups; as one CSO informant shared, when it comes to sexuality education in Uganda, *"we just bury our heads in the sand"* (KII, January 26, 2022), which made another academic informant, simply "*feel sad"* (KII, January 6, 2022),

Despite the *"intertwined"* relationship between pre-marital pregnancies and child marriage in Uganda, child marriage campaigns in Uganda have disproportionately focused on the protection of the 'child', rather than adolescent sexual education and sexuality (KII, January 26, 2022). The framing of 'child' marriage has paradoxical consequences: both mobilizing attention toward adolescent SRH issues, while at the same time not fully addressing the sexuality-related roots of child marriage in Uganda. In the context of Uganda, key informants shared that child marriage funding enabled NGOs and CSOs to work on other SRH issues like teenage pregnancy prevention (KII, January 10, 2022), while at the same time, drawing attention away from teenage pregnancy prevention and larger sexuality education reform (KII, December 9, 2021). Notably, several key informants called out the need for increased sexuality education efforts in Uganda to root out child marriage in Uganda (KII, January 6, 2022; January 10, 2022; January 26, 2022; February 8, 2022).

As one civil society activist urgently shared, "*we need to invest in sex education if we are to see Uganda free of child marriage"* (KII, January 26, 2022).

Actor Power. Consistent with Schiffman and Smith's framework, a strong network of academics, government ministries and CSOs pushed for collective action toward addressing child marriage with the support of global agencies like UNICEF and Girls Not Brides (2007). Government 'champions', like former Speaker of Parliament, Rebecca Kadaga and Uganda's First Lady Janet Museveni, provided direct mandates and calls to action to work on broader 'gender equality' and the issue of child marriage more specifically (KII, January 26, 2022). Accordingly, the issue of gender equality was becoming more mainstream within Uganda's government policies and budgets by the mid-2010s due to global funding shifts, the activism of CSOs, and the power of female champions at high government levels (KII, January 20, 2022; January 26, 2022). Within this enabling political environment, academics from Makerere University played an important role in generating formative research and evidence that informed the 2015 *National Strategy to End Child Marriage and Teenage Pregnancy*, led by the Ministry of Gender Labour and Social Development and with support from UNICEF (Bantebya et al., 2014). At the same time, Uganda's active CSO community - now organized and backed by Girls Not Brides - played a pivotal role in *"creating noise"* around child marriage, as explained by one key informant:

> *"The African Union Summit really got the attention of our First Lady to focus on the issue of child marriage. But also at the country level, members had already started working on child marriage under the partnership of Girls Not Brides. Organizations had also started picking up the issue as a very, very crucial development issue that needed to be addressed by the government. So the pressure to put child marriage on the policy agenda also came from civil society."*
>
> **– Ugandan Key Informant, CSO Sector**

In line with this excerpt, CSOs played an important role in the formulation of the national strategy, including pressuring the Ugandan government to integrate the issue of teenage pregnancies into the national strategy.

Taken together, the 2015 *National Strategy to end Child Marriage and Teen Pregnancy* signaled the formation of a political community around the issue of child marriage; the plan included participation of diverse government ministries, CSOs, UN agencies and other development partners (MGLSD & UNICEF Uganda, 2015). At the same time, global actors and funding sources were pivotal in the development and implementation of the policy. The strategy was developed with funding from UNICEF, and later implemented through the globally-funded Joint UNFPA-UNICEF Global Programme to End Child Marriage in priority districts in Uganda (KIIs, January 21, 2022; January 25, 2022).

Translating policy priorities into implementation

Although the presence of 'effective interventions' can help determine whether an issue becomes a political priority, Shiffman & Smith's framework places less emphasis on the extent that policy priorities, and responding interventions, are effectively implemented at local levels. During key informant interviews, a recurring theme centered around the challenges between policy development and implementation at the community level despite the significant policy developments on child marriage in Uganda (KIIs December 9, 2021; January 6, 2022; January 20, 2022; January 25, 2022; February 3, 2022). As mentioned by the key informant below, the gap between policy development and implementation suggests a larger pattern about foreign donor influence and Uganda's progressiveness in developing policies aligned with global norms:

> *"Uganda's problem has always been its ease in developing policies to appease the West, NGOs, and agencies, when we are not yet convinced. There have always been pressures and pushes from Western organizations for the Ugandan government to align themselves with Western values. So these 'norms' are the norms of the policy-makers that align with global discourse."*
>
> **– Ugandan Key Informant, Academic Sector**

As a result, national policies and community social norms around child marriage have moved at different paces in Uganda and, according to one key informant, perhaps even *"in different directions"* (KII, December 9, 2021). This finding is consistent with a larger pattern of policy formulation in Uganda, in which the Ugandan government has developed a vast range of national policies on the 'girl child,' in accordance with global norms and expectations, and less so based on local norms, values and broader cultural systems.

Uganda's dependence on foreign funding for social and gender programs has contributed significantly to the gap between policy formulation and implementation of child marriage programs. According to key informants, both foreign dependence and domestic resource allocation have contributed to this discordance: the Ugandan government has largely focused on investing in larger infrastructure, economic and security investments, while enabling donors to *"support the social structures"* and systems (KII, February 3, 2022). Given this broader context, several key informants expressed frustration in the lack of government investment toward child protection and child marriage programs, with one key informant sharing, *"In Uganda, children are the future of tomorrow, but where are these investments?*" (KII, January 25, 2022).

Uganda's dependence on external funding for social programs has resulted in a 'disconnect' between Uganda's strong legal and policy frameworks around child marriage and the implementation of programs at the community level (Bantebya et al., 2018). For example, the Ministry of Gender, Labour and Social Development has limited capacity at both central and local

levels due to minimal budget allocation; as of 2015, the Ministry of Gender was allocated less than 1 percent of the national budget (Bantebya et al., 2018). Given this broader funding allocation context, progress toward Uganda's National Strategy to End Child Marriage and Teenage pregnancy has been uneven, limited to only 55 out of over 120 districts, and with weak implementation at the district level (Bantebya et al., 2018). As one civil society activist pointed out, the national strategy remains a *"foreign"* document, published only in English and not translated into local district languages (KII, January 26, 2022). As such, this national strategy has stayed on the *"shelves"* of policymakers, rather than at the hands of district officers, local authorities, and implementers at the community level (KIIs, January 10, 2022; January 26, 2022).

Discussion

Grounded in key informant interviews and an extensive desk review across a span of 20 years, this analysis traced the evolution of child marriage as a priority, examining the extent that the global cause of child marriage trickled down to national policies and contributed to child marriage policy uptake in Uganda. Taken together, this analysis demonstrates that the birth of the global 'child marriage' movement in the late 2000s marked a political shift in adolescent girl funding, repackaging the issue of early marriage as an issue of 'child protection'. The focus on child protection, rather than adolescent sexuality, was instrumental in mobilizing attention from both liberal and conservative funders in the Global North and policy-makers in the Global South, including Uganda.

In the priority country of Uganda, multiple political factors influenced the policy uptake of child marriage. First, ***regional context*** mattered -- African Union campaigns and conventions created consensus toward addressing child marriage among countries in the Eastern and Southern

Africa region, connecting global policy efforts to national policy uptake. Second, the availability of national and sub-regional data on child marriage showed the national reach and severity of the problem, strengthening mutual understanding about the ***characteristics of the issue*** at hand. Third, the ***portrayals and framing*** of child marriage as an issue of 'child rights' and 'child protection', rather than one of 'sex' and 'sexuality,' enabled broader community acceptance around the issue, including from more conservative religious and political leaders. Fourth, a strong network of government leaders, academics, INGOs and CSOs coalesced behind the issue, and under the directive of powerful ***actors*** at the highest levels of government.

By applying Schiffman & Smith's framework, I was able to assess the extent that Ugandan actors actively engaged in the formulation of 'child marriage' as a problem and in the setting of potential policy solutions. While the 'framing' of child marriage clearly came from global campaign efforts and Global North institutions, these efforts aligned with Uganda's earlier research and awareness of 'early marriage' laws and policies, as well as their longstanding focus on child protection laws and rights. Thus, while global actors and organizations like Girls Not Brides and UNICEF were influential in mandating and *funding* the priority of 'child marriage' in Uganda from the top-down, this mandate was also relevant to current social issues in Uganda, feeding into earlier 'early marriage' work and research of CSOs and researchers in Uganda. This finding is consistent with other political analyses showing the influence of INGOs in setting the agenda for child marriage (Murdie et al., 2019), as well as human rights theory showing that global issues are more commonly taken up when they are a "good fit" with local advocacy efforts (Carpenter, 2014; Murdie et al., 2019).

An important contribution of this analysis is the application of Shiffman and Smith's framework to both global and national landscapes, rather than just to 'global' priorities (2007).

Certain political factors from Schiffman and Smith's determinant framework were particularly salient in the uptake of child marriage in Uganda. First, the 'ideas' behind child marriage were key in mobilizing global and national policy interests toward child marriage; in particular, child marriage efforts aligned themselves with 'child protection' norms and framing to ensure global and national buy-in. The centrality of the 'child' in these efforts is pivotal in understanding the sustained momentum of global and national efforts. This finding is distinct from other political analyses of child marriage which have focused instead on the centrality of 'human rights', rather than 'child protection' within global child marriage advocacy efforts (Murdie et al., 2019; Shawki, 2015). Second, the 'issue characteristics' dimension – and the availability of national data on child marriage - was equally important in driving urgency to address child marriage, and along the way, building a community of CSOs, academics and government leaders to tackle the issue.

Overall, Uganda's policies around child marriage reflect government efforts to tap into global norms and funding to support their social and gender programs, albeit while also contributing to a gap between policy development and implementation. In particular, I identified extensive Ugandan government engagement in taking up the cause of child marriage, while at the same time, finding limited government funding support for child marriage programs. This challenge is by no means unique to Uganda, but reflects the larger tension between global development agendas and national policy implementation across different global development initiatives. The balance between 'global' and 'local' priorities is an ongoing tension for the child marriage movement, and is being increasingly discussed in global child marriage advocacy and research (Kimball & Dwivedi, 2022; Muthengi et al., 2021; Siddiqi & Greene, 2022).

This paper also shows the extent that the 'child protection' framing of child marriage collided with sexuality education efforts, to the detriment of pregnancy prevention and sexuality

education efforts in Uganda. The intentional messaging around 'child rights' and 'child protection' allowed for easier uptake and acceptance of child marriage by policy-makers and CSOs in Uganda, while at the same time aligning with more conservative political and religious movements opposed to sexuality education efforts. In contrast to child marriage efforts which appeared more 'nationally owned', policy analyses of failed sex education efforts in Uganda have identified persistent 'moral panics' and longstanding anxieties over international INGO interventions into the sexual lives and rights of Ugandans (Moore et al., 2021). Given the close linkages between pre-marital pregnancies and child marriages, this 'child' marriage framing has had unintended consequences for other adolescent SRH issues, and as such, for fully addressing the roots of child marriage in Uganda. As shared by key informants, the inability to advance sexuality education in Uganda poses significant barriers to 'ending' child marriage in Uganda, given the close relationship between adolescent sex, premarital pregnancies, and marriages in Uganda.

To the readers working on child marriage, the tension between child protection and adolescent sexuality efforts is not a surprising finding. Rather, this tension is central to the future of the larger child marriage movement, and has been researched in other contexts like Latin America (Vilán, 2022). In recent years, activists, researchers and practitioners have advocated for more intentional inclusion of adolescent sex and sexuality in child marriage advocacy and programs (CEFMU and Sexuality Working Group, 2022; Das et al., 2022; Kimball & Dwivedi, 2022); however, such efforts face an upward battle given the obvious centrality of the 'child' in 'child marriage.' In particular, the discussion of contraception, sex, and sexuality in the context of 'children' seems challenging in the face of socially conservative and religious agendas in both Global North and Global South contexts. Nevertheless, documenting the potential consequences

of the child marriage movement on adolescent sex and sexuality programs is pivotal in paving a path forward that can fully address adolescent girls' and boys' SRH needs.

An important strength of this study is the use of key informant data and diverse documents to piece together the story of the child marriage movement both at the global level and in Uganda. However, this study also has several limitations. First, I attempted to gather and review documents dating back to 1997, but my search only yielded documents dating back to 2009. As a result, this analysis may not reflect pre-existing child marriage efforts in Uganda. Nevertheless, the lack of child marriage documentation in the 2000s most likely reflects the lack of attention given to the issue prior to 2009 in Uganda. Second, the use of newspaper articles could skew results toward more negative and 'sensationalist' perceptions of the issue at hand, which may be different than the current realities and opinions shared by broader civil society. My use of primary documents from government, donor and INGOs may also bias results toward more positive perceptions of current child marriage policies and programs. Nevertheless, I attempted to minimize these biases by conducting key informant interviews and using multiple sources of documents, triangulating my analysis across primary documents, grey literature, press releases and peer review literature. Lastly, the issue of child marriage both globally and in Uganda is complex, multidimensional, and politically contested. While I attempted to capture multiple dimensions and perspectives in this analysis, certain salient issues, such as the ongoing tension and conflation between 'child marriage' and 'forced marriage' were not fully captured in the confines of these page limits. Nevertheless, the hope is that these findings can spark more mainstreamed debates about different political dimensions of child marriage, including those not fully discussed in this paper.

The above findings have clear implications for future research, programs, and policies. At present, political analyses of the child marriage movement are scant, but growing (Bessa, 2019;

Murdie et al., 2019; Shawki, 2015; Vilán, 2022). In response, this analysis attempts to map the political evolution of child marriage for broader public knowledge and use, and in doing so, aims to jump start more open debates about the contributions and challenges of the child marriage movement in addressing adolescent girls and boys needs in Uganda and elsewhere. This is particularly relevant as child marriage efforts evolve into new uncharted territories, including with the COVID-19 pandemic and the increased influence of public-private partnerships in child marriage initiatives. With the expiration of Uganda's National Strategy to End Child Marriage and Teenage Pregnancy in 2020, this analysis may also provide a useful assessment of child marriage and sexuality education efforts in the country to-date, with the goal of informing future national policies and programs in Uganda.

This paper maps the political evolution of child marriage as a global movement down to the national context of Uganda. Using child marriage as a case study, these findings illuminate the often-invisible political drivers and negotiations behind adolescent girl funding, policies and programs. Looking toward the future, an ongoing tension for the child marriage movement will be the balance between the simplicity and appeal of its 'child protection' message and brand, and the complexity of marriage as a process influenced by a range of structural, educational, normative, and sexuality-related drivers. Ultimately, the child marriage story told in this paper aims to catalyze more open, systemic conversations about the potentials and challenges of girl-centered policies and programs, with the goal of improving the lives and wellbeing of girls, boys, and families in Uganda and beyond.

References

African Union. (2015, November). *First African Girls' Summit on Ending Child Marriage in Africa | Union africaine*. https://au.int/fr/node/19343

Agaba, V. (2015, June 15). Two million girls forced into early marriage annually. *The New Vision*. International Newsstream.

Anitha, S., & Gill, A. K. (2018). Making Politics Visible: Discourses on Gender and Race in the Problematisation of Sex-Selective Abortion. *Feminist Review*, *120*(1), 1–19.

Badejo, O., Sagay, H., Abimbola, S., & Belle, S. V. (2020). Confronting power in low places: Historical analysis of medical dominance and role-boundary negotiation between health professions in Nigeria. *BMJ Global Health*, *5*(9), e003349.

Bantebya, G. K., Muhanguzi, F. K., & Watson, C. (2014). *Adolescent girls in the balance: Changes and continuity in social norms and practices around marriage and education in Uganda* (p. 184). Overseas Development Institute (ODI).

Bantebya, G. K., Muhanguzi, F. K., & Watson, C. (2018). From National Laws and Politices to Local Programmes: Obstacles and opportunities in communication for adolescent girls' empowerment in Uganda. In C. Harper, N. A. Jones, R. Marcus, G. K. Bantebya, & A. Ghimire (Eds.), *Empowering adolescent girls in developing countries: Gender justice and norm change*. Routledge, Taylor & Francis Group.

Bategeka, L. & Okurut, N. (2006). *Universal Primary Education | Uganda*. Policy Brief 10. Overseas Development Institute (ODI), London: UK.

Behrman, J. A. (2015). The effect of increased primary schooling on adult women's HIV status in Malawi and Uganda: Universal Primary Education as a natural experiment. *Social Science & Medicine*, *127*, 108–115. https://doi.org/10.1016/j.socscimed.2014.06.034

Bessa, T. (2019). Informed powerlessness: Child marriage interventions and Third World girlhood discourses. *Third World Quarterly*, *40*(11), 1941–1956. https://doi.org/10.1080/01436597.2019.1626229

Bruce, J. (2003). Married Adolescent Girls: Human Rights, Health, and Developmental Needs of a Neglected Majority. *Economic and Political Weekly*, *38*(41), 4378–4380. JSTOR.

Carpenter. (2014). *"Lost" Causes: Agenda Vetting in Global Issue Networks and the Shaping of Human Security*. Cornell University Press.

Carter, J. (2009, July 14). Losing my religion for equality. *The Age*. https://www.theage.com.au/politics/federal/losing-my-religion-for-equality-20090714-dk0v.html

CEFMU and Sexuality Working Group. (2022, March). *Girls' sexuality and child, early, and forced marriages and unions: A conceptual framework*. Girls Not Brides.

Chae, S. (2013). Timing of Orphanhood, Early Sexual Debut, and Early Marriage in Four Sub-Saharan African Countries. *Studies in Family Planning*, *44*(2), 123–146.

Clark, S. (2004). Early Marriage and HIV Risks in Sub-Saharan Africa. *Studies in Family Planning*, *35*(3), 149–160. https://doi.org/10.1111/j.1728-4465.2004.00019.x

Cloward, K. (2014). False Commitments: Local Misrepresentation and the International Norms Against Female Genital Mutilation and Early Marriage. *International Organization*, *68*(3), 495–526. JSTOR.

Collier, D. (2011). Understanding Process Tracing. *PS: Political Science & Politics*, *44*(04), 823–830. https://doi.org/10.1017/S1049096511001429

Das, M., Guedes, A., Moletsane, R., & Svanemyr, J. (2022). Singularity and Diversity in Child, Early, and Forced Marriage and Unions. *Journal of Adolescent Health*, *70*(3), S1–S4.

Deininger, K. (2003). Does cost of schooling affect enrollment by the poor? Universal primary education in Uganda. *Economics of Education Review*, 15.

Efevbera, Y., & Bhabha, J. (2020). Defining and deconstructing girl child marriage and applications to global public health. *BMC Public Health*, *20*(1), 1547.

Ford Foundation. (2011). "Girls Not Brides: A new global partnership to end child marriage announced at the 2011 Clinton Global Initiative annual meeting." Press release (20 September 2011).

Girls Not Brides. (2021) About Girls Not Brides. Retrieved from: https://www.girlsnotbrides.org/

Girls Not Brides. (2016). *It takes a movement: Reflecting on five years of progress towards ending child marriage*. Girls Not Brides. https://www.girlsnotbrides.org/resource-centre/it-takes-a-movement/

Jain, S., & Kurz, K. (2007). *New insights on preventing child marriage: A global analysis of factors and programs*. ICRW. https://www.icrw.org/publications/new-insights-on-preventing-child-marriage/

Jensen, R., & Thornton, R. (2003). Early Female Marriage in the Developing World. *Gender and Development*, *11*(2), 9–19.

Kasujja, C. (2014, December 16). Early child marriages blamed on decaying social structures. *The New Vision*. International Newsstream. http://ezproxy.cul.columbia.edu/login?url=https://www.proquest.com/newspapers/early-child-marriages-blamed-on-decaying-social/docview/1636549305/se-2?accountid=10226

Kimball, D., & Dwivedi, A. (2022). Recollections of How the Child Marriage Field Has Evolved. *Journal of Adolescent Health*, *70*(3), S7–S8.

Koski, A., Strumpf, E. C., Kaufman, J. S., Frank, J., Heymann, J., & Nandi, A. (2018). The impact of eliminating primary school tuition fees on child marriage in sub-Saharan Africa: A quasi-experimental evaluation of policy changes in 8 countries. *PLOS ONE*, *13*(5), e0197928.

Malhotra, A., Warner, A., McGonagle, A., & Lee-Rife, S. (2011). *Solutions to End Child Marriage—What the Evidence Shows* (p. 36). International Center for Research on Women (ICRW).

Masinde, A. (2014, July 28). Busoga parents warned against child marriages. The New Vision. International Newsstream.

Mathur, S., Greene, M., & Malhotra, A. (2003). *The Lives, Rights, and Health of Young Married Girls*. International Center for Research on Women (ICRW).

Ministry of Gender, Labour and Social Development (MGLSD) and UNICEF Uganda. (2015) *The National Strategy to End Child Marriage and Teenage Pregnancy: 2014/2015 - 2019/2020*. Kampala, Uganda.

Mohanty, C. T. (1988). Under Western Eyes: Feminist Scholarship and Colonial Discourses. *Feminist Review*, *30*, 61–88. https://doi.org/10.2307/1395054

Mone, S. J. (2014, September 16). Let's unite against child marriages. *Daily Monitor*. International Newsstream.

Moore, E. V., Hirsch, J. S., Spindler, E., Nalugoda, F., & Santelli, J. S. (2021). Debating Sex and Sovereignty: Uganda's New National Sexuality Education Policy. *Sexuality Research and Social Policy*. https://doi.org/10.1007/s13178-021-00584-9

Moussa, W., & Omoeva, C. (2020). The Long-Term Effects of Universal Primary Education: Evidence from Ethiopia, Malawi, and Uganda. *Comparative Education Review*, *64*(2), 179–206.

Mugisa, A., & Mwesigwa, C. (2013, June 13). Uganda among the worst in child marriages – study | National Population Council. Uganda National Population Council (NPCSec). https://npcsec.go.ug/uganda-among-the-worst-in-child-marriages-study/

Mugisa, A., & Nabatanzi, V. (2013, October 16). "Early marriages" responsible for 20% of maternal deaths. The New Vision. International Newsstream.

Murdie, A., Park, B., Hart, J., & Mullinax, M. (2019). Chapter 2: Building momentum: Changes in advocacy discourse around early child marriage, 2011-2017 in: Contesting Human Rights. In *Contesting Human Rights: Norms, Institutions and Practice*. Edward Elgar Publishing Limited.

Muthengi, E., Olum, R., & Chandra-Mouli, V. (2021). Context Matters—One Size Does Not Fit All When Designing Interventions to Prevent Child Marriage. *Journal of Adolescent Health*, *69*(6), S1–S3. https://doi.org/10.1016/j.jadohealth.2021.09.018

Nantume, G. (2015, June 24). What needs to change for child marriage to end. *Daily Monitor*. International Newsstream.

Nelson, T. E., & Oxley, Z. M. (1999). Issue Framing Effects on Belief Importance and Opinion. *The Journal of Politics*, *61*(4), 1040–1067. https://doi.org/10.2307/2647553

Nishimura, M., Yamano, T., & Sasaoka, Y. (2008). Impacts of the universal primary education policy on educational attainment and private costs in rural Uganda. *International Journal of Educational Development*, *28*(2), 161–175. https://doi.org/10.1016/j.ijedudev.2006.09.017

Nour, N. M. (2009). Child Marriage: A Silent Health and Human Rights Issue. *Reviews in Obstetrics and Gynecology*, *2*(1), 51–56.

Otoo-Oyortey, N., & Pobi, S. (2003). Early marriage and poverty: Exploring links and key policy issues. *Gender & Development*, *11*(2), 42–51. https://doi.org/10.1080/741954315

Plesons, M., Travers, E., Malhotra, A., Finnie, A., Maksud, N., Chalasani, S., & Chandra-Mouli, V. (2021). Updated research gaps on ending child marriage and supporting married girls for 2020–2030. *Reproductive Health*, *18*, 152. https://doi.org/10.1186/s12978-021-01176-x

Raj, A. (2010). When the mother is a child: The impact of child marriage on the health and human rights of girls. *Archives of Disease in Childhood*, *95*(11), 931–935.

Shawki, N. (2015). Norm-based Advocacy and Social Change: An analysis of advocacy efforts to end child marriage. *Social Alternatives*, *34*(4), 57–62.

Shiffman, J. (2007). Generating Political Priority for Maternal Mortality Reduction in 5 Developing Countries. *American Journal of Public Health*, *97*(5), 796–803.

Shiffman, J., Kunnuji, M., Shawar, Y. R., & Robinson, R. S. (2018). International norms and the politics of sexuality education in Nigeria. *Globalization and Health*, *14*(1).

Shiffman, J., & Smith, S. (2007). Generation of political priority for global health initiatives: A framework and case study of maternal mortality. *Health Policy*, *370*, 10.

Siddiqi, M., & Greene, M. E. (2022). Mapping the Field of Child Marriage: Evidence, Gaps, and Future Directions From a Large-Scale Systematic Scoping Review, 2000–2019. *Journal of Adolescent Health*, *70*(3), S9–S16. https://doi.org/10.1016/j.jadohealth.2021.09.020

Ssempala, R., Ssebulime, K., & Twinoburyo, E. (2020). Uganda's experience with debt and economic growth: An empirical analysis of the effect of public debt on economic growth—1980–2016. *Journal of Economic Structures*, *9*(1), 48.

Ssewamala, F. M., Wang, J. S.-H., Karimli, L., & Nabunya, P. (2011). Strengthening Universal Primary Education in Uganda: The potential role of an asset-based development policy. *International Journal of Educational Development*, *31*(5), 472–477.

Svanemyr, J., Chandra-Mouli, V., Christiansen, C. S., & Mbizvo, M. (2012). Preventing child marriages: First international day of the girl child "my life, my right, end child marriage." *Reproductive Health*, *9*(1), 31. https://doi.org/10.1186/1742-4755-9-31

Uganda Bureau of Statistics (UBOS) and Macro International Inc. (2007). Uganda Demographic and Health Survey 2006. Calverton, Maryland, USA: UBOS and Macro International Inc.

UBOS and ICF. (2018). Uganda Demographic and Health Survey 2016. Kampala, Uganda and Rockville, Maryland, USA: UBOS and ICF.

UBOS & UNICEF (2018) Going beyond Monetary Poverty: Uganda's Multidimensional Poverty Profile. UNICEF Uganda.

Uganda Children Amendment Act (2016). "The Children (Amendment) Act, 2016." The Republic of Uganda.

UNFPA & UNICEF. (2019). *Joint Evaluation Report: UNFPA-UNICEF Global Programme to Accelerate Action to End Child Marriage*. New York, NY.

UNICEF. (2001). *Early Marriage: Child Spouses* (Innocenti Digest No. 7). https://www.unicef-irc.org/publications/291-early-marriage-child-spouses.html

UNICEF. (2005). *Early marriage: A harmful traditional practice : a statistical exploration*. UNICEF.

UNICEF. (2018). *Child Marriage: Latest trends and future prospects*. UNICEF. https://data.unicef.org/resources/child-marriage-latest-trends-and-future-prospects/

UNICEF. (2022). Child Marriage Database. Last updated May 2022. UNICEF. Retrieved from: https://data.unicef.org/topic/child-protection/child-marriage/

Vilán, A. (2022). The evolution of the global movement to end child marriage. *Journal of Human Rights*, *21*(2), 227–244. https://doi.org/10.1080/14754835.2022.2030208

VOW for Girls. (2022). About VOW for Girls. Retrieved from: https://vowforgirls.org/about/

Walker, D. (2017, January 17). *This Dutch Princess Has Devoted Herself to Ending the Scourge of Child Marriage*. Town & Country.

Wodon, Q., Savadogo, A., Yedan, A., Edmeades, J., Kes, A., John, N., Murithi, L., Steinhaus, M., & Petroni, S. (2017). *Economic Impacts of Child Marriage: Global Synthesis Report* (p. 99). ICRW.

World Bank. (2017). *Accelerating Uganda's Development: Ending Child Marriage, Educating Girls.* Uganda Economic Update: 10th Edition. Washington, D.C

World Bank. (2020). *Investing in Uganda's Youth.* Uganda Economic Update: 16th Edition Washington, D.C.

CHAPTER 1 APPENDIX 1: TABLES AND FIGURES

Table 1 | Shiffman & Smith's Determinants of Political Priority for Global Initiatives

Dimension	Explanation	The sub-elements shaping the determinant
ACTOR POWER	Strength of individuals and organisations concerned with the issue	1. **Political community cohesion**: Degree of coalescence among the network of individuals and organisations that are involved with the issue 2. **Leadership**: Presence of individuals capable of uniting the policy community and acknowledged as strong champions for the cause 3. **Guiding institutions**: Effectiveness of organisations or coordinating mechanisms with a mandate to lead the initiative 4. **Civil society mobilization**: Extent to which grassroots organisations have mobilized to pressure international and national political authorities to address the problem
POLITICAL CONTEXTS	Environments in which actors operate	5. **Policy windows**: Political moments when global conditions align favourably for an issue, presenting opportunities for advocates to influence decisionmakers 6. **Global governance structure**: Degree to which norms and insti operating in a sector provide a platform for effective collective a
IDEAS	Ways in which those involved with the issue understand and portray it	7. **Internal frame**: Degree to which the policy community agrees on the definition of, causes of, and solutions to the problem 8. **External frame**: Public portrayals of the issue in ways that resonate with external audiences, especially the political leaders who control resources
ISSUE TRAITS	Features of the problem	9. **Credible indicators**: Clear measures that show the severity of the problem and that can be used to monitor progress 10. **Severity**: Size of the burden relative to other problems, as indicated by objective measures such as mortality levels 11. **Effective interventions**: Extent to which proposed means of addressing the problem are clearly explained, cost effective, backed by evidence, simple to implement, and inexpensive

(*Adapted from:* Shiffman, J., & Smith, S. (2007). Generation of political priority for global health initiatives: A framework and case study of maternal mortality. *Health Policy*, *370*, 10.)

Table 2 | Summary of four document source categories, by document type, sources and content of interest

Source category	Document sources	Content of interest	Document numbers
1. Primary documents, reports and press releases from donors, INGOs, and Ugandan government on child marriage policies and advocacy	• **Gov Ministries:** Ministry of Gender, Labour and Social Development; Ministry of Education and Sports; Ministry of Health • **Donors:** USAID, Gates Foundation, Ford Foundation • **INGOs and CSOs:** Girls not Brides; UNICEF; DREAMS; Plan International; Straight Talk Foundation; Raising Voices; Joy for Children Uganda; UNFPA and UNICEF program to end child marriage • **Laws:** Uganda law libraries; Uganda Legal Information Institute (ULII)	• Stakeholder / actor power • Internal and external language/frame • Political context • Issue characteristics • Funding streams • Program, policy and advocacy priorities	• 41 documents (2010 - 2021)
2. Technical reports and peer-reviewed articles on program implementation, evaluation and research in Uganda	• **Database engines:** ProQuest, Web of Science, Social Sciences Index, and World Health Organization (WHO) databases, EBSCO host, Google Scholar • **Other INGO websites:** Population Council, ICRW, Save the Children, Plan International	• Stakeholder / actor power • Internal and external language/frame • Issue characteristics • Research and program priorities	• 24 papers (2009 - 2021)
3. Uganda newspaper archives	• ProQuest search of Ugandan newspapers: Daily Monito, New Vision and The Observer	• External language/frame • Issue characteristics • Social dialogue	• 73 news articles (2013 - 2021)

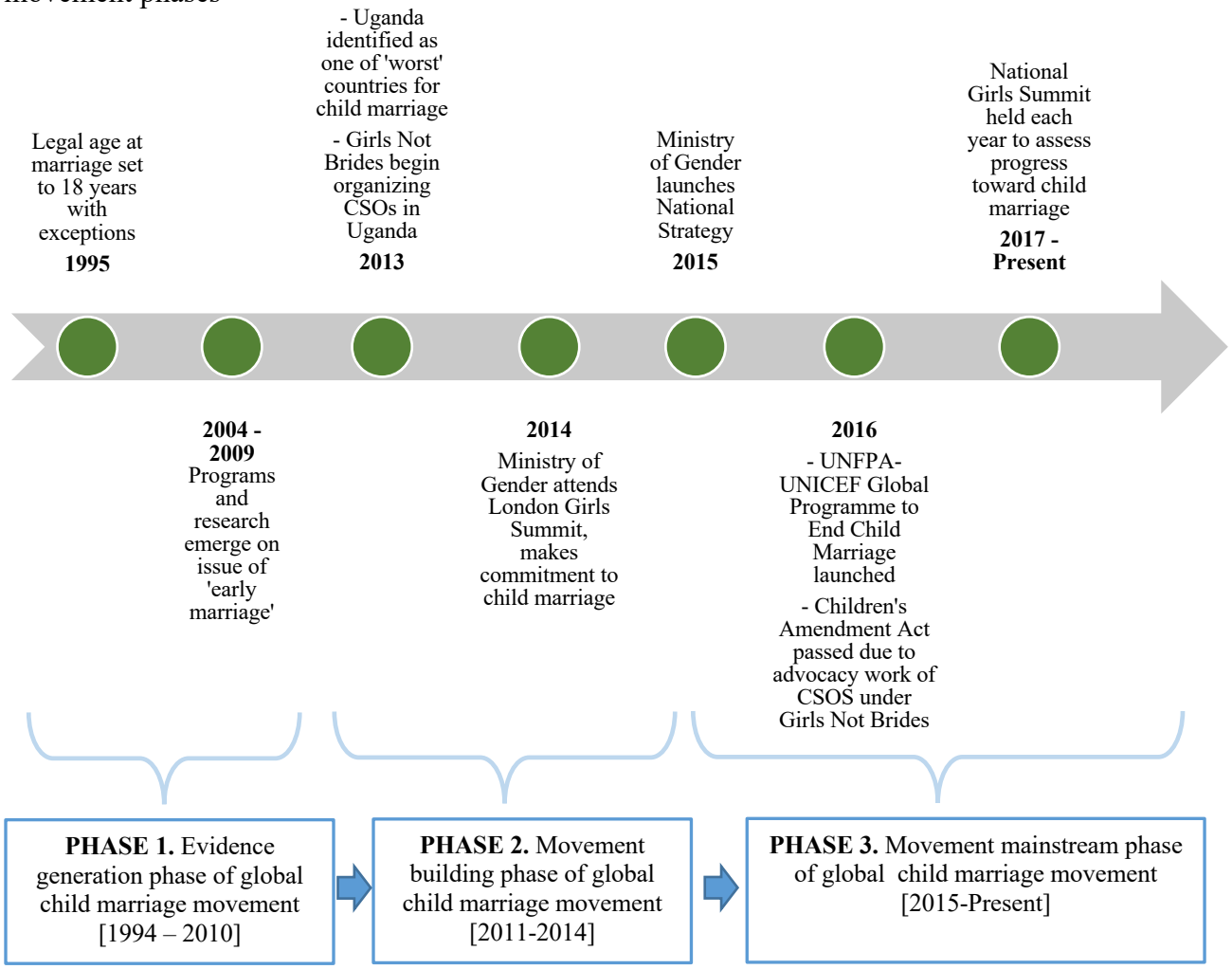
Table 3 | Sample of key informant participants (n=20)

Key informant sector	Ugandan key informants	Global key informants
Academia	2	2
Civil society organization (CSO)	4	--
Funders	--	2
Government ministries	2	--
International non-governmental organization (INGO)	1	3
Multilateral (UN) organizations	1	3
TOTAL	**10**	**10**

Table 4 | Political determinants of global child marriage efforts, over time

	PHASE 1. Evidence generation about the girl child [1994 - 2010]	PHASE 2. Policy momentum and community-building [2011 – 2014]	PHASE 3. Movement mainstreaming [2015-Present]
Actor power	•	• **Actor power**: Girls Not Brides is created by The Elders at the 2011 in collaboration with civil society organizations (CSOs) • **Political community cohesion**: Donors and funders make public commitments to end child marriage. On International Day of the Girl Child event, Ford foundation commits to five-year $25 million commitment to help end. At annual Clinton Global initiative in 2013, stakeholders came together—including The Elders, the NoVo Foundation and Girls not Brides—to rededicate and recommit efforts to ending child marriage is a global priority. • **Civil society mobilisation**: Girls Not Brides begins to bring together different CSOs and activists through national memberships and partnerships to focus on the issue of child marriage • **Guiding institutions**: World Health Organization (WHO), UNDP, UNFPA, UNICEF, World Bank and Girls Not Brides organize a global meeting in 2013 to identify research gaps and set priorities for research.	• **Civil society mobilisation**: Increased funding and mobilization toward more grassroots organizations (through Girls Not Brides) New partnerships leveraged with private sector starting in 2019 – including VOW, which partners with US wedding industry and solicits individual donations to support the Girls First Fund (GFF), which brings these financial investments to grassroots CSOs tackling child marriage • **Guiding institutions**: WHO, UNFPA, UNICEF and Girls Not Brides convene a progress review meeting of experts in 2019 to review progress in addressing research priorities identified in WHO, UNICEF and Girls Not Brides meeting in 2013 and identify key priority areas for future research.
Political context	• **Global governance structure**: Stronger focus on the 'girl child' as part of international development efforts. Child marriage research evolves from longstanding efforts to focus on women and girl-centered development.	• **Policy window**: International Day of the Girl Child, marked annually be UN member countries, observes the issue of child marriage for the first time in 2012, building momentum toward child marriage • **Policy window**: The London Girls Summit, hosted by UK government and UNICEF helped secure funding for CEFM and FGM. The summit aims at mobilizing domestic and international efforts to end Female Genital Mutilation (FGM) and child, early and forced marriage (CEFM) within a generation. UNFPA-UNICEF Global Programme to End Child Marriage announced then, with UK committing Shs110 billion for new multicountry programme in 12 countries, including Uganda	• **Global governance structure**: "Ending" child marriage incorporated into the Sustainable Development Goals (SDGs) in 2015. GnB plays a key role in influencing the UN to include CM in SDG Target 5.3 which aims to eliminate all harmful practices, such as child, early and forced marriage and female genital mutilations by 2030 • **Global governance structure**: UN Resolution 71/175 on Child, Early and Forced Marriage adopted by UN General Assembly in 2016
Ideas	• **Internal frame**: Term 'child marriage' coined in mid-2000s and picked up by advocates and researchers, but both 'early' and 'child marriage' terminologies still used.	• **External frame**: Child marriage becomes global issue and terminology of 'child marriage' more widely used from 2011 onward.	• **Internal and external frame**: Terminology of 'child marriage' persists, but debates over best terminology are on-going. New terminologies emerge, including "Child, Early and Forced Marriage (CEFM).
Issue characteristics	• **Severity and credible indicators**: Research and comparative prevalence indicators on child marriage grows, including "Early Marriage: Child Spouses" (UNICEF, 2001); "Too Young to Wed" (ICRW, 2003); "Early Marriage: A harmful traditional practice (UNICEF, 2005).	• **Severity and effective interventions**: Key evidence published including "Marrying too Young" report (UNFPA, 2012) and "What Works to Prevent Child Marriage: A Review of the Evidence" (Lee-Rife, Malhotra, Warner & Glinksi, 2012) – first review of child marriage interventions	• **Effective interventions**: UNFPA-UNICEF Global Programme to End Child Marriage launched as a large scale 15 year global project, targeting 12 'hot spot' countries including Uganda.

Figure 1 | Timeline of child marriage policy events in Uganda, relative to global child marriage movement phases



CHAPTER 1 APPENDIX 2: INTERVIEW TOOLS

INTERVIEW GUIDE FOR UGANDAN EXPERTS WORKING ON CHILD MARRIAGE:

I. Participant's background and work with child marriage in Uganda:

1. I'd like to start off by asking how you got involved with child marriage work – how and when did you first start working on child marriage?
2. What sorts of issues (related to child marriage) were you working on then? How have these issues changed or stayed the same up until now?

II. Actors and political context behind child marriage in Uganda:

3. Why do you think the issue of child marriage has become important in this moment in time in Uganda? (*Probe*: what might be some political and social motivations to take up the issue now?)
4. What has been the role of different actors – from donors to INGOs, government actors and civil society organizations – in moving child marriage work forward in Uganda? (*Probe:* What has worked well and what has been challenging in these collaborations?)
5. Are there any key child marriage events or milestones that stick out to you as being particularly important or significant?
6. What challenges or barriers remain in advancing child marriage work in Uganda?
7. What other factors do you think have contributed toward the issue of child marriage becoming a priority in Uganda? (*Probe:* any specific events, policies, data, etc).
8. In your opinion, how similar or different is the issue of child marriage from other adolescent SRH issues in Uganda? (*Probe:* for example, the issue of teenage pregnancies?

III. Ideas and issue characteristics about child marriage in Uganda:

9. What are your thoughts about the terminology 'child marriage'? In comparison to other terminologies such as 'early' or 'child, early and forced marriage'?
10. Based on your expertise, where do you think this terminology of 'child marriage' comes from? (*Probe*: In your opinion, what ideologies, values or norms lie behind this terminology?)
11. In what ways do you think there is agreement or disagreement about the issue of child marriage between international, Ugandan and community actors? (*Probe:* For example, in the case of child marriage versus forced marriage?)
12. What has been the role of data and research, if at all, in driving child marriage work? (Probe: In what ways has this been positive or negative?)
13. In your opinion, how well has the Ugandan government been able to implement different policies and programs related to child marriage?

IV. Wrap-up:

14. If someone asked you to share the unfiltered or untold story of child marriage work in Uganda -- what would be the story or point you would want to tell?
15. Looking at the future, where do you see the work of child marriage moving toward?
16. Are there any other resources or actors you recommend I reach out related to the topic of child marriage?
17. Anything else you'd like to share with me today that I haven't specifically asked about?

INTERVIEW GUIDE FOR GLOBAL ACTORS WORKING ON CHILD MARRIAGE:

I. Participant's background and work with global child marriage efforts:

1. I'd like to start off by asking how you got involved with child marriage work – how and when did you first start working on child marriage?
2. What sorts of issues (related to child marriage) were you working on then? How have these issues changed or stayed the same up until now?

II. Actors and political context behind global child marriage efforts:

3. Why do you think the issue of marriage has become important in this moment in time?
4. What has been the role of different actors and guiding institutions – from donors to INGOs, government actors and civil society organizations – in moving child marriage work forward? (*Probe:* What has worked well and what has been challenging in these collaborations?)
5. Are there any key child marriage events or milestones that stick out to you as being particularly important or significant?
6. What challenges or barriers remain in advancing child marriage work globally?
7. What other factors do you think have contributed toward the push of child marriage as a global movement and political priority? (*Probe*: any specific events, policies, data, etc).
8. In your opinion, what sets the issue and movement of child marriage apart from other adolescent SRH issues? (*Probe:* for example, the issue of teenage pregnancies?

III. Ideas and issue characteristics about global child marriage efforts:

9. What are your thoughts about the terminology 'child marriage'? In comparison to other terminologies such as 'early' or 'child, early and forced marriage'?
10. Based on your expertise, where does this terminology of 'child marriage' come from? (*Probe*: In your opinion, what ideologies, values or norms lie behind this terminology?)

11. In what ways do you think there is agreement or disagreement about the issue of child marriage between international, national and community actors? (*Probe:* For example, in the case of child marriage versus forced marriage?)
12. What has been the role of data and research, if at all, in driving child marriage work? *(Probe:* In what ways has this been positive or negative?)
13. In your experience, how well have national governments been able to implement different policies and programs related to child marriage?

IV. Wrap-up:

14. If someone asked you to share the unfiltered or untold story of global child marriage efforts -- what would be the one story or point you would want to tell?
15. Looking at the future, where do you see the work of child marriage moving toward?
16. Are there any other resources or actors you recommend I reach out related to the topic of child marriage?
17. Anything else you'd like to share with me today that I haven't specifically asked about?

Chapter 2: "What's driving adolescent marriage decline in southcentral Uganda? Understanding the role of adolescent pregnancies and social determinants"

Introduction

Child marriage – defined as a formal or informal union before 18 years – affects both boys and girls, but disproportionally affects girls. Globally, 19% of women 20-24 years old report being married before age 18 (UNICEF, 2022). Girls who marry before 18 years are at increased risk of maternal mortality and birth complications, intimate partner violence (IPV), and intergenerational poverty (Clark, 2004; Nour, 2009; Otoo-Oyortey & Pobi, 2003; UNICEF, 2018; Wodon et al., 2017). Given these adverse outcomes, adolescent marriage is recognized as a human rights violation under a number of international treaties (Nour, 2009).

Globally, adolescent marriage is on a downward trend, but regional declines have been uneven. Between 2008 to 2019, the proportion of women 20 to 24 years old who were married before 18 years decreased from 25% to 19%, with the largest reductions in South Asia (UNICEF, 2018; 2022). To-date, adolescent marriage is most prevalent in West and Central Africa (37%), followed by Eastern and Southern Africa (32%) and South Asia (28%; UNICEF, 2022). Several East African countries have made significant strides in reducing adolescent marriage prevalence over the last decade, including Ethiopia, Rwanda, and Uganda.

To-date, substantial evidence exists about the protective effect of different social determinants – such as education, socio-economic status (SES) and family influences – on lower risk of adolescent marriage in different contexts (Bhan et al., 2019; Raj et al., 2014; Wodon et al., 2016). However, we have less knowledge about how broader structural and social changes might be affecting adolescent marriages, despite the significant global prevalence declines. In recent years,

global researchers, practitioners, and policy-makers have identified several research gaps related to adolescent marriage. First, there is limited understanding of how macro-level factors – such as economic and educational improvements at a societal level – might be driving large-scale adolescent marriage declines; second, there are scant analyses that have adequately teased out the bidirectional relationship between teenage pregnancy and marriage (Plesons et al., 2021), including whether teenage pregnancies contribute to adolescent marriages, or whether adolescent marriages perpetuate teenage pregnancies.

Using close to 20 years' worth of data, this research provides key insights into the macro- and micro-level drivers of adolescent marriage among adolescent girls in southcentral Uganda. I combine prediction, causal inference, and decomposition methods to assess the extent that education, SES, orphanhood, and teenage pregnancies contributed to marriage declines among 15 to 17 year old girls over time. I use repeat cross-sectional data from the Rakai Community Cohort Study (RCCS) from 1999 to 2018 to assess whether education level, SES and orphanhood are related to early marriage and pregnancy declines among 15 to 17 year old girls in Southcentral Uganda. I then use longitudinal panel data from a sub-set of girls followed over two or more survey rounds in the RCCS to assess the mediating role of teenage pregnancies in explaining the relationship between higher education levels and lower risk of adolescent marriage.

Social determinants, adolescent marriage, and adolescent pregnancy

The drivers of adolescent marriage are complex, inter-related and context-dependent; yet universally sustained by social and gender inequities (Raj, 2010). Risk factors for adolescent marriage include structural conditions such as poverty and poor access to schooling, social inequalities, adverse family circumstances such as orphanhood, and social and gender norms about ideal marriage age (Chae, 2013; Jain & Kurz, 2007; Mathur et al., 2003). Although adolescent

marriage affects both boys and girls, adolescent marriage is a gendered pattern that adversely affects girls and young women. Often, young women enter marriage early due to limited educational and economic opportunities – and often because of teenage pregnancy. While marriage during adolescence can result in an adolescent pregnancy, evidence from Uganda suggests that adolescent pregnancies may be driving adolescent marriage (Bantebya et al., 2014; Stoebenau, 2015).

Teenage pregnancies and adolescent marriages are closely associated and driven by similar social determinants. Girls' education is a key protective factor against both adolescent marriage and adolescent pregnancy (Mathur et al., 2003; Patton et al., 2016). Specifically, access to education and higher educational attainment are consistently associated with later age at marriage (Jain & Kurz, 2007; Wodon et al., 2017) and lower rates of teenage pregnancy (Patton et al., 2016). In Uganda, research suggests that girls are at high risk of dropping out particularly during upper primary school and end of primary school examinations, due to parents' inability to pay for school fees and supplies, unwanted pregnancies, and/or arranged marriages (Ahaibwe et al., 2018; Bantebya et al., 2014). As such, keeping girls in school, and particularly secondary school, is considered one of the most effective strategies to delay age at marriage and pregnancy for young women.

Girls' education is widely credited as one of the most significant protective factors against adolescent marriage in prior global research (Jain & Kurz, 2007; Wodon et al., 2017). Yet, there are various mechanisms underlying the relationship between education and adolescent marriage. In contexts where parents have strong decision-making powers over the marriage process, parents may choose to prioritize their daughter's education and delay her marriage until school completion. Other studies suggest that the agency of girls increases the longer they are in school, allowing them

greater choice in the timing of their marriage (Jain & Kurz, 2007). Relatedly, education influences girls' life aspirations, while giving them needed negotiation skills to navigate and choose their life goals, including future educational, professional and partnership choices (Wodon et al., 2017). In contexts like Uganda, an early and unwanted pregnancy often curtails girls' education and future life aspirations, resulting in an unexpected marriage entry (Bantebya et al., 2014; Stoebenau, 2015; Wodon et al., 2016).

The relationship between education and adolescent marriage is often confounded and mediated by other social factors. Lower household socio-economic status, coupled with lack of economic opportunities, may drive young girls out of school and into adolescent marriages. In Uganda, for example, girls from poorer households are more likely to drop out of school due to financial constraints. Once leaving school, girls are then faced with the choice to either stay idle at home or enter a marital union. With the lack of viable work options, girls from poorer households are thus faced with an "either/or" scenario between marriage or staying in their childhood home (Wodon et al., 2017). In this situation, girls and their families may choose marriage as an avenue to ensure girls' future financial and social security (Lee-Rife et al., 2012). Lastly, marriage may be used by families as a mechanism of social protection—and in particular, to shield girls from social sanctions arising from an unplanned or unexpected adolescent pregnancy (Bantebya et al., 2014; Greene & Stiefvater, 2019).

At the national level, Uganda has experienced significant economic growth and implemented policies that have contributed to young people's improved educational, marital and life outcomes, particularly for girls. In 1995, the legal age at marriage was raised to 18 years for men and women under the Ugandan constitution, although exceptions were allowed with parental consent. Under Uganda's Children Act Amendment, the minimum legal age of marriage was subsequently set to

18 years for both boys and girls with no exceptions or parental consent (2016). In 1997, the Ugandan government implemented a universal primary education (UPE) policy, followed by universal secondary education (USE) in 2007. These policies reduced school fees and boosted school enrollment for girls, but inadvertently lowered education quality due to higher student enrollments and teacher shortages (Deininger, 2003). Multiple studies have since demonstrated the impact of the UPE policy on positive outcomes for Ugandan girls, including increased years of education and delayed age at marriage (Deininger, 2003). Over the same time, Uganda experienced significant economic growth and poverty reduction, with the proportion of those living in poverty declining from 56% in 1992 to 21% in 2017 (UBOS & UNICEF, 2018). During this period, marriage under 18 years among 20 to 24 year old women dropped from 46% to 34% in just 10 years, from 2006 to 2016 (UBOS 2007; 2017). Furthering this evidence base, this analysis more deeply explores the causal mechanisms behind higher education and lower adolescent marriage risk, and in particular the role of adolescent pregnancies in potentially explaining this relationship in southcentral Uganda.

The context of Rakai, in southcentral Uganda, provides a unique context to further explore the relationship between improvements in social determinants, and pregnancy and marriage declines. Rakai, Uganda, has been the center of HIV research, treatment and prevention efforts for the last 30 years, following the start of the HIV epidemic in the region in the late 1980s. Research in Rakai shows rising socioeconomic status, increasing school enrollment, and improving adolescent sexual and reproductive health (SRH) outcomes, including significant declines in adolescent marriages and pregnancies over the past two decades (Santelli et al., 2019). The region is also home to the Rakai Health Sciences Program (RHSP) and the RCCS, a population-based, open-cohort survey that has collected demographic and SRH-related data from participating households since 1994.

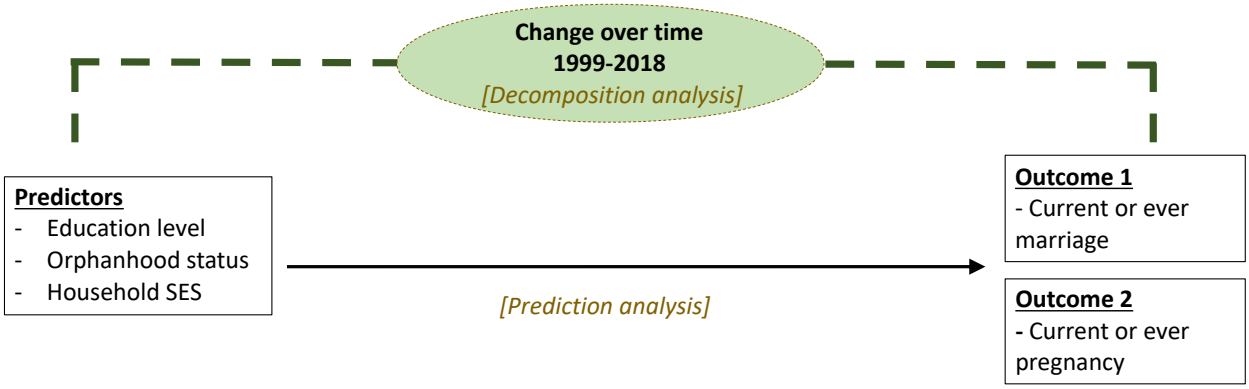
Using this RCCS data, I explore the relationship between social determinants, pregnancy, and marriage through two sets of analyses. Using prediction and decomposition analyses, I first assess the extent to which social determinants – including education, SES, and orphanhood – are associated with declines in adolescent marriage and pregnancy among 15 to 17 year old girls between 1999 and 2018. I use 13 survey rounds from 1999 to 2018 since these survey rounds consistently included the variables of interest for this analysis. Using individual-level panel data, I then investigate the extent to which adolescent pregnancy might explain the causal relationship between higher educational attainment and lower risk of girls' adolescent marriage during this same period. Coupled together, these analyses advance existing research on adolescent marriage by 1. Identifying the social factors associated with long-term marriage change among adolescents, and; 2. Untangling the complex relationship between education, pregnancy, and marriage among adolescent girls in the context of Rakai, Uganda.

Conceptual models relating social determinants, adolescent pregnancy, and marriage

My analyses are guided by the conceptual models in Figures 1 and 2, respectively. In Figure 1, I show the conceptual model guiding the prediction and decomposition analyses. The bottom half of the figure shows the prediction analysis using repeat cross-sectional data, where I examine the extent to which three social determinants – orphanhood, SES, and education – predict two separate outcomes: adolescent pregnancy and adolescent marriage. Based on existing literature, I assume that girls with higher education, higher SES and who are not orphans will have lower risks of marriage and pregnancy, respectively, and that these associations will remain constant over time. As the predictors of interest may be strongly related with one another (e.g., girls with higher education are also more likely to come from higher SES household and not have experienced

orphanhood), I conduct exploratory analyses to assess the inter-relationship among all three variables.

Figure 1 | Conceptual model relating social determinants with adolescent pregnancy and adolescent marriage for 15 to 17 year old girls, Rakai, Uganda (using repeated cross-sectional data)

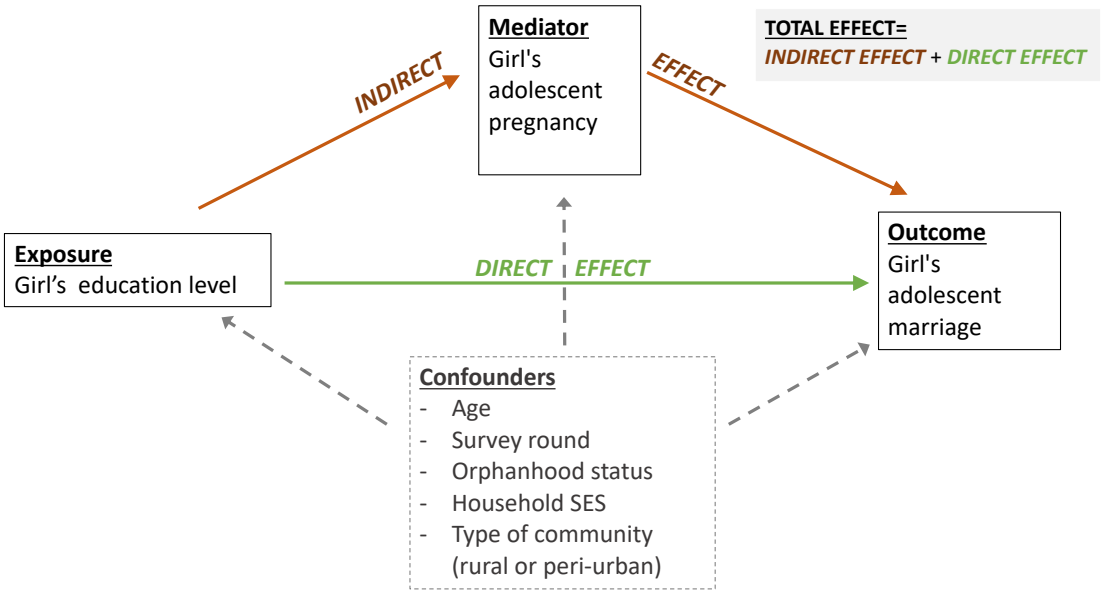


For the decomposition analyses using repeat cross-sectional data, I show change over time (1999-2018) at the top of the figure to assess the extent that changes in the three social determinants, coupled with adolescent pregnancy, have contributed to declines in adolescent marriage between 1999 and 2018.

Next, Figure 2 isolates the hypothesized causal relationship between education, pregnancy, and marriage at the individual level. Among the three social determinants, I expect education to be a stronger predictor of girls' marriage and pregnancy, and thus include education as the exposure variable in the model (rather than SES and orphanhood). I assume an inverse direct relationship between higher education levels and adolescent marriage (that is, girls with higher educational attainment will have lower risk of marriage than girls with lower educational attainment). The green arrow below represents the ***direct effect*** of education on marriage. However, I hypothesize that girls' premarital adolescent pregnancy following school might partially explain (or mediate) the relationship between girls' higher education and girls' lower risk of marriage. The brown arrow

below thus represents the ***indirect effect*** of education levels on marriage that works through lower rates of adolescent pregnancies. The ***total effect*** of higher education and lower pregnancy rates on marriage risk is reflected by combining both the green arrow (direct effect) and brown arrows (indirect effect) below. As represented by the grey dotted arrows, I include several confounders that are associated with the education exposure, pregnancy mediator and marriage outcome; these include girls' age, their interview survey round, orphanhood status, household SES and the type of community that they reside in (rural or peri-urban).

Figure 2 | Conceptual model showing causal relationship between education exposure, pregnancy mediator and adolescent marriage outcome at the individual level, Rakai, Uganda (using individual panel data)



Taken together, the conceptual models and analyses test the following hypotheses:

(1.1) Higher education, higher SES, and lower rates of orphanhood are strongly associated with both lower risk of marriage and pregnancy, and these relationships are consistent while adjusting for time *(conceptual model 1, prediction analysis)*

(1.2.) Increases in girls' education levels and socio-economic status, as well as decreases in orphanhood and adolescent pregnancies, have contributed to declining trends in adolescent marriage over time *(conceptual model 1; decomposition analysis)*

(2) At the individual level, adolescent pregnancies partially explain the protective effect of girls' higher education levels on their lower risk of marriage, while adjusting for time *(conceptual model 2; causal mediation analysis)*

To assess these hypotheses, I conducted bivariate and multivariable logistic regression modeling to examine the relationship between social determinants – education, socio-economic status (SES), and orphanhood – and two outcomes: marriage and pregnancy (n=6,998), while adjusting for time, age, and other confounders *(hypothesis 1.1).* Decomposition analyses were then conducted to understand the contribution of different social determinants and pregnancy changes on declining adolescent marriage between 1999 and 2018 *(hypothesis 1.2).* Lastly, I conducted causal mediation analysis using panel data from girls who participated in at least two surveys to assess whether pregnancy mediated the relationship between education and marriage (n=1,183) *(hypothesis 2).*

Methods

Study setting and population

Data were drawn from 13 surveys (1999-2018) of the RCCS study, a population-based, open cohort study in the region of Rakai, Uganda. Since 1994, RCCS has conducted 18 survey rounds with ~14,000 women and men between 15-49 years, every 12-18 months. The RCCS includes approximately 6,500 to 9,500 adolescents and young adults per study round. As an open cohort, newly age-eligible 15-year old's and recent in-migrants are enrolled at each round.

Each RCCS survey round includes a household census, with data provided by the head of household. Household members are enumerated by age, sex, relationship to the head of household, duration of residence in the household, and the status of each parent for all household members (co-resident, alive but not co-resident, or deceased). Two to four weeks after the census, consenting residents are interviewed and asked to provide blood for HIV and STI testing. RCCS participation rates are ~95% of those present at time of survey; ~25% of censused residents are absent at each round - for work, school or other travel (Grabowski et al., 2017). Eligible individuals (age 15-49 years) are interviewed about SRH and HIV risk, and offered HIV counseling and testing on the day of interview. Data collection is monitored by field supervisors and quality control staff to ensure data integrity.

Analysis overview and roadmap

Table 1 below provides a summary of the analytic approach, sample and associated results tables and figures for this paper. All the analyses described below use data from 1999 to 2018 (which correspond to survey rounds 6 through 18 in the RCCS).

Table 1 | Roadmap of methods, analytic sample, and results tables and figures

Analytical approach	**Analytic sample**	**Results Tables and Figures**
• Univariate and bivariate descriptive trends	• Repeat cross-sectional data	• Table 2 • Figures 3, 4, 5, 6
• Prediction analysis *(Figure 1; Conceptual Model 1)*	• Repeat cross-sectional data	• Tables 3, 4
• Decomposition analysis *(Figure 1; Conceptual Model 1)*	• Repeat cross-sectional data	• Table 5
• Causal mediation analysis *(Figure 2; Conceptual Model 2)*	• Individual panel (closed cohort) data	• Tables 6, 7, 8

The remainder of the methods section provides more details about the sample, measures, and analyses for each of the above approaches.

Analytic sample for prediction and decomposition analyses (Figure 1, conceptual model 1)

For the predictive and decomposition analyses, I included girls 15-17 years old who participated in any of the 13 survey rounds, between 1999 and 2018. I used self-report of marriage from 15-17 year old girls, rather than self-reported age at marriage from 20-24 year old women which is a more commonly used measure of child marriage (UNICEF, 2022). Examining age at first marriage among 20 to 24 year olds across time was not possible since age at first marriage was not consistently measured across all RCCS survey rounds. Therefore, by restricting the sample to 15 to 17 year olds, I was able to determine directly if the girl was ever or currently married at each survey round. The sample included both girls who participated in RCCS at only one survey round (one time observations), and girls who participated in RCCS across multiple survey rounds (repeat observations). As part of a sensitivity analysis, I compared bivariate and multivariable models using both repeat observations (total n=6,998) and one time observations (total n=5,169) but did not find any significant differences between models. As a result, I chose to use repeat observations to increase the statistical power and efficiency of the analyses. Across the 13 survey rounds, the final analytical sample included 6,998 observations from girls aged 15 to 17 years across 30 continuously followed communities.

Analytic sample for the causal mediation analyses (Figure 2, conceptual model 2)

For the causal mediation analyses examining pregnancy as a potential mediator between education and marriage, I constructed a panel (or closed cohort) dataset from observations of 15 to 17 year old girls who were consecutively followed across multiple survey rounds. The construction of a closed cohort from girls who were followed more than once allowed me to isolate

the temporality between pregnancy and marriage events, only focusing on pregnancy non/events that occurred before marriage (rather than pregnancy after marriage). This enabled me to meet the temporality assumption required for mediation analyses in which the exposure and mediator must precede the outcome of interest. I included girls who participated in RCCS in any of the survey rounds from 1999 to 2018. Due to RCCS' open cohort design, adolescents typically stay in the cohort between one to three survey rounds. Of the 5,169 girls who participated in RCCS between 1999 to 2018, approximately 77% participated in one survey round only, 21% in two rounds, 2% in three rounds. To construct the analytic sample, I excluded girls who only participated in one round from the analysis (n=3,986) and included a total of 1,183 girls who participated in 2 to 3 survey rounds between 1999 to 2018.

Measures

The primary outcome of interest for all analyses was current or ever experience of marriage among 15 to 17 year old girls. Adolescent marriage was measured as a binary variable (married or not) and constructed from self-reports of ever or current marriage among girls between 15 to 17 years at each survey round. For the predictive and decomposition analyses, current or ever experience of pregnancy was measured as a binary variable from self-reports of ever or current pregnancy among girls between 15 to 17 years at each survey round. Ever or current pregnancy was not measured during survey round 17 (2015-2016); as a result, this survey round is excluded from multivariable models.

For the individual-level causal mediation analyses, I constructed a pre-marriage pregnancy mediator variable to ensure that any included pregnancy events were those that occurred prior to marriage (rather than after marriage). To do this, I constructed a categorical pregnancy variable from self-reports of ever or current pregnancy, categorizing whether a girl in the dataset had: 1.

Never been pregnant; 2. A pregnancy before marriage (reported in a previous round or as a prior pregnancy in the current round); 3. A pregnancy at the same time as marriage (pregnancy reported in the same survey round as marriage); 4. A pregnancy after marriage (pregnancy reported in a later round); 5. A pregnancy without a marriage, and; 6. A pregnancy and marriage sequence without clear temporality. To isolate the temporality of a pregnancy event before marriage, I then constructed a pre-marriage pregnancy variable (1=pregnant; 0=never pregnant) and excluded any pregnancy events that occurred at the same survey round as marriage (#3), a pregnancy in a survey round after a marriage event (#4); and a pregnancy without clear temporality in relation to marriage (#6).

Across all analyses, social determinants of interest included education level, a household assets-based measure of SES, and orphanhood status (death of one or both biological parents). Girls' educational level is measured categorically according to the highest schooling level reported by respondents at each survey round across three categories of schooling level attainment: 1. Some level of lower primary schooling or lower; 2. Some level of upper primary schooling, and; 3. Some level of lower secondary schooling or higher. Using Santelli and colleagues' asset-based SES approach, SES was measured as a categorical variable (low, low-medium, high-medium, high quartiles), using an asset-based measure of nine household assets (e.g., radio, motorbike) and modern home constructions (e.g., metal or tile roof, cement floors) (2021). Orphanhood status was measured as a categorical variable (not an orphan, maternal orphan, paternal orphan, and double orphan).

Time was measured as a continuous variable according to each of the 13 survey rounds (round 6 – 18). For the predictive and causal mediation analyses, I included potential confounders including age at first interview and type of community. Age is measured as a categorical variable

for 15, 16 and 17 years of age. Community type is measured as either rural, or peri-urban community. Although some variables were collected at the household census level (orphanhood and SES) and community type, all variables were analyzed at the individual level.

Prediction and decomposition analyses (Figure 1, conceptual model 1)

Using repeat cross-sectional data, univariate descriptive analyses were conducted to describe overall sample characteristics, including trends in adolescent marriage, adolescent pregnancy, and social determinants across all survey rounds among 15 to 17 year old girls (Results Table 2; Figures 3 and 4). Bivariate analyses were also used to describe changes over time in marriage by social determinant categories (Results Figure 5). Conditional probability using bivariate logistic modeling was also conducted to assess the probability of marriage given a previous or current pregnancy at each survey round to describe the relationship between pregnancy and marriage more closely over time (Results Figure 6).

Prediction analyses. First, cross-tabulations and logistic regression models were conducted to understand the bivariate associations between: 1. Different social determinants and adolescent marriage; 2. Adolescent pregnancy and adolescent marriage; 3. Other demographic characteristics and adolescent marriage (Results Table 3). To better understand the relationship between different social determinants, I explored the potential direct and indirect relationships between SES, orphanhood, and education by examining the associations of SES and orphanhood on girls' educational levels. Due to repeat observations across survey rounds, I used generalized estimating equation (GEE) with exchangeable correlation for the logistic regression models and adjusted for both age and time, to understand whether associations were consistent over time and across age. Variables that were statistically associated with adolescent marriage below the p=0.20 threshold in bivariate models were included in the final multivariable models. Variables that did not meet

this statistical threshold but were conceptually related to adolescent marriage – for example, whether a girl lives in an urban or rural area - were included in the final models. Following these bivariate analyses, separate multivariable logistic regression models with GEE were conducted to examine the relationship of each social determinant on adolescent pregnancy and adolescent marriage outcomes separately, adjusting for adolescent age, community type and time (Results Table 4). I assumed no significant interactions between the predictors of interest and the time variable, although I did not formally test for interaction between each individual social determinant and time in my analyses.

Decomposition analyses. Multivariable decomposition analyses were conducted to quantify the contribution of social determinants, as well as pregnancy, to the change over time in marriage among 15 to 17 year old girls. Decomposition analyses are commonly used in demographic research to describe population-level processes driving change, but they do not provide information about what *causes* change over time. While decomposition methods do not explain reasons for change, these methods are useful to illuminate patterns behind social change (Eloundou-Enyegue et al., 2021). These methods allow us to understand how changes in a dependent variable (in this case, marriage) can be attributed to changes in each independent variable over time (pregnancy, education, orphanhood, SES, and community type). Among different decomposition methods, regression decomposition uses regression modeling to partition how change in an outcome over time (or in between two groups) can be broken down into explained and unexplained components from the regression estimates. Regression decomposition analyses are conducted through two-stages: 1. Regressing the independent variables on the outcome of interest; 2. Decomposing the difference between 2 groups or (survey rounds) into explained and unexplained components from the regression coefficients.

Using multivariable logistic regression, I first regressed the independent variables - pregnancy, education, orphanhood, SES, and community type - on the adolescent marriage outcome. To examine gradual changes over time, I stratified the models using different survey rounds over time, first showing the difference in marriage over time between survey round 6 (1999) vs. round 18 (2018; Results Table 5). Additional models compared gradual changes in marriage over time, between survey round 6 vs. round 8; then round 8 vs. round 10; round 10 vs. 12; round 12 vs. 14; round 14 vs. 16; and round 16 vs. 18. I also stratified decomposition analyses by age (not adjusting for age; adjusting for age; and 17 year old girls only); but only report the results unadjusted for age in this paper. The second stage of this analysis decomposed the regression coefficients from each model into a part that is 'explained' by changes in the independent variables, and a part that is 'unexplained' or cannot be accounted for by changes in the independent variables. I used a multivariable decomposition package for nonlinear response models ("Fairlie" package in Stata 17; (Fairlie, 2005). The Fairlie technique is an extension of the Blinder-Oaxaca linear decomposition method; Fairlie decomposition can be applied to logistic models and addresses path dependency issues resulting from the ordering of different independent variables in the model (Fairlie, 2005). This method also provides both overall (or aggregate) decomposition results, as well as detailed decomposition results. The latter provides detailed information about the explained contribution of each independent variable in the model to the change in marriage over time.

Causal mediation analysis (Figure 2, conceptual model 2)

I employed a causal mediation framework to assess the underlying mechanism between education, pregnancy, and marriage using panel data from 1,183 girls. Among different causal inference methods, Baron & Kenny's traditional mediation framework (1986) is commonly used to assess the effect of a mediator in explaining the relationship between an exposure and an

outcome. However, this approach has two limitations: 1. It only works when linear regression is used for both mediator and outcome models; 2. It assumes that there is no interaction between exposure and mediator (an assumption that is commonly violated; VanderWeele, 2015). The causal mediation approach addresses both limitations by using a potential outcomes framework with non-linear regression models, and when there is interaction between exposure and mediator. This causal mediation approach decomposes direct and indirect effects into four types of effects:

(1) ***Controlled direct effect*** – The direct effect of the exposure on the outcome, when adjusting for the mediator at the same value for all individuals in the sample (this is the direct effect estimate in the *absence* of exposure and mediator interaction)

(2) ***Natural direct effect*** – The direct effect of the exposure on the outcome, when allowing the mediator value to vary based on the proportion of the mediator among a particular level of exposure (this is the direct effect estimate in the *presence* of exposure and mediator interaction)

(3) ***Natural indirect effect*** – The indirect effect of the exposure on the outcome that works through the mediator, when allowing the mediator value to vary based on the proportion of the mediator among a level of exposure (this is the indirect effect estimate in the *presence* of exposure and mediator interaction)

(4) ***Total effect*** – The total effect of the direct and indirect effect on the outcome. When using a binary mediator and binary outcome, the total effect will be the product of the natural direct effect and natural indirect effects (rather than the sum of direct and indirect effects as in the traditional mediation framework).

Causal mediation analysis is conducted through a two-stage process, first regressing the total and direct effects of the exposure on the outcome, as well as the effect of the exposure on the

mediator. During this stage, a test for interaction between exposure and mediator can be conducted by including an exposure and mediator interaction term in the direct effect model, and then comparing the exposure coefficients between the direct effect model with the interaction term and the direct effect model without the interaction term. Given that the first stage regressions are non-linear, regression coefficients from the total and direct effect models cannot be used to calculate the indirect effect as done in the traditional mediation framework (Baron & Kenny, 1986). Thus, the second causal mediation stage allows us to decompose the regression estimates into a controlled direct effect, natural direct effect, natural indirect effect and total effect from non-linear models (Kohler et al., 2011).

In the first stage of the mediation analyses, I estimated four separate regression models: 1. the **total effect** of the education exposure on the marriage outcome not adjusting for pregnancy and adjusting for other confounders; 2. the **direct effect** of the education exposure on the marriage outcome adjusting for pregnancy and other confounders; 3. the **effect of the education exposure on pregnancy** as an outcome, adjusting for other confounders, and; 4. the direct effect of the education exposure on the marriage outcome, allowing for a **pregnancy and education exposure interaction,** adjusting for other confounders (Results Table 6). Baseline values from the education exposure and confounder variables were included in all models (that is, the baseline value of education, SES, community, age, and survey round). I used the first survey round the individual was enrolled in as their 'baseline' value. I used logistic regression with generalized linear modeling (GLM) for all models. The second stage of the analysis decomposed the regression estimates into controlled direct effects, natural direct effects, natural indirect effects, and total effects. For simplicity of interpretation, I only present the natural direct effect, natural indirect effect, and total effect in the results (Results Table 7). The controlled direct effect is not presented given that the

estimate was almost identical to the natural direct effect estimate. As with the other analyses, I excluded R17 (2015-2016) from these analyses as pregnancy was not measured during this survey round. All analyses were conducted using 'Paramed' package in Stata 17 (Emsley & Liu, 2013).

Causal mediation assumptions and sensitivity analyses

The causal mediation framework requires a strong set of assumptions to obtain natural direct and indirect effects. These assumptions include that: 1. There is no unmeasured exposure and outcome confounding; 2. There is no unmeasured mediator and outcome confounding; 3. There is no unmeasured exposure to mediator confounding; 4. There is no mediator and outcome confounding that is caused by the exposure. As shown in conceptual model 2 (Figure 2), I purposely adjust for variables that may be associated with exposure, mediator, and marriage outcomes (age, survey round, SES, orphanhood, community area); however, there is the possibility that other unmeasured confounders were not captured.

As a result, sensitivity analyses were conducted under different scenarios of unmeasured confounding to assess the robustness of the findings to violations of the above assumptions. I use the e-value technique proposed by Vanderweele and Ding to understand how unmeasured confounding could affect the total, direct and indirect effect estimates (2017). More commonly used in epidemiology, the e-value approach identifies how much uncontrolled confounding there would have to be for the association between an exposure and outcome (or mediator and outcome, or exposure and mediator) to be fully explained by unmeasured confounding. To compute the e-values, I used the "evalue" package in Stata 17 to generate different e-values for the controlled direct effect, natural direct effect, natural indirect effect, and total effect (Linden et al., 2020). These e-values represent the minimum strength of association on the risk-ratio scale that an unmeasured confounder would need to have with the exposure and outcome, or mediator and

outcome, or exposure and mediator, to fully explain away the observed estimate, adjusting for other measured confounders. Four separate e-values are presented for the controlled direct effect, natural direct effect, natural indirect effect, and total effect estimates (Results Table 8).

To address potential measurement biases, I ran separate multivariable models using different exposure and mediator variables. For the pregnancy mediator, I compared mediation models using the pregnancy mediator that *excluded* concurrent pregnancies and marriages (that were reported in the same round), and a pregnancy mediator model that *included* concurrent pregnancies and marriages. Both results yielded consistent results, although the final pregnancy mediator (excluding concurrent pregnancies and marriages) yielded more conservative estimates.

Ethical procedures

Both written minor assent and parental/guardian permission are obtained for unemancipated minors (<18 years) participating in the RCCS; 18+ year-olds and emancipated minors provide their own written informed consent. This study has been approved by the Uganda Virus Research Institute (UVRI) Research and Ethics Committee (REC) and the Uganda National Council for Science and Technology (UNCST), and Institutional Review Board (IRB) at the Columbia University Medical Center in the United States.

Results

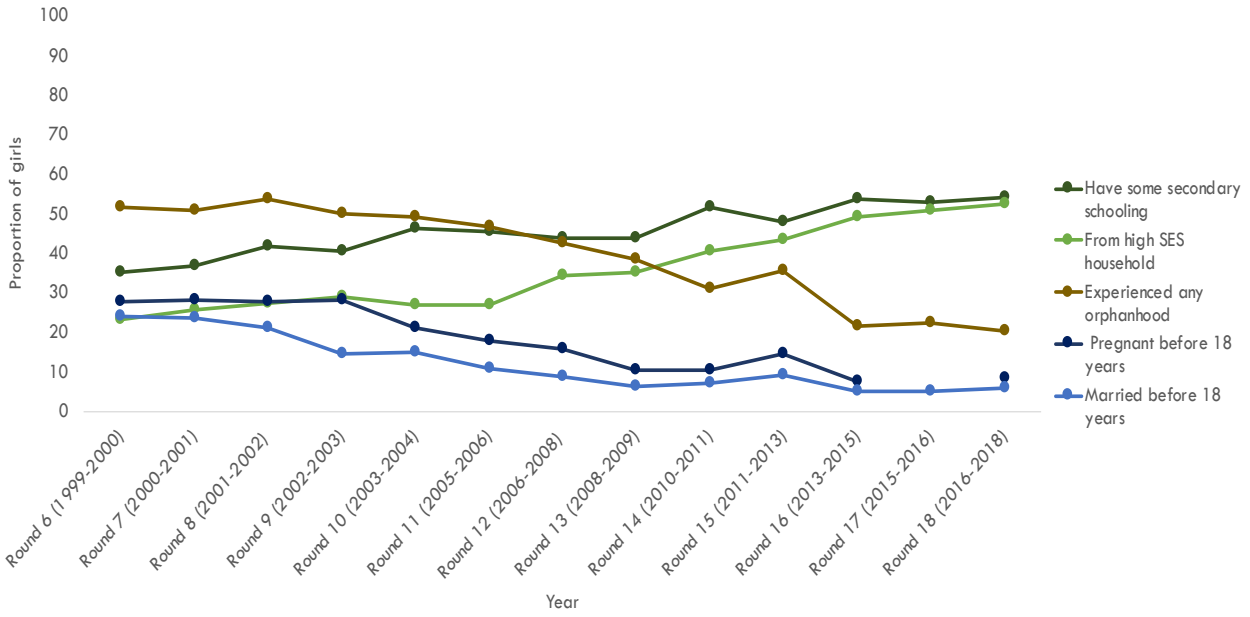
This section presents the following results: 1. Trends and changes in social determinants, adolescent pregnancy, and marriage between 1999 and 2018; 2. The social predictors of adolescent marriage and pregnancy outcomes; 3. Decomposition of social determinants and pregnancy on adolescent marriage declines between 1999 and 2018; and 4. The causal relationship between

education, pregnancy, and adolescent marriage at the individual level. All tables described in this section can be found in the Appendix.

I. Trends and changes in social determinants, pregnancy, and marriage between 1999 and 2018

Trends over time. Table 2 shows trends over time in adolescent marriage, pregnancy, social determinants, and sociodemographic characteristics. Between 1999 to 2018, marriage and pregnancy among 15 to 17 year old girls declined in a parallel trend from 24% to 6%, and 28% to 8%, respectively. Figure 3 below visualizes the social changes happening at the same time of these declines: household SES rose over time, as did secondary school attainment, which rose from 35% in 1999 to 54% in 2018. Rates of orphanhood were high and stable (>50%) before 2004, then declined steadily through 2018 (21%) following the rollout of HIV treatment in the region in 2004.

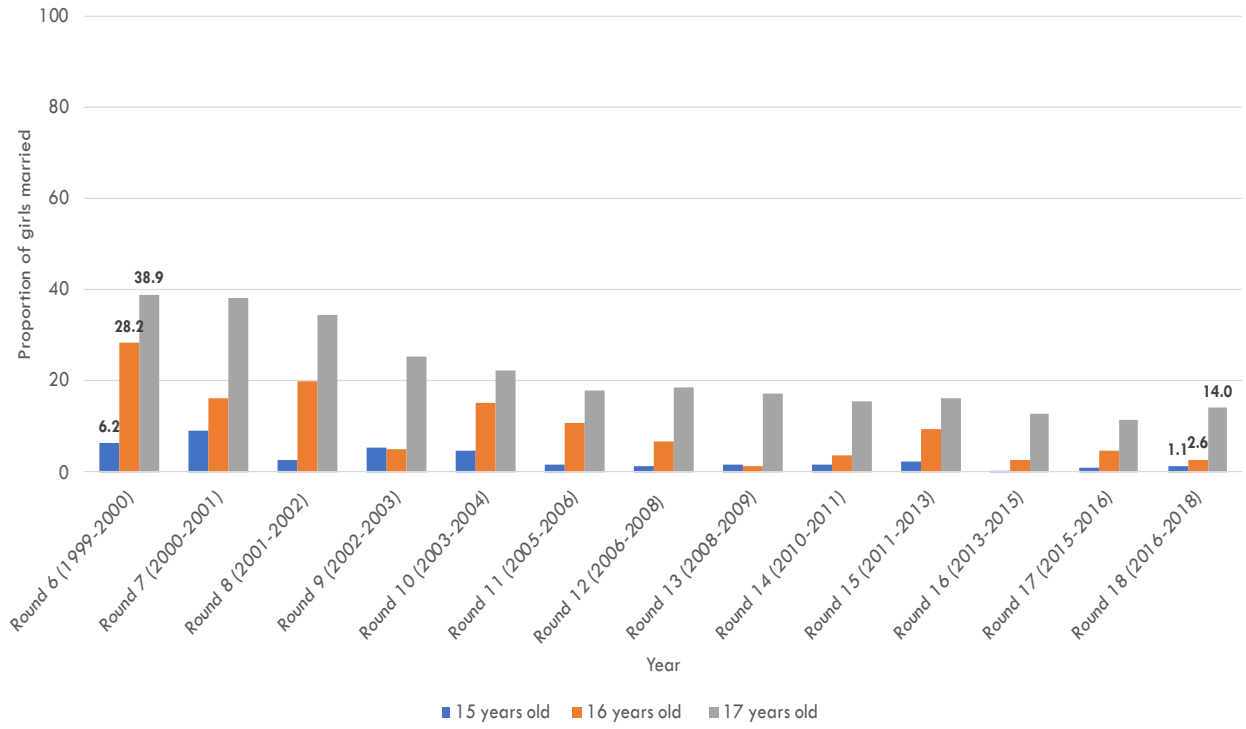
Figure 3 | Marriage, pregnancy, education, orphanhood, and SES among 15 to 17 year olds, 1999-2018 (n=6,998)



As shown in Table 2, the proportion of girls who ever had sex also declined substantially from 62% in 1999 to just 23% in 2018, consistent with declining adolescent pregnancy rates. Interestingly, the proportion of girls currently using at least one method of contraception decreased from 22% to 7%, although this may be due to declining marriage rates over the same period. All changes in pregnancy, marriage, sex initiation and social determinants over time were statistically significant (p-value for trend <0.0001).

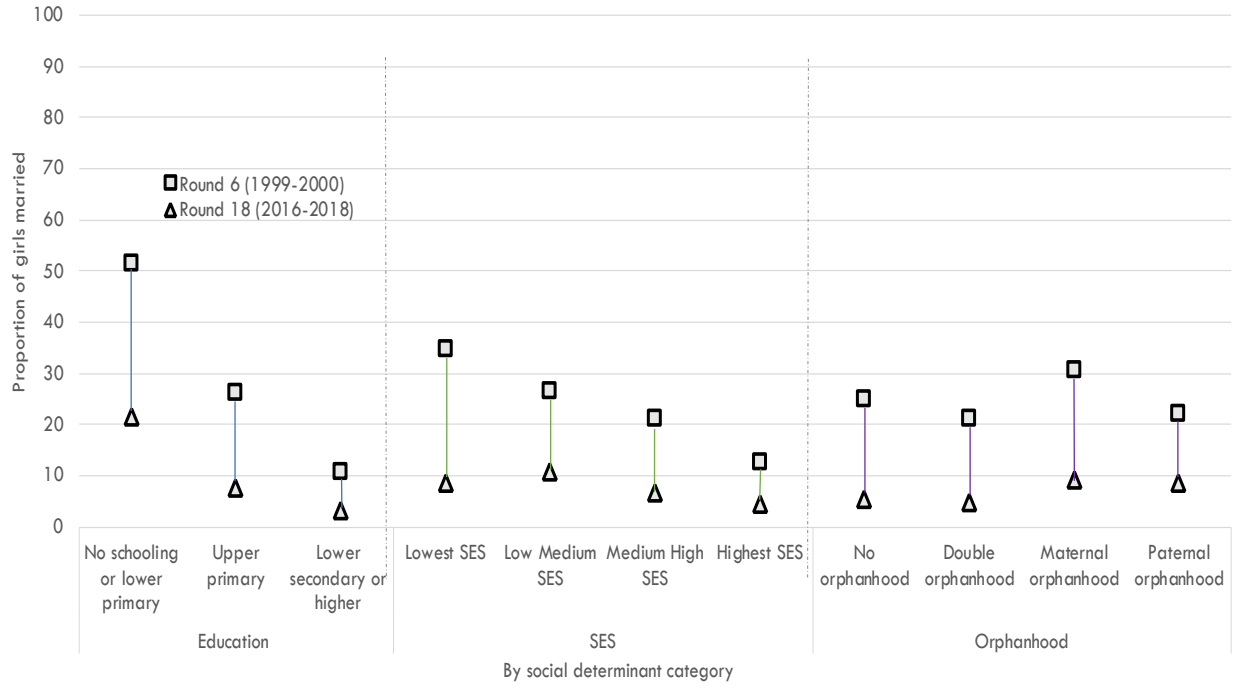
As shown in Figure 4, 17 year old girls were more likely to marry than younger girls across all survey rounds. The proportion of 17 year old girls who reported being married dropped from 39% in 1999 to 14% in 2018 (p<0.0001). Reported marriages were lowest among 15 year olds, dropping from 16% to just 1% between 1999 to 2018 (p<0.0001).

Figure 4 | Proportion of girls married by exact age, 1999-2018 (n=6,998)



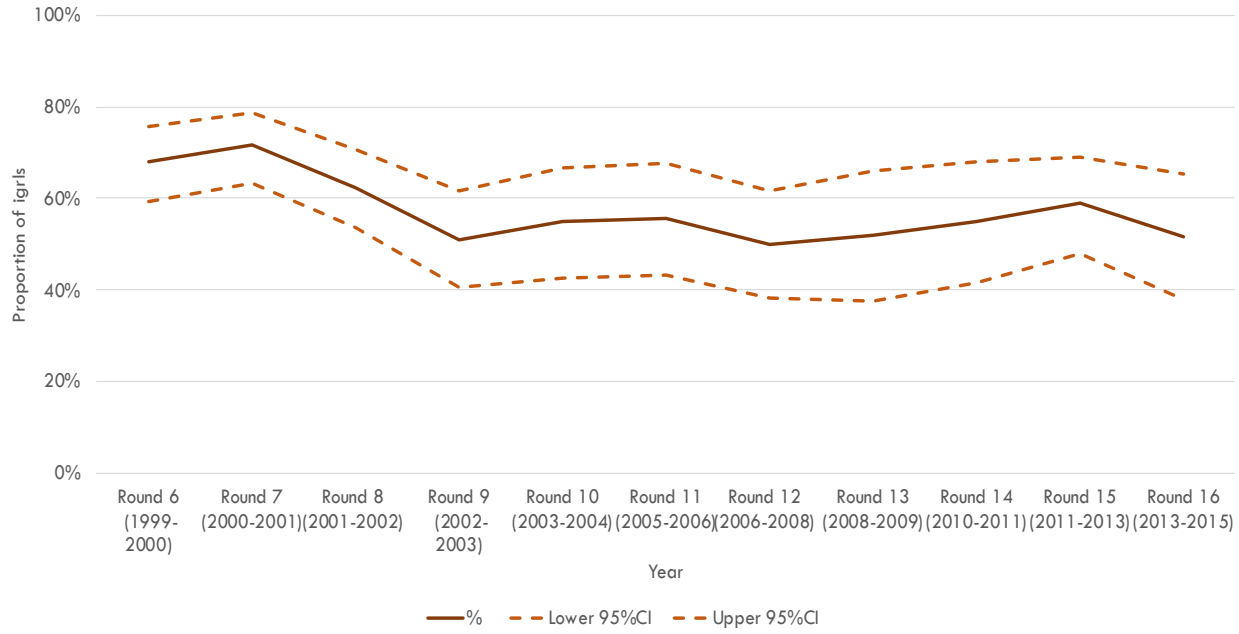
Changes over time in adolescent marriage, by social determinants. To better understand how adolescent marriages changed across different social groups, I examined changes in adolescent marriage between 1999 and 2018 among girls with different education, SES, and orphanhood levels. Figure 5 shows that girls in the lowest education and SES groups experienced the most significant drops in adolescent marriage over time. Specifically, 52% of girls with lower primary or no schooling were married in 1999, dropping to 21% of girls in the same educational category in 2018. As well, the proportion of girls in the lowest SES category married before 18 years dropped from 26% to 8% between 1999 to 2018. Change in marriage were somewhat similar across different orphanhood levels, although slightly steeper for maternal orphanhood (from 31% of girls married in 1999 to 9% in 2018).

Figure 5 | Proportion of 15 to 17 year old girls married in 1999 versus 2018, by social determinants (n=1,291)



Changes over time in adolescent marriage, by pregnancy status. The results show little change in marriage among girls who experienced a pregnancy. Specifically, I examined the conditional probability of marriage given a current or prior pregnancy among 15 to 17 year old girls at each survey round. In contrast to declines in marriage over time among 15 to 17 year old girls, the probability of marriage given a previous pregnancy remained high (68% - 52%) and steady over time (Figure 6). These data suggest that while adolescent marriage may have declined over time, there is a high and consistent risk of a marriage if previously or currently pregnant, and this relationship has remained constant over time.

Figure 6 | Conditional probability of marriage among 15 to 17 year old girls given a pregnancy, 1999 – 2015 (n=5,405) *



*(*Note : Round 17 and Round 18 excluded from figure since pregnancy history was not measured at R17)*

II. Social predictors of adolescent marriage and pregnancy outcomes

Table 3 shows the bivariate associations between social determinants, pregnancy, and marriage. Both bivariate crosstabulations and logistic regression models were used, the latter of

which adjusted for time and age in the model to understand whether associations were consistent across both age and time. In summary, the results show strong bivariate associations between education and marriage, SES and marriage, but this association was weaker for orphanhood and marriage. Education was strongly associated with adolescent marriage; girls with lower secondary or higher education were 91% less likely to be married relative to girls with lower primary level or no schooling (aOR=0.09; 95%CI: 0.07; 0.12). Girls from high SES households were also 41% less likely to be married than girls from low SES households (aOR=0.59; 95%CI: 0.47; 0.75). The association between orphanhood and marriage varied according to different orphanhood experiences; for example, girls whose mother was deceased were more likely to be married (16% of girls) relative to girls who had lost both parents (13% of girls), but girls who lost their mother were more likely to be married than girls who were not orphans (10% of girls).

Building from these bivariate associations, Table 4 presents the crude and adjusted multivariable logistic models for two outcomes: adolescent marriage (left green side of table), and; adolescent pregnancy (right blue side of table). Both adolescent marriage and pregnancy were strongly associated with time, showing similar declines over time (aOR marriage: 0.87; 95%CI: 0.85, 0.89; vs. aOR pregnancy: 0.90; 95%CI: 0.88, 0.90). Compared to orphanhood and SES predictors, education – and in particular secondary education levels – appears to be a more proximate predictor of lower pregnancy and marriage rates. Education was a stronger predictor of marriage (aOR upper primary=0.28; 95%CI: 0.22, 0.36; aOR lower secondary= 0.09; 95%CI: 0.07, 0.12), than pregnancy outcomes (aOR upper primary=0.40; 95%CI: 0.31, 0.51; aOR lower secondary= 0.14; 95%CI: 0.11, 0.19). Both higher SES levels and living in a peri-urban area were significantly associated with lower likelihood of adolescent pregnancy, but not marriage. Orphanhood was not strongly associated with either pregnancy or marriage.

These results are consistent with the bivariate results in Table 3; however, the strong influence of education on both pregnancy and marriage may be weakening the relative strength of other more downstream factors – such as SES – in affecting adolescent marriage and pregnancy. In addition to the bivariate analyses, I explored the potential back 'pathways' between SES, orphanhood, and education in separate exploratory analyses. In these analyses, both higher SES and not being an orphan were independently associated with girls' higher education levels. Girls from high SES households were 1.11 times more likely to have at least some level of secondary education than girls from low SES households, when adjusting for age and time (aOR= 1.11; 95% CI: 1.09, 1.13; *results table available upon request*). Girls who were not orphans were also 1.2 times more likely to have some level of secondary schooling relative to girls who were double orphans, adjusting for age and time (aOR=1.20; 95%CI: 1.11, 1.29; *results table available upon request*). Given the moderate associations between SES, orphanhood, and education, we cannot rule out the potential influence of SES and orphanhood on adolescent marriages. Thus, girls' educational levels can be interpreted as a more proximate factor, or direct influence, of lower adolescent marriage rates, with SES and orphanhood potentially playing a more 'downstream' role by affecting girls' educational achievement.

III. Decomposition of social determinants and pregnancies on adolescent marriage declines

Multivariable regression decomposition methods were employed to identify the extent that changes in education, SES, orphanhood, community, and pregnancy contributed to the decline in adolescent marriage among 15 to 17 year old girls in Rakai, Uganda. Table 5 compares the decomposition results across different survey points. For each model, the top half of the table shows the change in marriage explained by changes in social determinants and pregnancy, as well as due to unexplained changes (that is, attributed to other unmeasured variables). The bottom half

of the table shows the different contributions of each social determinant and pregnancy variable on changes in marriage over time.

Toward the left side of the table, Model 1 decomposes the attribution of different variables to adolescent marriage decline between survey round 6 (1999) and survey round 18 (2018), showing that 76% of the observed decline can be attributed to changes in social determinants and pregnancy. In particular, 67% of the decline in adolescent marriage between 1999 to 2018 was attributed to a decline in adolescent pregnancy and just 5% to increased secondary education and higher SES, respectively (bottom half of the table). Moving to the right of the table, Models 2 – 7 show the gradual change of adolescent marriage declines comparing every other round over time. These models suggest some variability in the attribution of different variables, but that the contribution of pregnancy changes to marriage declines remained relatively consistent over time. Interestingly, the contribution of pregnancy between 2008 and 2011 was 159% (Model 5), indicating that the changes in pregnancy during this period accounted for more than the total change in marriage.

The contribution of education on marriage change is more salient in earlier rounds -- for example from 1999 to 2002 in Model 2, and from 2002 to 2004 in Model 3 -- but this contribution weakened when comparing later rounds (from 2004 onward in Models 4 - 7). Changes in higher SES levels also contributed to declines in marriage over time and became more important and significant in later years (from 2015 to 2018 in Model 7). Lastly, any negative coefficients and percentages show a contribution toward adolescent marriage change that goes in the opposite direction of the general change over time. For example, orphanhood coefficients and percentages were almost consistently negative across multiple survey round comparisons, suggesting that changes in orphanhood may have worked to increase adolescent marriage, although these

associations were not statistically significant. Additional decomposition models adjusting for age were also conducted and yielded consistent results (*tables available upon request)*.

IV. The causal relationship between education, pregnancy, and marriage at the individual level

Table 6 presents the results of the first stage analysis comparing total and direct effect models on pregnancy. Model 1 shows the total effect of education and pregnancy on adolescent marriage (not adjusting for pregnancy in the model); Model 2 shows the direct effect of education on marriage (adjusting for pregnancy); Model 3 shows the direct effect of education on marriage with an interaction term for pregnancy and education, and; Model 4 shows the education effect on pregnancy. All models are adjusted for potential confounders, including age, time, SES, and type of community. Orphanhood was dropped from these models because it did not significantly confound or change the exposure, mediator, and outcome relationship during exploratory analyses.

As shown in the total effect model 1, higher education levels are significantly associated with lower probability of marriage, consistent with previous modeling in the prediction analyses (aOR = 0.20; 95%CI: 0.12, 0.34). When isolating the direct effect of education on marriage in model 2, higher education levels are still significantly associated with lower risk of marriage, although this association is now weaker, suggesting that pregnancy may partially mediate the effect of education on marriage (aOR = 0.28; 95%CI: 0.12, 0.65). Model 3 shows that there may be an interaction between pregnancy and education that should be accounted for in the second stage of the causal mediation analyses. Although the interaction term is not significant, the education exposure estimate changes slightly in magnitude and is no longer significant (aOR=0.24; 95%CI: 0.03-2.22). As expected, Model 4 shows that higher education levels were also strongly associated with lower risk of pregnancy (aOR=0.45; 95%CI: 0.32, 0.65).

Table 7 shows the second stage causal effects of education and pregnancy on marriage decomposed into total, direct and indirect effects, comparing two models. Model 1 excludes any individual pregnancies that occurred at the same survey round as marriage; as a result, this model shows more conservative causal effects (and may be under-estimated); model 2 relaxes this temporality assumption and includes pregnancies that occurred at the same time of marriage in the same survey round; these causal effects are thus more liberal estimates (and may be over-estimated). To simplify interpretation, the controlled direct effect is not shown in Table 7 given that its effect size was almost identical as the effect size of the natural direct effect (and suggesting minimal interaction between the education exposure and pregnancy mediator). The results from Models 1 and 2 confirm that there is a strong and significant direct relationship between higher education levels and lower odds of marriage, but that pregnancy partially mediates this relationship. The indirect effect of pregnancy on the relationship between education and marriage is slightly stronger in Model 2 which includes both pregnancies and marriages that occurred around the same time than in Model 1 (Model 1 aOR: 0.55; 95%CI: 0.364-0.730; Model 2 aOR: 0.49; 95%CI: 0.345, 0.635). Overall, the models show that pregnancy mediates between 32% to 39% of the effect of higher education on lower risk of marriage (using the risk ratio scale).

As per Table 8, the e-value sensitivity results show that the causal mediation findings are robust to potential unmeasured confounding. The table shows that the magnitude of an unmeasured confounder would have to have a risk ratio of at least 12.8 to explain away the observed total effect (and with a lower 95% CI limit of 6.2). Similarly, an unmeasured confounder would need a risk ratio of at least 6.6 to explain away the direct effect of education on marriage (using natural direct effect). Both e-values suggest that unmeasured confounding is unlikely to completely pull the direct and total effects toward the null value. The e-value is noticeably lower for the natural indirect

effect (3.04), but nonetheless is large enough in size to confidently infer that the indirect effect is robust and withstands unmeasured confounding.

Discussion

Using close to 20 years of data, this research provides key insights into the macro- and micro-level drivers of adolescent marriage among girls in southcentral Uganda. The findings show that education is a strong determinant of lower marriage risk, although the downstream effects of other determinants, in particular SES, should not be completely disregarded. When examining changes over time more broadly, declines in pregnancies appear to be contributing to the considerable decline in adolescent marriage between 1999 and 2018 in Rakai, Uganda. In line with this close relationship, expectations of marriage for young women following a premarital pregnancy remained relatively high and unchanged over time. Using causal mediation approaches, I found that pregnancy also helped to partially explain the relationship between higher education and lower risk of adolescent marriage, but that the direct effect of education on marriage also remained important. Taken together, these macro- and micro-level findings show that education continues to be an important protective factor in preventing adolescent marriage. Yet, pregnancies may be playing an important role in explaining the protective effect of education on adolescent marriages, and in contributing to broader reductions in adolescent marriages over time.

My first hypothesis tested whether higher education, higher SES, and lower rates of orphanhood were strongly associated with lower risk of marriage, and that these relationships held up while adjusting for time *(conceptual model 1).* I found that higher education levels significantly predicted lower marriage rates and this association was significant while accounting for time in the analyses. Although orphanhood and SES were not as significantly associated with marriage in

multivariable models, they were both moderately associated with education in separate analyses. Thus, while girls' educational levels may be a more proximate factor in lowering adolescent marriage risk, rising SES may be a more 'downstream' determinant that may influence adolescent marriages by increasing girls' educational achievement. The strong effect of education on marriage corroborates existing evidence that continuing girls' education – and particularly secondary education - is effective in delaying marriage (Mathur et al., 2003; Wodon et al., 2017). The significant contribution of education is consistent with other national quasi-experimental studies which shows that UPE implementation in 1997 - and to a lesser extent USE in 2007 - drastically increased school enrollment in secondary education and reduced adolescent marriage among Ugandan girls (Deininger, 2003; Koski et al., 2018), and fertility desires among young women (Behrman, 2015)

Under hypothesis 1.2, the decomposition findings showed that improvements in education, SES, and orphanhood between 1999 and 2018 did not contribute significantly to adolescent marriage declines relative to the sizeable contribution of pregnancy declines over time. However, descriptive findings (Figure 5) suggest that the largest reductions in marriage occurred among the lowest education and lowest SES groups. This finding contrasts recent global trends showing that the pace of adolescent marriage declines have been slowest among girls in the lowest education and lowest SES groups (UNICEF, 2018). Thus, while improvements in SES did not seem to contribute to broader changes in adolescent marriage over time, the fact that girls in the lowest SES experienced the most reductions in adolescent marriage in Rakai, Uganda, is a promising finding that researchers and policy-makers in Uganda and Eastern Africa should further examine. Related to both hypotheses 1.1 and 1.2, lower orphanhood levels did not appear to predict lower marriage risk, nor contribute to changes in marriage over time. These findings contradict previous

research from Uganda suggesting that orphanhood is associated with increased risk of adolescent marriage (Chae, 2013).

Our last hypothesis tested whether the relationship between girls' higher education levels and their lower risk of marriage could be partially explained by lower rates of pregnancy *(conceptual model 2)*. Consistent with the second hypothesis, I found that lower risk of pregnancy partially explained the relationship between higher education and lower risk of marriage. Although pregnancy contributed to the effect of education on marriage, pregnancy did not explain all of the causal relationship. Other potential explanations include the presence of more supportive social norms around continuing education and delaying age at first marriage for girls. Although I was unable to measure gender and social norms directly, the third chapter of this dissertation explores how social norms might explain changing marriage and pregnancy behaviors in Rakai, Uganda.

There may be other factors not captured in this analysis that could help explain the significant decline in marriages in the region. Rakai is a unique context, different than other regions in Uganda. Considered the 'bread basket' of Uganda, the region was hit hard with the HIV epidemic in the late 1980s, but later experienced significant socio-economic improvements. Over the last 30 years, the region experienced increased foreign donor and NGO investments in response to the HIV epidemic, infrastructure investment of schools and health centers, and diversified livelihoods and economic opportunities (Cummiskey, 2020; Smith et al., 2001). These changes could have played a role in the declines of marriages among more socially disadvantaged groups. For example, improved livelihood and/or skills-building opportunities for girls – coupled with increased access to education - could have contributed to the significant decline in adolescent pregnancies and marriages, particularly among girls in lower SES groups.

Lastly, another potential explanation could be Uganda's legal reforms around age of sexual consent in 2007 (also known as 'defilement laws') – which criminalize sexual relations when one of the partners is a minor (Parikh, 2012). These laws have generated substantial public attention to the issue of adolescent marriage in Uganda. Male partners and families of girls married below 18 years have experienced significant social backlash and imprisonment due to violating the sexual defilement laws. Thus, the increased public awareness of sexual defilement laws – and its serious repercussions - could have contributed to underreporting of underage marriages over time, as adolescent marriages may have been driven underground. In line with this, evidence suggests that sexual and marital consent laws are often ineffective in preventing adolescent marriages, particularly when these laws are far away from local community norms and practices (Santelli et al., 2019; Mackie, 2014). Given the stigma around adolescent pregnancies and marriages, adolescent women may have been more likely to under-report an existing marriage or pregnancy in the more recent RCCS survey rounds used for this analysis.

Study strengths and limitations

The main strength of this study is the use of both macro- and micro-level data that span across 19 years, enabling the examination of both shifts and associations between social determinants, marriage, and pregnancy behaviors on a population and individual level. Another key strength of this analysis is the triangulation of findings across methods that have different strengths and weaknesses. For example, while the repeated cross-sectional analyses are limited in making causal statements, the causal analyses introduce loss to follow-up bias when restricting the analysis to only individuals who were followed-up in the cohort. As well, these data provide rich marriage and sexual and reproductive health information directly from 15 to 17 year old girls, rather than retrospectively from women 20 to 24 years old (as typically done in adolescent

marriage research). The use of data from 15 to 17 year old girls allows us to directly measure their childhood exposures and social determinants, rather than exposures during adulthood as measured with 20 to 24 year old women. Although 15 to 17 year old girls are less prone to recall bias than 20 to 24 year old girls, these estimates do not reflect the conventional method for measuring adolescent marriage prevalence in population surveys. Specifically, data from 15 to 17 year old girls are right-censored – they do not capture girls who will experience an adolescent marriage event after their interview. For example, these data might include an observation for an unmarried girl who is interviewed once at 15 years old, but does not capture whether that girl will marry at 16 years or 17 years old if she does not return for an interview. As a result, these data likely under-estimate adolescent marriage prevalence rates.

As well, adolescents may provide a non/report of marriage based on social desirability, depending on the expected social norms for adolescents at that age (be it marriage or not), rather than their actual marital behavior. To address potential social desirability bias among 15 to 17 year old girls, I verified their marital status with census data that reported their relationship to the household head. Consistent with this, 92% of married girls in the survey sample were reported as the spouse of the household head in the census. The remaining percentage of married girls reported being a daughter-in-law, household head or living with a non-relative, indicating little over-reporting of marriages among surveyed girls.

Although the survey asked about both formal and informal marriage unions, there could have been under-reporting of marriages among girls. In addition to the aforementioned sexual defilement laws in Uganda, marriage in many countries is a socio-normative process consisting of multiple events and stages, including cohabitation, ceremonies and childbirths (Johnson-Hanks, 2002; Mensch et al., 2005). As such, identifying when a union was formalized in a questionnaire

can be challenging, particularly in settings where several socio-cultural events define a union. Relatedly, Chapter 3 of this dissertation suggests that more informal patterns of cohabitation may be on the rise in Rakai due to the high costs of marriage preparations and the relaxation of social norms and sanctions around premarital sex and pregnancies.

Last, there may have been loss to follow-up bias due to out-migration, given that in- and out-migration is high in the region and the RCCS (Grabowski et al., 2020). Research in the region shows that some newly married women, particularly between the ages of 15 to 19 years old, move communities to form a new household with their partner (Schuyler et al., 2017). As a result, some married girls may not be captured in the survey if they out-migrated for marriage reasons. However, the data do capture newly married girls who may have in-migrated into the RCCS study communities due to marriage.

These findings have important implications for future research, programs, and policies on adolescent marriage. As corroborated by previous research, governments and funders should continue investing in larger scale education and socio-economic policies and programs to delay girls' age at marriage. However, to end adolescent marriage in the context of Uganda as per Sustainable Development Goal (SDG) Target 5.3, stronger investments toward adolescent pregnancy prevention are warranted, including programs and policies that address norms and issues related to sex, contraception, and sexuality among girls and boys. On the research front, additional national and sub-regional analyses are needed to compare large-scale changes and drivers of adolescent marriage across different global and regional contexts. Second, longitudinal research could examine whether the drastic adolescent marriage declines found in the lowest educational and economic social groups stay consistent across different Ugandan and Eastern African contexts. Future research could also explore alternate causal pathways between education

and marriage, and in particular the role of alternative employment and skills training opportunities in delaying age at marriage. Lastly, additional research is warranted to assess whether declines in adolescent marriage in southcentral Uganda -- and elsewhere -- are occurring due to increasing cohabitation patterns and informalization of marriages among adolescent girls.

Using close to 20 years' worth of data, this paper provides crucial insights into the role of social determinants and teenage pregnancies in driving changes in adolescent marriage in southcentral Uganda. These findings affirm the importance of education in preventing adolescent marriage in Uganda, while also calling attention to the role of adolescent pregnancies in contributing to adolescent marriage declines. To delay adolescent marriage altogether, funding efforts need to shift toward adolescent pregnancy prevention, as well as the structural and social drivers of adolescent pregnancy and marriage in southcentral Uganda.

References

Ahaibwe, G., Ssewanyana, S., & Kasirye, I. (2018). Early labour market transitions of young women in Uganda. *IDEAS Working Paper Series from RePEc*. ProQuest Central; Publicly Available Content Database.

Bantebya, G. K., Muhanguzi, F. K., & Watson, C. (2014). *Adolescent girls in the balance: Changes and continuity in social norms and practices around marriage and education in Uganda* (p. 184). Overseas Development Institute (ODI).

Baron, R. M., & Kenny, D. A. (1986). *The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations*. 10.

Behrman, J. A. (2015). Does Schooling Affect Women's Desired Fertility? Evidence From Malawi, Uganda, and Ethiopia. *Demography*, *52*(3), 787–809.

Bhan, N., Gautsch, L., McDougal, L., Lapsansky, C., Obregon, R., & Raj, A. (2019). Effects of Parent–Child Relationships on Child Marriage of Girls in Ethiopia, India, Peru, and Vietnam: Evidence From a Prospective Cohort. *Journal of Adolescent Health*, *65*(4), 498–506.

Chae, S. (2013). Timing of Orphanhood, Early Sexual Debut, and Early Marriage in Four Sub-Saharan African Countries. *Studies in Family Planning*, *44*(2), 123–146.

Clark, S. (2004). Early Marriage and HIV Risks in Sub-Saharan Africa. *Studies in Family Planning*, *35*(3), 149–160. https://doi.org/10.1111/j.1728-4465.2004.00019.x

Cummiskey, J. (2020). Early AIDS Research in Rakai: Ugandan Experiences and Expertise in the Creation of the African AIDS Paradigm. *International Journal of African Historical Studies*, *53*(1), 1–26.

Deininger, K. (2003). Does cost of schooling affect enrollment by the poor? Universal primary education in Uganda. *Economics of Education Review*, 15.

Efevbera, Y., & Bhabha, J. (2020). Defining and deconstructing girl child marriage and applications to global public health. *BMC Public Health*, *20*(1), 1547.

Eloundou-Enyegue, P. M., Giroux, S. C., & Tenikue, M. (2021). Demographic Analysis and the Decomposition of Social Change. In *Demographic Analysis—Selected Concepts, Tools, and Applications*. IntechOpen. https://www.intechopen.com/chapters/75618

Emsley, R., & Liu, H. (2013). *PARAMED: Stata module to perform causal mediation analysis using parametric regression models*. https://EconPapers.repec.org/RePEc:boc:bocode:s457581

Fairlie, R. W. (2005). An extension of the Blinder-Oaxaca decomposition technique to logit and probit models. *Journal of Economic and Social Measurement*, *30*(4), 305–316.

Grabowski, M. K., Lessler, J., Bazaale, J., Nabukalu, D., Nankinga, J., Nantume, B., Ssekasanvu, J., Reynolds, S. J., Ssekubugu, R., Nalugoda, F., Kigozi, G., Kagaayi, J., Santelli, J. S., Kennedy, C., Wawer, M. J., Serwadda, D., Chang, L. W., & Gray, R. H. (2020). Migration, hotspots, and dispersal of HIV infection in Rakai, Uganda. *Nature Communications*, *11*(1), 1–12.

Grabowski, M. K., Serwadda, D. M., Gray, R. H., Nakigozi, G., Kigozi, G., Kagaayi, J., Ssekubugu, R., Nalugoda, F., Lessler, J., Lutalo, T., Galiwango, R., Makumbi, F., Kong, X., Kabatesi, D., Alamo, S. T., Wiersma, S., Sewankambo, N. K., Tobian, A. A. R., Laeyendecker, O., … Chang, L. W. (2017). Combination HIV Prevention and HIV Incidence in Uganda. *The New England Journal of Medicine*, *377*(22), 2154–2166.

Greene, M. E., & Stiefvater, E. (2019). *Social and gender norms and child marriage*. 21.
Jain, S., & Kurz, K. (2007). *New insights on preventing child marriage: A global analysis of factors and programs*. ICRW. https://www.icrw.org/publications/new-insights-on-preventing-child-marriage/

Johnson-Hanks, J. (2002). On the Limits of Life Stages in Ethnography: Toward a Theory of Vital Conjunctures. *American Anthropologist*, *104*(3), 865–880.

Kohler, U., Karlson, K. B., & Holm, A. (2011). Comparing Coefficients of Nested Nonlinear Probability Models. *The Stata Journal*, *11*(3), 420–438.

Koski, A., Strumpf, E. C., Kaufman, J. S., Frank, J., Heymann, J., & Nandi, A. (2018). The impact of eliminating primary school tuition fees on child marriage in sub-Saharan Africa: A quasi-experimental evaluation of policy changes in 8 countries. *PLOS ONE*, *13*(5), e0197928.

Lee-Rife, S., Malhotra, A., Warner, A., & Glinski, A. M. (2012). What Works to Prevent Child Marriage: A Review of the Evidence. *Studies in Family Planning*, *43*(4), 287–303.

Linden, A., Mathur, M. B., & VanderWeele, T. J. (2020). Conducting sensitivity analysis for unmeasured confounding in observational studies using E-values: The evalue package. *The Stata Journal: Promoting Communications on Statistics and Stata*, *20*(1), 162–175.

Lokot, M., Sulaiman, M., Bhatia, A., Horanieh, N., & Cislaghi, B. (2021). Conceptualizing "agency" within child marriage: Implications for research and practice. *Child Abuse & Neglect*, *117*, 105086.

Mathur, S., Greene, M., & Malhotra, A. (2003). *The Lives, Rights, and Health of Young Married Girls*. International Center for Research on Women (ICRW).

Mensch, B., Singh, S., & Casterline, J. (2005). *Trends in the timing of first marriage among men and women in the developing world*. Population Council. https://doi.org/10.31899/pgy6.1096

Moussa, W., & Omoeva, C. (2020). The Long-Term Effects of Universal Primary Education: Evidence from Ethiopia, Malawi, and Uganda. *Comparative Education Review*, *64*(2), 179–206.

Nishimura, M., Yamano, T., & Sasaoka, Y. (2008). Impacts of the universal primary education policy on educational attainment and private costs in rural Uganda. *International Journal of Educational Development*, *28*(2), 161–175. https://doi.org/10.1016/j.ijedudev.2006.09.017

Nour, N. M. (2009). Child Marriage: A Silent Health and Human Rights Issue. *Reviews in Obstetrics and Gynecology*, *2*(1), 51–56.

Otoo-Oyortey, N., & Pobi, S. (2003). Early marriage and poverty: Exploring links and key policy issues. *Gender & Development*, *11*(2), 42–51. https://doi.org/10.1080/741954315

Parikh, S. A. (2012). "They arrested me for loving a schoolgirl": Ethnography, HIV, and a feminist assessment of the age of consent law as a gender-based structural intervention in Uganda. *Social Science & Medicine*, *74*(11), 1774–1782.

Patton, G. C., Sawyer, S. M., Santelli, J. S., Ross, D. A., Afifi, R., Allen, N. B., Arora, M., Azzopardi, P., Baldwin, W., Bonell, C., Kakuma, R., Kennedy, E., Mahon, J., McGovern, T., Mokdad, A. H., Patel, V., Petroni, S., Reavley, N., Taiwo, K., … Viner, R. M. (2016). Our future: A Lancet commission on adolescent health and wellbeing. *The Lancet*, *387*(10036), 2423–2478. https://doi.org/10.1016/S0140-6736(16)00579-1

Plesons, M., Travers, E., Malhotra, A., Finnie, A., Maksud, N., Chalasani, S., & Chandra-Mouli, V. (2021). Updated research gaps on ending child marriage and supporting married girls for 2020–2030. *Reproductive Health*, *18*, 152. https://doi.org/10.1186/s12978-021-01176-x

Raj, A. (2010). When the mother is a child: The impact of child marriage on the health and human rights of girls. *Archives of Disease in Childhood*, *95*(11), 931–935.

Raj, A., McDougal, L., Silverman, J. G., & Rusch, M. L. A. (2014). Cross-Sectional Time Series Analysis of Associations between Education and Girl Child Marriage in Bangladesh, India, Nepal and Pakistan, 1991-2011. *PLOS ONE*, *9*(9), e106210.

Santelli, J., Chen, I., Spindler, E., Nalugoda, F., Lindberg, L., Lutalo, T., Wawer, M., Ssewamala, F., Grilo, S., Kreniske, P., Hoffman, S., & Kagaayi, J. (2019, September). *Improvements in social determinants and declines in adolescent pregnancy and child marriage in rural uganda, 1994–2018 | Request PDF*. RCPCH and SAHM Adolescent Health Conference.

Santelli, J. S., Spindler, E., Moore, E., & McGovern, T. (2019). Criminalising sexuality or preventing child marriage: Legal interventions and girls' empowerment. *The Lancet Child & Adolescent Health*, *3*(4), 206–208. https://doi.org/10.1016/S2352-4642(18)30370-5

Schuyler, A. C., Edelstein, Z. R., Mathur, S., Sekasanvu, J., Nalugoda, F., Gray, R., Wawer, M. J., Serwadda, D. M., & Santelli, J. S. (2017). Mobility among youth in Rakai, Uganda: Trends, characteristics, and associations with behavioural risk factors for HIV. *Global Public Health*, *12*(8), 1033–1050. https://doi.org/10.1080/17441692.2015.1074715

Smith, D. R., Gordon, A., Meadows, K., & Zwick, K. (2001). Livelihood diversification in Uganda: Patterns and determinants of change across two rural districts. *Food Policy*, *26*(4), 421–435. https://doi.org/10.1016/S0306-9192(01)00012-4

Stoebenau, K. (2015). *"Girls are like Leaves on the Wind": How gender expectation impact girls' education—A closer look from West Nile, Uganda*. ICRW. https://www.icrw.org/wp-content/uploads/2016/10/141011-ICRW-MacArthur-Final-Web-R.pdf

Taylor, A. Y., Murphy-Graham, E., Van Horn, J., Vaitla, B., Del Valle, Á., & Cislaghi, B. (2019). Child Marriages and Unions in Latin America: Understanding the Roles of Agency and Social Norms. *Journal of Adolescent Health*, *64*(4), S45–S51. Scopus.

Uganda Bureau of Statistics (UBOS) and Macro International Inc. (2007). Uganda Demographic and Health Survey 2006. Calverton, Maryland, USA: UBOS and Macro International Inc.

UBOS and ICF. (2018). Uganda Demographic and Health Survey 2016. Kampala, Uganda and Rockville, Maryland, USA: UBOS and ICF.

UBOS & UNICEF (2018) Going beyond Monetary Poverty: Uganda's Multidimensional Poverty Profile. UNICEF Uganda.

Uganda Children Amendment Act (2016). "The Children (Amendment) Act, 2016." The Republic of Uganda.

UNICEF. (2018). *Child Marriage: Latest trends and future prospects*. UNICEF. https://data.unicef.org/resources/child-marriage-latest-trends-and-future-prospects/

UNICEF. (2022). Child Marriage Database. Last updated May 2022. UNICEF. Retrieved from: https://data.unicef.org/topic/child-protection/child-marriage/

VanderWeele, T. (2015). *Explanation in Causal Inference: Methods for Mediation and Interaction*. Oxford University Press. https://books.google.com/books?id=K6cgBgAAQBAJ

VanderWeele, T. J., & Ding, P. (2017). Sensitivity Analysis in Observational Research: Introducing the E-Value. *Annals of Internal Medicine*, *167*(4), 268. https://doi.org/10.7326/M16-2607

Wodon, Q., Nguyen, M. C., & Tsimpo, C. (2016). Child Marriage, Education, and Agency in Uganda. *Feminist Economics*, *22*(1), 54–79. Scopus.

Wodon, Q., Savadogo, A., Yedan, A., Edmeades, J., Kes, A., John, N., Murithi, L., Steinhaus, M., & Petroni, S. (2017). *Economic Impacts of Child Marriage: Global Synthesis Report* (p. 99). ICRW.

CHAPTER 2 APPENDIX: RESULTS TABLES

Table 2 | Characteristics of girls 15-17 years old, 1999 - 2018 (n=6,998)

	Row total (person rounds)	*Percent Total (across all rounds)*	Round 6 (1999-2000)	Round 7 (2000-2001)	Round 8 (2001-2002)	Round 9 (2002-2003)	Round 10 (2003-2004)	Round 11 (2005-2006)	Round 12 (2006-2008)	Round 13 (2008-2009)	Round 14 (2010-2011)	Round 15 (2011-2013)	Round 16 (2013-2015)	Round 17 (2015-2016)	Round 18 (2016-2018)	*P-value for trend across rounds*
Total number of observations	6,998	*N/A*	474	512	482	332	336	390	477	499	568	624	729	758	817	
% married under 18 years	783	11.2	24.3	23.8	21.4	14.8	15.2	11.0	9.0	6.4	7.2	9.3	5.1	5.3	6.0	**<0.0001**
% pregnant under 18 years	1,067	17.1	27.9	28.4	27.8	28.3	21.1	18.0	15.9	10.4	10.6	14.5	7.7	*N/A*	8.3	**<0.0001**
Age																**<0.0001**
15	2,168	31.0	34.0	23.4	24.9	22.0	23.8	29.5	32.5	36.5	31.5	33.0	35.4	32.6	33.3	
16	2,405	34.4	32.9	34.8	35.7	36.8	36.3	35.4	34.0	32.3	32.6	34.0	32.8	38.3	32.8	
17	2,425	34.7	33.1	41.8	39.4	41.3	39.9	35.1	33.5	31.3	35.9	33.0	31.8	29.2	33.9	
Social determinants																
Educational Level																**<0.0001**
Lower primary or no school	494	7.1	13.5	11.1	8.5	7.8	7.4	7.5	5.7	6.4	5.5	6.4	5.5	5.3	5.1	
Upper primary school	3,219	46.0	51.3	51.8	49.6	51.5	46.1	47.0	50.3	49.5	42.8	45.7	40.9	41.8	40.8	
Lower secondary or higher	3,284	46.9	35.2	37.1	41.9	40.7	46.4	45.5	44.0	44.1	51.8	47.9	53.6	52.9	54.1	
Orphanhood status																**<0.0001**
Not an orphan	4,426	63.3	48.3	49.0	46.3	50.0	50.6	53.3	57.4	61.5	68.7	64.4	78.4	77.3	79.4	
Double orphan	841	12.0	19.8	18.8	21.0	21.4	18.8	19.7	16.1	14.2	10.6	7.7	4.1	4.2	2.6	
Maternal orphan	507	7.3	11.0	8.8	9.1	8.7	9.2	8.2	8.6	7.6	5.8	7.1	4.7	5.4	5.3	
Paternal orphan	1,223	17.5	20.9	23.4	23.7	19.9	21.4	18.7	17.8	16.6	15.0	20.8	12.8	13.1	12.7	
Household SES																**<0.0001**
Low SES	789	11.3	26.2	23.5	19.1	21.1	18.2	14.1	11.4	8.8	6.7	6.1	4.4	3.6	4.3	
Low-Medium SES	1,360	19.5	25.5	24.9	26.6	24.7	25.0	27.4	21.5	20.5	20.6	17.9	13.6	11.6	11.4	
Medium-High SES	2,153	30.8	25.1	25.9	27.0	25.0	29.8	31.5	32.6	35.5	32.2	32.3	32.8	33.8	31.5	
High SES	2,681	38.4	23.2	25.7	27.4	29.2	27.1	26.9	34.5	35.1	40.5	43.7	49.3	51.1	52.8	
Other characteristics																
% living in rural area	4,939	70.6	63.7	69.9	68.9	72.0	67.6	75.9	75.5	73.2	72.9	73.2	70.5	69.8	66.8	**0.0005**
Religion																**<0.0001**
Catholic	4,560	65.2	70.3	68.4	68.3	65.7	66.1	64.3	63.1	65.3	64.6	64.6	64.3	61.5	64.4	
Protestant	1,119	16.0	17.5	17.8	15.8	15.1	16.1	15.4	16.4	16.6	13.7	15.7	15.9	18.3	13.8	
Saved/pentescotal	267	3.8	1.1	0.8	1.9	2.4	4.2	4.6	4.0	3.0	6.0	4.0	3.6	4.4	7.0	
Muslim	1,009	14.4	11.0	12.5	13.7	16.6	13.1	15.2	16.1	14.2	15.5	15.4	15.6	14.4	14.0	
Other	42	0.6	0.2	0.6	0.4	0.3	0.6	0.5	0.4	0.8	0.2	0.3	0.6	1.5	0.9	
Age at first sex																**<0.0001**
Never had sex	4,752	61.3	38.0	40.0	38.5	43.1	43.2	53.2	53.2	62.4	67.3	64.9	73.0	71.9	77.3	
12 - 14 years	1,381	17.8	33.5	26.6	28.7	31.5	28.8	26.7	24.2	19.0	13.3	12.6	10.5	11.2	9.2	
15 - 17 years	1,622	20.9	28.5	33.3	32.9	25.4	27.9	20.1	22.7	18.6	19.5	22.5	16.5	16.9	13.4	
% HIV positive	127	1.9	2.6	1.9	3.6	4.2	1.9	2.1	2.1	1.4	0.7	1.4	1.1	1.7	1.6	**0.0217**
% currently using at least one method of contraception	1,009	14.4	22.2	23.6	21.8	20.2	17.9	20.0	16.4	14.2	10.6	11.1	10.2	8.2	7.2	**<0.0001**

Table 3 | Bivariate associations between social determinants, adolescent marriage, and adolescent marriage outcome, pooled across all surveys (1999 - 2018)

	Overall		Cross-tabulation						Logistic regression*			
			Married		Not Married							
	N	*%*	*N*	*row %*	*N*	*row %*	*Pearson Chi2*	*p-value*	*OR*	*95% CI (L, U)*		*p-value*
Total	6,998		783	88.8	6215	11.2						
Time									0.86	0.84	0.88	**<.0001**
Ever pregnant							**2800.0**	**<.0001**				**<.0001**
No	5,177	82.9	108	2.1	5069	97.9			*ref*			
Yes	1,067	17.1	638	59.8	429	40.2			39.59	31.12	50.36	**<.0001**
Age							**435.5**	**<.0001**				**<.0001**
15 years	2,168	31.0	53	2.4	2115	97.6			*ref*			
16 years	2,405	34.4	211	8.8	2194	91.2			2.44	2.10	2.84	**<.0001**
17 years	2,425	34.7	519	21.4	1906	78.6			5.59	4.80	6.50	**<.0001**
Education level							**500.2**	**<.0001**				**<.0001**
None or Lower primary level	494	7.1	186	37.7	308	62.4			*ref*			
Upper primary level	3,219	46.0	437	13.6	2782	86.4			0.29	0.22	0.37	**<.0001**
Lower secondary or higher	3,284	46.9	159	4.8	3125	95.2			0.09	0.07	0.12	**<.0001**
Orphanhood status							23.3	**<.0001**				0.12
Double orphan	841	12.0	110	13.1	731	86.9			*ref*			
Not an orphan	4,426	63.3	438	9.9	3988	90.1			1.08	0.83	1.40	0.566
Maternal orphan	507	7.3	79	15.6	428	84.4			1.49	1.05	2.11	**0.025**
Paternal orphan	1,223	17.5	156	12.8	1067	87.2			1.12	0.84	1.49	0.439
Household SES							**109.4**	**<.0001**				**<.0001**
Low	789	11.3	150	19.0	639	81.0			*ref*			
Low-medium	1,360	19.5	199	14.6	1161	85.4			0.95	0.76	1.18	0.644
Medium-high	2,153	30.8	241	11.2	1912	88.8			0.82	0.66	1.03	0.096
High	2,681	38.4	191	7.1	2490	92.9			0.59	0.47	0.75	**<.0001**
OTHER VARIABLES:												
Type of community							2.1	0.148				
Rural	4,939	70.6	570	11.5	4369	88.5			*ref*			
Peri-urban	2,059	29.4	213	10.3	1846	89.7			0.81	0.67	0.98	**0.033**
Religion							17.1	0.002				0.19
Catholic	4,560	65.2	532	11.7	4028	88.3			*ref*			
Protestant	1,119	16.0	126	11.3	993	88.7			0.97	0.77	1.22	0.786
Saved /Pentescotal	267	3.8	13	4.9	254	95.1			0.53	0.30	0.96	0.036
Muslim	1009	14.4	111	11.0	898	89.0			1.05	0.82	1.35	0.679
Other	42	0.6	0	0.0	42	100.0			**Ommited due to low cell count*			
Age at first sex							1300.0	**<.0001**				
Never had sex	4,108	59.0	3	0.1	4,105	99.9			*ref*			
12 - 14 years	1,333	19.1	355	26.6	978	73.4			251.299	121.39	520.25	**<.0001**
15 - 17 years	1,523	21.9	425	27.9	1,098	72.1			186.554	90.99	382.49	
HIV status							30.3	**<.0001**				
Negative	6,706	98.1	712	10.6	5,994	89.4			*ref*			
Positive	127	1.9	33	26.0	94	74.0			2.65	1.69	4.18	**<.0001**
Currently using FP method									1.0	0.33		
No	5,987	85.6	661	11.0	5326	89.0	661	84.4			*ref*	
Yes	1,009	14.4	122	12.1	887	87.9	122	15.6			0.70	0.58

*(**Note:** Logistic regression uses GEE with exchangeable correlation to account for repeat observations; models are adjusted for age and time to assess whether associations were consistent across both age and time ; regression outcome = current or ever marriage)*

Table 4 | Multivariable models between social determinants and adolescent marriage and adolescent pregnancy outcomes (using GEE with repeat observations)

	Adolescent marriage outcome										Adolescent pregnancy outcome									
	Model 1 - Crude Model					Model 2 - Adjusted model *					Model 3 - Crude Model					Model 4 - Adjusted model *				
	n=6,998 QIC = 4901.746					n=6,981 QIC = 4031.231					n=6,244 QIC = 5837.224					n=6,227 QIC = 4846.809				
	OR	*SE*	*95%CI*		*p-value*	*OR*	*SE*	*95%CI*		*p-value*	*OR*	*SE*	*95%CI*		*p-value*	*OR*	*SE*	*95%CI*		*p-value*
Time	0.86	0.01	0.84	0.88	**<.0001**	0.87	0.01	0.85	0.89	**<.0001**	0.88	0.01	0.87	0.90	**<.0001**	0.90	0.01	0.88	0.92	**<.0001**
Age						2.60	0.11	2.40	2.82	**<.0001**						2.98	0.13	2.73	3.25	**<.0001**
Education level										**<.0001**										**<.0001**
None or Lower primary level (ref)						1.00										1.00				
Upper primary level						**0.28**	0.04	**0.22**	**0.36**	**<.0001**						**0.40**	**0.05**	**0.31**	**0.51**	**<.0001**
Lower Secondary or higher						**0.09**	0.01	**0.07**	**0.12**	**<.0001**						**0.14**	**0.02**	**0.11**	**0.19**	**<.0001**
SES										0.054										**<.0001**
Low (ref)						1.00										1.00				
Low-medium						1.08	0.13	0.86	1.36	0.506						0.95	0.11	0.76	1.18	0.648
Medium-high						1.04	0.13	0.82	1.32	0.761						0.83	0.10	0.66	1.04	0.103
High						0.82	0.11	0.63	1.06	0.124						**0.61**	**0.07**	**0.48**	**0.78**	**<.0001**
Orphanhood										0.296										0.3803
Double orphan (ref)						1.00										1.00				
Not orphan						1.26	0.18	0.96	1.66	0.097						0.90	0.11	0.71	1.13	0.364
Maternal orphan						1.35	0.25	0.94	1.94	0.099						1.13	0.19	0.81	1.56	0.478
Paternal orphan						1.14	0.18	0.84	1.55	0.390						0.90	0.12	0.69	1.18	0.439
Type of community																				
Rural (ref)						1.00										1.00				
Peri-urban						1.00	0.10	0.81	1.22	0.985						**0.81**	**0.08**	**0.68**	**0.97**	**0.025**
Constant	0.824	0.107	0.137	0.638	1.064	0.000	0.000	0.000	0.000	<.0001	0.912	0.106	0.431	0.726	1.147	0.000	0.000	0.000	0.000	<.0001

*(*Note: in the adjusted model, all variables shown are adjusted for each other)*

Table 5 | Decomposition results showing the attribution of social determinants and pregnancy on adolescent marriage change, comparing different survey rounds over time (1999 – 2018)

	Model 1: 1999 - 2018 (R6 vs. R18)		Model 2: 1999 - 2002 (R6 vs. R8)		Model 3: 2002 - 2004 (R8 vs. R10)		Model 4: 2004 - 2008 (R10 vs. R12)		Model 5: 2008 - 2011 (R12 vs. R14)		Model 6: 2011 - 2015 (R14 vs. R16)		Model 7: 2015 - 2018 (R16 vs. R18)	
OVERALL EXPLAINED AND UNEXPLAINED CHANGE	Coef (SE) CI	%	Coef (SE) CI	%	Coef (SE) CI	%	Coef (SE) CI	%	Coef (SE) CI	%	Coef (SE) CI	%	Coef (SE) CI	%
	0.239		0.239		0.209		0.152		0.09		0.072		0.051	
Proportion of girls married at first	(0.017)		(0.017)		(0.016)		(0.017)		(0.011)		(0.009)		(0.006)	
time point	0.206 - 0.272		0.206 - 0.272		0.178 - 0.240		0.118 - 0.185		0.069 - 0.111		0.055 - 0.089		0.038 - 0.063	
	0.06		0.209		0.152		0.09		0.072		0.051		0.06	
Proportion of girls married at	(0.005)		(0.016)		(0.017)		(0.011)		(0.009)		(0.006)		(0.005)	
second time point	0.049 - 0.071		0.178 - 0.240		0.118 - 0.185		0.069 - 0.111		0.055 - 0.089		0.038 - 0.063		0.049 - 0.071	
	0.179* **		0.030		**0.057*** **		**0.062*** **		0.018		**0.021** **		-0.009	
Change in marriage between first	(0.016)		(0.020)		(0.021)		(0.019)		(0.013)		(0.010)		(0.008)	
and second time points	0.148 - 0.210		-0.010 - 0.070		0.016 - 0.098		0.025 - 0.098		-0.007 - 0.043		0.001 - 0.042		-0.025 - 0.007	
	0.136* **	**75.9%**	**0.010*** **	**34.6%**	**0.038*** **	**67.5%**	**0.021*** **	**33.6%**	**0.025*** **	**141.6%**	**0.015*** **	**70.5%**	**-0.005*** **	**54.6%**
Change in marriage explained by	(0.012)		(0.004)		(0.003)		(0.006)		(0.004)		(0.002)		(0.001)	
independent variables	0.113 - 0.158		0.003 - 0.018		0.033 - 0.044		0.010 - 0.032		0.018 - 0.033		0.010 - 0.020		-0.007 - -0.003	
	0.043* **	**24.1%**	0.020	65.4%	0.019	32.5%	**0.041** **	**66.4%**	-0.007	-41.6%	0.006	29.5%	-0.004	45.4%
Change in marriage NOT explained	(0.015)		(0.021)		(0.020)		(0.018)		(0.011)		(0.010)		(0.008)	
by independent variables	0.014 - 0.072		-0.021 - 0.060		-0.021 - 0.058		0.006 - 0.076		-0.029 - 0.015		-0.013 - 0.025		-0.021 - 0.013	
CONTRIBUTION OF INDEPENDENT VARIABLES TO CHANGE IN MARRIAGE	Coef (SE) CI	%	Coef (SE) CI	%	Coef (SE) CI	%	Coef (SE) CI	%	Coef (SE) CI	%	Coef (SE) CI	%	Coef (SE) CI	%
No pregnancy	**0.119*** **	**66.5%**	**0.001*** **	**2.6%**	**0.038*** **	**64.9%**	**0.026*** **	**43.4%**	**0.028*** **	**158.8%**	**0.016*** **	**74.9%**	**-0.004*** **	**38.8%**
(ref=pregnancy)	(0.009)		(0.000)		(0.004)		(0.004)		(0.005)		(0.003)		(0.001)	
	0.102 - 0.136		0.000 - 0.001		0.030 - 0.045		0.018 - 0.034		0.019 - 0.037		0.011 - 0.021		-0.005 - -0.002	
Secondary education	**0.009** **	**4.6%**	**0.007*** **	**22.7%**	**0.005** *	**10.0%**	0.000	-0.1%	0.001	8.4%	0.001	6.6%	-0.000	3.4%
(ref=primary school or lower)	(0.004)		(0.003)		(0.003)		(0.002)		(0.003)		(0.002)		(0.001)	
	0.001 - 0.016		0.002 - 0.012		-0.001 - 0.011		-0.004 - 0.004		-0.004 - 0.007		-0.002 - 0.005		-0.002 - 0.001	
No orphanhood	-0.001	-0.8%	0.000	0.4%	-0.003	-4.9%	-0.005	-8.4%	0.001	3.7%	-0.000	-0.3%	0.000	-2.4%
(ref= any orphanhood)	(0.007)		(0.001)		(0.002)		(0.004)		(0.001)		(0.001)		(0.001)	
	-0.015 - 0.012		-0.001 - 0.001		-0.007 - 0.001		-0.012 - 0.002		-0.002 - 0.003		-0.003 - 0.003		-0.001 - 0.001	
Highest SES	0.009	5.2%	0.002	7.1%	0.001	1.5%	0.001	1.5%	-0.001	-8.2%	-0.002	-10.5%	**-0.001** *	**11.8%**
(ref= Medium-High SES or lower)	(0.007)		(0.002)		(0.001)		(0.002)		(0.003)		(0.002)		(0.001)	
	-0.004 - 0.022		-0.001 - 0.005		-0.002 - 0.004		-0.003 - 0.005		-0.007 - 0.004		-0.006 - 0.002		-0.002 - 0.000	
Peri-urban community	0.001	0.3%	0.000	1.4%	-0.003	-4.5%	-0.001	-2.1%	-0.003	-20.5%	0.000	0.4%	-0.000	1.6%
(ref=rural community)	(0.002)		(0.002)		(0.002)		(0.003)		(0.003)		(0.001)		(0.001)	
	-0.004 - 0.005		-0.003 - 0.004		-0.007 - 0.002		-0.007 - 0.005		-0.010 - 0.003		-0.002 - 0.002		-0.001 - 0.001	
Observations at first time point	469		469		479		336		477		567		727	
Observations at second time point	817		479		336		477		567		727		817	

(Note: *** $p<0.01$, ** $p<0.05$, * $p<0.1$)*

Table 6 | First stage logistic regression results for total and direct effects of education and pregnancy on marriage (adjusting for visit, age, SES, and area; using GLM)

	Model 1: Total effect of education and pregnancy on marriage	**Model 2:** Direct effect of education on marriage without pregnancy interaction	**Model 3:** Direct effect of education on marriage **WITH pregnancy interaction**	**Model 4:** Education exposure effect on pregnancy
VARIABLES	**aOR (SE) 95%CI**	**aOR (SE) 95%CI**	**aOR (SE) 95%CI**	**aOR (SE) 95%CI**
Education level				
Lower secondary or higher	**0.20*** **	**0.28*** **	0.24	**0.45*** **
	(0.052)	**(0.119)**	(0.275)	**(0.083)**
(Ref: Upper primary or lower)	**0.122 - 0.336**	**0.122 - 0.646**	0.027 - 2.221	**0.317 - 0.649**
Pregnancy				
Yes		**55.10*** **	**53.19*** **	
(ref=no)		**(27.577)**	**(29.352)**	
		20.660 - 146.949	**18.034 - 156.876**	
Interaction			1.18	
(pregnancy*education)			(1.409)	
			0.114 - 12.232	
Constant	0.00***	0.00***	0.00***	0.00***
	(0.000)	(0.000)	(0.000)	(0.000)
	0.000 - 0.000	0.000 - 0.000	0.000 - 0.000	0.000 - 0.014
Observations	1,183	1,104	1,104	1,104
R2	0.196	0.428	0.428	0.0764
AIC	700.9766	287.8876	289.868	955.362

***(Note:** Models also adjusted for age, time, SES level, and community area; p-values = *** p<0.01, ** p<0.05, * p<0.1)*

Table 7 | Second stage causal mediation results examining effect of pregnancy in mediating the relationship between education and marriage (adjusting for visit, age, SES, and area; using Paramed package with GLM)

	Model 1 - Mediation with pregnancy mediator that excludes concurrent pregnancies and marriages	**Model 2 -** Mediation with pregnancy mediator that includes concurrent pregnancies and marriages
Type of causal effect	**aOR (SE) 95%CI**	**aOR (SE) 95%CI**
Direct effect of secondary education on adolescent marriage	0.28** (0.128) 0.032 - 0.532	0.33*** (0.126) 0.087 - 0.581
Indirect effect of secondary education on adolescent marriage that works through pregnancy	0.55*** (0.093) 0.364 - 0.730	0.49*** (0.074) 0.345 - 0.635
Total effect of secondary education and pregnancy on adolescent marriage	0.15** (0.072) 0.014 - 0.295	0.16** (0.065) 0.035 - 0.292
Percent of effect mediated (risk ratio scale)	31.51%	38.93%
Observations	1,104	1,104

***(Note:** Results show natural direct effect, and natural indirect effect; controlled direct effect not reported. p-values = *** p<0.01, ** p<0.05, * p<0.1)*

Table 8 | Sensitivity analyses using e-value approach for observed direct, indirect, and total effects

Type of effect	Observed estimate	E-value point estimate *	E-value lowest 95% CI *
Controlled direct effect	0.29 (0.018, 0.552)	6.354	3.024
Natural direct effect	0.28 (0.032, 0.532)	6.602	3.166
Natural indirect effect	0.55 (0.364, 0.730)	3.038	2.082
Total effect	0.15 (0.014, 0.295)	12.81	6.236

**(Note: An 'e-value point estimate' is the magnitude needed for an unmeasured confounder to take away the observed effect estimate. The 'e-value lowest 95% CI' is the lowest 95% confidence interval of the e-value point estimate.)*

Chapter 3: The 'Normative Transition': How structural drivers and social norms changed adolescent marriages in southcentral Uganda

Introduction

Marriage during adolescence has consequences into adulthood, including increased risk of maternal and child mortality, gender-based violence, social isolation and depression (Burgess et al., 2022; Clark, 2004; Nour, 2009; Otoo-Oyortey & Pobi, 2003). Given its adverse consequences, substantial research and programs over the last 10 years have focused on the prevention of adolescent marriage or 'child marriage' – a marital union where one of the partners (more commonly a female partner) marries before 18 years. Although its causes and consequences are diverse and context-specific, adolescent marriage is rooted in gender and social inequities that disadvantage girls and young women well into adulthood, limiting their access to future schooling, employment and life opportunities (Raj, 2010). For all these reasons and more, adolescent marriage – or more specifically 'child marriage' -- is internationally recognized as a human rights abuse, in violation of the Convention on the Rights of the Child (CRC), among other international covenants (Bruce, 2003).

In recent years, researchers and practitioners have zeroed-in on the role of social norms in driving adolescent marriages. In particular, research shows that strong social expectations about the ideal marriage age for girls, as well as social sanctions against adolescent sexuality and premarital pregnancies help explain adolescent marriages in various contexts, including Uganda (Bantebya et al., 2014; Cislaghi et al., 2019; Greene & Stiefvater, 2019; Muhanguzi et al., 2017). Adding more complexity to the issue, recent research suggests that adolescents navigate social norms about marriage with varying degrees of agency and power (Lokot et al., 2021). In the Latin

American context for example, Taylor and colleagues show that adolescent girls exercised varying forms of agency in response to social norms regulating their marital behaviors, including "oppositional" agency and "accommodating" agency to marriage norms, as well as "transformative" agency in resisting harmful marriage norms (2019); in Somaliland and Putland on the other hand, Kenny and colleagues show that adolescents' increased agency and autonomy from parents contributed to their choice in marrying early, rather than later (2019).

With the growing attention toward social norms and adolescent marriage, recent debates have focused on the competing effectiveness of social norms versus structural interventions in preventing adolescent marriage (Chandra-Mouli & Plesons, 2021; Malhotra & Elnakib, 2021). On one hand, social norms-focused programs commonly do not address larger structural drivers of adolescent SRH, beyond individual, group or community-level intervention (Malhotra et al., 2019); while structural interventions such as cash transfer programs have focused too explicitly on single package interventions without appropriately addressing social and gender norms (Chandra-Mouli & Plesons, 2021). Regardless of where one falls on either side of this debate, these discussions have focused primarily on the effectiveness of designed and evaluated interventions, rather than how broader changes in *structural factors* may be affecting norms around adolescent marriage (outside of an intervention-based framework).

In this paper, I aim to better understand how structural determinants have shaped social norms around adolescent sex, courtship and marriage in Rakai, Uganda. I define *structural determinants* as "the fundamental structures that generate social stratification", such as income in/equality, educational access, economic systems, political participation and laws, and gender in/equity (Malhotra et al., 2019; Viner et al., 2012). That is, structural determinants can be thought of as the larger set of economic, social, gender and political systems that shape more proximal social

determinants that affect young people's everyday life experiences and decisions. These *social determinants* are the life circumstances at the micro-level that shape young people's every day experiences, including community, family, peer, schooling, employment, media and healthcare factors (Viner et al., 2012). In turn, *social norms* are conceptualized as the unwritten rules in a particular social group that influence young people's behaviors (Bicchieri et al., 2014; Cislaghi & Heise, 2018; Lapinski & Rimal, 2005; Pulerwitz et al., 2019). Not surprisingly, debate also exists about the most appropriate categorization for social norms – whether norms should be considered as 'structural' or 'social' determinants. In this paper, I consider social norms to be both part of 'structural' and more proximal 'social' determinant spheres. In particular, social norms reflect both a system of collective behaviors and expectations (at the structural determinant level), while also affecting young people's every day behaviors (at the social determinant level).

Globally, declining trends in adolescent marriage suggest that broader structural determinants may be influencing later age at marriage for adolescents and young people. Around the world, countries have experienced declines in adolescent marriage, with global prevalence dropping from 25% to 19% over the last decade (UNICEF, 2022), although these data pre-date the COVID-19 pandemic. While some research suggests that structural drivers like educational, economic and reproductive health improvements may be driving declining trends (UNICEF, 2021), we know little about how these larger structural drivers might be transforming norms and expectations around adolescent marriages. Although research on norms transformation exists, evidence is limited to theories of change and evaluations from donor-funded interventions focused on improving adolescent sexual and reproductive health through social and gender norms change (Dagadu et al., 2022; Kim et al., 2022; Levy et al., 2020; Stewart et al., 2021) Although useful for

programmatic interventions, this evidence does not address how larger structural determinants may be affecting changes in norms and consequent adolescent marriage processes.

Based in the context of southcentral Uganda, this paper qualitatively examines how structural determinants are driving norm changes in adolescent sex, courtship, and marriage in Rakai, Uganda. My analysis is informed by 16 focus group discussions and 15 key informant interviews conducted in 2018 in trading and peri-urban communities with women and men from younger and older generations, with participants as young as 16 years old and as wise as 78 years. In contrasting generational perspectives, this analysis builds from other chapters in this dissertation, including: 1. the interplay of global efforts, national policies and civil society efforts in preventing adolescent marriages in Uganda (*Chapter 1),* and; 2. the role of schooling and teenage pregnancies in reducing adolescent marriages in the region of Southcentral Uganda (*Chapter 2).* This paper first identifies the structural factors driving changes in courtship and marriage norms, and then describes the 'normative transition' that is occurring in the region – where new marriage processes appear to be replacing earlier marriage processes. Lastly, I highlight the consequences of this normative transition, in which adolescents are entering adulthood in uncharted territories not previously known by previous generations of young people.

Study context

Uganda provides a unique setting to understand how structural changes are affecting gender and social norms surrounding young people's marriages. Consistent with global trends, adolescent marriages have been declining in Uganda. At the national level, marriage under 18 years among 20 to 24 year old women dropped from 46% to 34% in just 10 years, from 2006 to 2016 (UBOS 2007; 2018). Over the same time, Uganda experienced significant economic growth and poverty reduction, with the proportion of those living in poverty declining from 34% in 1999 to 20% in

2019 (UBOS, 2021). Over the last 20 years, the study region of Rakai experienced significant socio-economic improvements, including increased foreign donor and non-governmental organization (NGO) investments in response to the HIV epidemic in the 1980s, increased investment in infrastructure of schools and health centers, and growing economic opportunities (Cummiskey, 2020; Smith et al., 2001). Recent research in Rakai shows that marriages and pregnancies among adolescent girls declined over the last 20 years due to educational and economic improvements, with marriage and pregnancy among 15-17 year old girls declining from 24% to 6%, and 28% to 8%, respectively, between 1999-2018. Over the same time, girls' household socio-economic status (SES) also rose over time, as did their secondary schooling levels and rates of orphanhood declined steadily following the rollout of HIV treatment in the region in 2004 (Santelli et al., 2015; Santelli et al., 2022; *Spindler, dissertation chapter 2*).

At the national level, Uganda's economic transition appears to be changing broader marriage formation patterns for young people (Parikh 2007; Frye & Urbina 2020). Although Uganda's economy has significantly grown over the last two decades, the labor market remains insecure particularly for young people, who make up a large portion of the population (Uganda National Planning Authority, 2007). At the same time, Ugandans have struggled with higher costs of living, and increased commercialization of certain sectors, particularly the marriage industry (Moore 2019). Young people's underemployment, coupled with the increased commercialization of marriage, has resulted in young people's inability to achieve the expected preparations for marriage (Frye & Urbina, 2020; Parikh, 2007). Young men have been unable to meet the financial expectations of customary and religious marriages, given the soaring costs of marriages that exceed men's available economic resources (Moore 2019). As a result, cohabitation of the couple - without customary, religious or civil marital processes – has become increasingly common as an

acceptable form of marriage in Uganda (Parikh, 2007). This pattern is consistent with other global trends, including that of the United States, where cohabitation appears to be on the rise (Horowitz et al., 2019).

While this evidence emphasizes the importance of social and economic factors in shaping young people's marriage formation in Uganda, we know less about how these factors are shifting social and gender norms about marriage for adolescents more specifically. As such, my analysis advances the existing evidence base in the context of Uganda by: 1. Focusing on how structural drivers shape social norms related to marriage more explicitly, 2. Understanding how changes in social norms are affecting both young people and adolescents in southcentral Uganda.

Conceptual framing

This analysis is guided by marriage and social norms theories. First, historical and sociological perspectives about love, sex, and marriage help elucidate the marriage changes occurring among adolescents in Uganda. Around the world, the process and meaning of marriage have changed significantly over time and across cultures, shifting from a project of kinship building and survival to one of individual self-expression, emotional intimacy, and satisfaction. These changes have led to what some argue are more 'companionate' or egalitarian models of marriage (Wardlow & Hirsch, 2006). The rise of 'romantic love' and marriage in Global North countries has been extensively researched (Giddens, 1992); yet the research on this is much more nascent for Global South contexts (Cole & Thomas, 2009). As Cole and Thomas argue in their book "Love in Africa", the ideas of love and romance have been largely ignored in the African context, despite the increased scrutiny into the sexual and reproductive health lives of young women – particularly with the advent of the HIV epidemic (2009). Consistent with this broader literature, this paper focuses on the changes in courtship, sexuality, and romance, beyond a sole focus on marriage. I

further interpret courtship and marriage processes as social constructions that are representative of broader social norms expected for young women and men in Rakai, Uganda, rather than inherent 'natural' processes.

Demographic and anthropological perspectives have focused on the role of cultural, economic, and other structural forces in shaping men's and women's relationships and marriages. Globalization processes – including political, economic and technological changes - have undoubtedly influenced young people's romantic engagements and relationship patterns (Padilla et al., 2007). This is particularly evident with the growing role of social media and mobile phones in expanding young people's access to romantic networks (Porter et al., 2020). At the same time, rising marriage and childbearing costs are leading people to marry and start childrearing at later ages around the world. In the Global South context, ethnographic work from Uganda shows that young people have become increasingly excluded from the forms of commercialized marriage that are culturally valued and depicted in the media (Moore 2019); while in Nigeria, young men's experiences of economic uncertainty and financial deprivation are resulting in later entry into marriage and parenthood (Smith, 2020). Thus, larger global forces may be affecting relationship patterns, with unanticipated consequences for young people. Consistent with this, I interrogate the potential consequences that these social changes have had on young people's love lives and relationships in Rakai, Uganda, beyond whether these changes are delaying age at marriage for young women and men.

I integrate marriage and courtship perspectives with social norms theory to guide my analysis framework. Over the last ten years, growing research has shown that social norms - the unwritten societal rules of behavior - are influential in dictating individual behaviors, particularly among young people. More specifically, social norms theory posits that an individual's behavior

is influenced by what they perceive to be the typical behavior in their community (called descriptive norm, e.g., "what others typically do in my group or community"), in addition to what behaviors are approved in their community (injunctive norm, e.g., "doing what others in my group or community think I should do"; Mackie, Moneti, Shakya & Denny, 2015; Chung & Rimal, 2016). Although the literature is diverse, scholars generally agree that: 1. Norms affect behaviors by influencing what people believe to be typical or appropriate behaviors; 2. Norms are influential within the context of a group identity or reference group, and; 3. The strength of the norm – in addition to the types of social sanctions and rewards at play – determines whether an individual complies with that norm (Vaitla, Taylor, Van Horne & Cislaghi, 2017). In their explication of social norms, Lapinski and Rimal further distinguish between *perceived norms* and *collective norms* (2005). Whereas perceived norms represent the individual-level, psychological perceptions of that normative behavior, collective norms represent the group-level code of conduct that prescribe behaviors for members of a social group (Lapinski & Rimal, 2005).

Nested within broader social norms, gender norms are central to the perpetuation of adolescent marriages across different contexts. These gender norms are inherently sustained by power and structural inequalities (Malhotra et al., 2019). In line with this, I define gender norms as a sub-set of larger social norms, or the differentiating rules of conduct deemed appropriate for different genders (Heise et al., 2019). Gender norms uphold the larger gender system, reproducing larger societal power hierarchies and gender inequities (Heise et al., 2019). In turn, restrictive gender norms are driven by gendered power inequities that begin to take center stage during adolescence (George et al., 2020). The uptake or rejection of these norms during adolescence has lingering effects across the life course. As evidence from Uganda suggests, adolescents' exposure to gendered norms during early adolescence shapes their relationship formation and decision

making processes into later adolescence (Lundgren et al., 2019). Consistent with this literature, I use both gender and social norms interchangeably and weave 'gender norms' into social norms theory and analysis.

Grounded in the social norms framework, my analysis focuses on *perceived social norms* more specifically, assessing how younger and older women and men in peri-urban and trading communities perceive changes in: 1. The typical rules of behavior around courtship and marriage (*descriptive norms*); 2. The role of institutions and social groups in influencing courtship and marriage behaviors (*reference groups*); 3. The presence or absence of sanctions or rewards for engaging in different courtship and marriage behaviors (*social sanctions*). I advance the evidence base on social norms theory by specifically focusing on how ***changes*** in these norms, reference groups, and social sanctions are occurring between generations of younger and older people. Lastly, I focus on the reciprocal relationship between social systems and norms, exploring how broader structural forces are contributing to norm changes around courtship and marriage.

Methods

This qualitative analysis uses secondary data collected in 2018 under the Structural Determinants and Social Transitions among Adolescents and Young Adults (SSTAR) Project in collaboration with the Rakai Health Sciences Program (RHSP), in Southcentral Uganda. The SSTAR Project (2017-2022) employs mixed method approaches to understand the influence of social and structural determinants on adolescent transitions into adulthood using Rakai Community Cohort Survey (RCCS) quantitative and ethnographic data. Using mixed ethnographic methods, the SSTAR Project aims to explore contexts and outcomes of social transitions by using life history interviews, FGDs, community mapping exercises and key informant interviews (KIIs) with

community gate keepers. Among these methods, I used 16 FGDs and 15 KIIs for my analysis given their focus on social and gender norms about key adolescent transitions, including school leaving, romance, pregnancy, and marriage. The FGD method is particularly beneficial in exploring group-level phenomena like social norms (Tolley et al., 2016), while KIIs can help elucidate the salient norms in a given community from the perspective of community gate keepers and reference groups.

Sampling and selection of participants. Study communities are part of the RCCS, an ongoing longitudinal HIV epidemiological investigation of Rakai residents aged 15 to 49 years. In the original study design, six study communities were selected from the larger RCCS cohort based on their population size, and social, economic, and geographic characteristics. These six communities were selected in close collaboration with RHSP and represent the typical fishing, peri-urban and trading communities in the Rakai region. In each community, snowball sampling was used to identify FGD and KII participants, in close collaboration with RHSP team members. FGD participants were sampled and recruited from employer and community-based groups salient within those communities; these included for example, savings groups and employment associations, such as tailoring groups, welding associations, as well as bar maids and sex worker groups. The final sample included 24 FGDs conducted with young women (n=12) and men (n=12), segmented between 15 to 29 years and over 30 years of age. KII participants comprised religious, NGO and employment industry leaders (n=20).

Although sampled communities included trading, peri-urban and fishing sites, I exclude fishing communities from this analysis for two reasons: first, the fishing communities are not included in the quantitative analysis of this dissertation (Chapter 2) due to the lack of available long-term marriage trends in these communities, and; second, fishing communities are drastically

different than peri-urban and trading communities with different sets of structural drivers and norms around adolescent sex, marriage and pregnancies, making a thematic cross-community comparison difficult. Thus, this analysis includes 16 FGDs and 15 KIIs from two peri-urban and two trading communities (n=4). Table 1 below shows the FGDs and KIIs segmented by type of community, totaling 8 FGDs and 7 KIIs in the two trading centers, and 8 FGDs and 8 KIIs in peri-urban communities.

Table 1 | Distribution of FGDs and KIIs by type of community

	Trading centers	**Peri-urban communities**	**Total**
FGDs			
FGD with young men *(17 - 34 years old)*	2	2	4
FGD with young women *(16 - 34 years old)*	2	2	4
FGD with older men *(39 - 78 years old)*	2	2	4
FGD with older women *(35 - 57 years old)*	2	2	4
Total FGDs	8	8	16
KIIs			
Religious leaders *(37 - 73 years old)*	3	4	7
NGO leaders *(23 - 59 years old)*	2	2	4
Employment industry heads *(25 - 45 years old)*	2	2	4
Total KIIs	7	8	15

Field procedures. Trained same-gender research assistants from RHSP's Social and Behavioral Sciences (SBS) department collected qualitative data using semi-structured FGD and KII guides. FGDs and KIIs were conducted in the local language, Luganda. FGDs comprised of 4 to 6 participants in each group and lasted about 1.5 hours. The FGDs were segmented and

conducted separately by gender, and age (young versus older participants). Focus group themes included salient adolescent transitions into adulthood, as well as social and gender norms around romance, courting, marriage and sex between young people, and changes in these norms over time. KIIs lasted about 1 hour and were conducted with only one key informant at a time. Key informants were asked about their role and engagement in the community, about key adolescent transitions into adulthood, as well as changes in social and gender norms around romance, courting, marriage, and sex between young people in their community. All FGDs and KIIs were recorded, transcribed, and translated from Luganda to English.

Analysis. This analysis is grounded in constructivist epistemology, recognizing that 'knowledge' produced from research is constructed by not just participant data, but by the author's own perceptions and worldview (Tolley et al., 2016). In line with this perspective, both deductive and inductive approaches to coding were used, developing codes from existing social norms theory (deductive), as well as participant's lived narratives and experiences (inductive). To strengthen the reliability and internal validity of the findings, the author collaborated with a second coder to pilot code and develop a codebook to guide the analyses. The codebook development process included: 1. Pilot coding three transcripts (by each coder); 2. Revisions to the codebook based on dis/agreements between the two coders after each pilot coding; 3. Three separate inter-coder agreement (ICA) tests between the two coders to ensure internal agreement and consistency throughout the coding process. During the pilot and full coding process, the two coders used the *Social Norms Lexicon* to ensure consistent application of social norms definitions to different excerpt coding (Social Norms Lexicon, 2021). The two coders moved forward with full coding of all FGD and KII transcripts following the third ICA Cohen's Kappa score of 0.78, suggesting very good agreement between both coders. The final codebook included parent and child codes relating

to: 1. Becoming an adult; 2. Changes in norms; 3. Current norms; 4. Personal attitudes; 5. Social sanctions; 6. Institutions and reference groups, and; 7. Problems facing youth today (see Appendix 1 for diagram of parent and child codes, Appendix 2 for full codebook). All transcripts were coded in Dedoose qualitative software.

Following coding, memos and coded excerpts were thematically analyzed according to: 1. The current social norms around courtship, sex, pregnancy, and marriage; 2. Changing generational norms about courtship, sex, pregnancy, and marriage; 3. Key institutions and reference groups influencing changes in norms; 4. Social sanctions related to courtship, sex, and marriage norms, and; 5. Emerging challenges for young people. All emerging themes were compared between younger and older participants, as well as between gender.

Positionality and data trustworthiness. Recognizing the importance of calling out our own positionality in qualitative research, this analysis was informed by the author's seven years of adolescent SRH research experience in Uganda, four of which have focused specifically on the study region of Rakai, Uganda. Although the author is based in a Global North academic institution, this analysis was significantly influenced by the expertise of qualitative researchers from the RHSP's SBS team in Rakai, Uganda. SBS qualitative researchers contributed substantially to the original study design and field work as well as by informing and guiding emerging findings of this analysis. More specific to the coding process itself, internal audit processes were put in place to minimize bias and ensure the trustworthiness of emerging findings. Analytic memos were used throughout excerpt coding to highlight needed codebook revisions and emerging findings. Since the two coders are from Global North contexts, analytic memos were also used and shared to reflect upon the two coders' 'Global North' biases related to adolescent sex, courtship, and marriage behaviors. Last, the study methodology and emerging results were

shared with the original study teams in Uganda and the United States on several occasions to ensure the internal validity of findings.

Participant demographics. Table 2 shows the gender and age ranges of FGD and KII participants. Of the 75 FGD participants, a little over half were men (n=38). FGD participant ages ranged from 16 years to 78 years old, demonstrating the large generational difference between FGD participants. A little under half of FGD participants were between the ages of 16 to 24 years old (n=35). A little under half of the KIIs were women (n=7), and the vast majority of the KIIs were older than 40 years old (n=11).

Table 2 | Number of FGD and KII participants, by gender and age

	FGD participants (n=75)		**KII participants (n=15)**	
Gender	**%**	**n**	**%**	**n**
Female	49%	37	47%	7
Male	51%	38	53%	8
Age				
16-19 years	24%	18	--	--
20-24 years	23%	17	7%	1
25-29 years	12%	9	13%	2
30-39 years	12%	9	7%	1
40-49 years	16%	12	27%	4
50-59 years	7%	5	33%	5
60-78 years	7%	5	13%	2

Ethical procedures. Both written minor assent and parental/guardian permission were obtained for unemancipated minors (<18 years) participating in the study; 18+ year-olds and emancipated minors provide their own written informed consent. The study was approved by the Uganda Virus Research Institute's (UVRI) Research Ethics Committee (REC), the Uganda National Council for Science and Technology (UNCST), and the Institutional Review Board (IRB) at Columbia University's Irving Medical Center.

Results

In this results section, I first explain how marriage processes for adolescents and young people are changing in Rakai, Uganda, and then identify the structural drivers – including epidemic, social and economic - that are driving these normative changes. I then explain the 'normative transition' occurring in the region of Rakai, in which new social spaces and economic markets – coupled with young people's increased autonomy - are challenging and replacing pre-existing marriage processes for young people. Although this normative transition has delayed age at marriage for young people, I argue that this transition has also introduced unanticipated challenges for young people as they enter adulthood.

I. How marriage processes are changing for young people in Rakai, Uganda

Marriage processes are drastically changing for young people in Rakai. Younger and older participants described vast changes around marriage decision-making, resulting in later age at marriage for young women and men. One young female participant described these generational differences, and in particular the waning role of parents in marriage decision-making process:

> *"Marriage is different in this generation. During our parents' time, they used to get married when still young like 13 years after the parents talk to each other in both families. These days, once a child feels grown up, she starts looking for a man herself and gets married just like that."*
>
> **- FGD younger female participant, 16 to 23 years old, trading center**

These findings point to a change in marriage decision-making power – and more specifically about *who* makes the decision about marriage. However, additional data show that *how* marriages are agreed, made, and decided upon are also changing. Older participants commonly pointed to the rise of 'come we stay' marriages among young people, in which two partners move-in and cohabitate together. Such informal marriages are becoming increasingly

more common both in Rakai and more widely in Uganda. One older male participant shared how this practice is becoming more common, with male and female partners moving in together and only introducing their marriage to their families after the birth of their child:

> *"These days relatives no longer find for young men women to marry. During our times, if you reached the time for marrying, you would talk to your parents and they advised you on which woman to marry and which family is suitable for you to get from a partner. However, these days, your son brings to you a woman for marrying when they have already stayed together and already have a child. If you try to advise this young man [about the marriage], he can decide not to come back to your home because you did not welcome his partner."*
>
> **- FGD older male participant, 40 to 66 years old, trading center**

The rise of such 'come we stay' marriages was commonly debated among both younger and older women and men. Participants frequently discussed the stark differences in informal marriage customs between generations. As shown in the quote above, older participants viewed such informal marriages as disrespectful to parents and families, highlighting the tension between young people's marriage autonomy, and parents' control over their marriage decisions.

In sum, older and younger participants alike pointed to the rise of a new marriage system in Rakai, Uganda. In describing this generational transition, one older male participant simply communicated, 'that [previous marriage] system has ended,' emphasizing the end of pre-existing marriage processes and the emergence of a completely new marriage system for young people. In the next section, I explore why this previous marriage system has 'ended', homing-in on the structural determinants driving changes in marriage norms.

II. Uncovering the structural drivers of marriage changes

In Rakai, changing epidemic, economic and social landscapes are influencing marriage norms and transitions for young people. As explained below, several macro-level factors are driving these changes, including the HIV epidemic's toll on family and elder structures, changes

in land ownership in between generations, and the proliferation of social and entertainment spaces which have expanded young people's romantic geographies.

The HIV epidemic's toll on elder and familial systems. The HIV epidemic in Rakai has played an important part in weakening family structures, and consequently, their role in marriage decision-making processes. In particular, older participants connected the HIV epidemic to the erosion of intergenerational land and communal systems. One older male participant shared how communal norms shifted between generations after the start of the HIV epidemic in Rakai:

> *"I was told that HIV came in 1986. Before that year, they were fine, and things were not as bad as they are with our generation now. My father never bought land. He was given land by our grandparents. You cannot compare their generation to our generation. During their generation, the parent and the community took care of the child. Land was just given. In our generation, we must work hard to get money to buy land. Our parent's generation had not many diseases like ours. Their generation had love and care. Ours has no love and care. We do not have that attitude of "for God and my country, not at all." The attitude we have now is "for God and my stomach."*
>
> **- FGD older male participant, 27 to 34 years old, Peri-urban community**

As highlighted above, the toll of the HIV epidemic reverberated across community and family systems. With growing orphanhood rates, a new generation of adolescents grew up without pre-existing familial and community reference groups to guide their transition into adulthood. In particular, the role of the "Senga" (paternal auntie) – an important familial guide who provided sex education to adolescent women in the family and prepared them for marriage -- disappeared. One NGO leader pointed to the disintegration of elders and family support systems as a direct result of the HIV epidemic in Rakai:

"The organization started after HIV became rampant in the community. They were looking at how HIV was spreading; they conducted research and found out that there is a way that HIV spreads. […] In 1998, they brought back study findings, which indicated that children did not have people to advise them because families had become apart, parents had died and the "Senga" (Aunt) who would do the job were not in existent. Therefore, we introduced a program for "Senga-Kojja"(Aunt –Uncle). The aim of this program was to train women to counsel younger women to prevent the spread of HIV. These senga were modern and not the sengas who counsel girl that are going to get married."

– **Female key informant, 59 years old, NGO leader in a trading center**

The above excerpt not only highlights the devastating impact of the HIV epidemic on family support systems, but also shows the salience of NGO programs in the region, which proliferated following the HIV epidemic and the establishment of the RHSP center in 1987. These local community-based organizations (CBOs) and NGO programs appear to have played a role in replacing eroded elder and family structures, although the extent that these programs were able to do so effectively is somewhat undetermined.

Generational changes in land ownership. As highlighted above, participants frequently pointed to changes in land ownership and housing between generations as having affected young people's transition into marriage. Whereas in the past, parents gave a male child a piece of land and helped them build a house in preparation for marriage, young men and women of today were described as simply moving out and renting a house or room to move into with their partner. Young male participants commonly described extensive financial hardships that impeded their ability to buy land and build their own home as had been done in their parents' generation:

"P1: In the past, being an adult was not merely to leave your parent's home and go somewhere to rent a room. Someone would live at his parent's home while taking the responsibility to take [upon the marriage preparations] himself.
P2: At the same time, parents would also construct a home for their son.
P1: Oh yes, parents would build a house for their son, and look for a woman he is going to marry."

- FGD younger male participants, 18 to 23 years old, trading center

Commonly, participants pointed to employment insecurity and higher costs of living as drivers of young people's entry into non-agricultural occupations, away from land ownership. To a lesser extent, some participants suggested that climate change may be contributing to land erosion and food insecurity, affecting intergenerational land ownership. In general, both older and younger participants – male and female - commonly cited that 'money was becoming scarcer in Uganda', with increased food insecurity due to increased costs of living, scarcity of jobs, and changing climate. In this economic context, participants – and in particular male participants - commonly pointed to the more expensive costs of living, economic instability, and not having the proper land and housing preparations as primary reasons for delaying marriage formation.

The introduction of new social and entertainment spaces. In more recent years, the introduction of new spaces outside the family home – including discos, mobile phones and schools - have expanded young people's romantic geographies and loosened norms around sex and courtship prior to marriage. Participants commonly pointed to entertainment discos, bars and mobile phones as having opened social and courtship spaces for young people. On multiple occasions, older participants commonly referred to these changes as the 'dotcom' phenomenon, whereby young people's access to outside information and networks through mobile phones and entertainment spaces increased their courtship period and the number of partners they sexually engaged with prior to marriage. This 'dotcom' phenomenon was not solely used to describe mobile phones and new technologies, but rather to describe a new era in which young people spent less time at home, and more time in social and entertainment spaces, as debated in the below exchange by young male participants:

"P1: Now, there are so many entertainments. In the past, our parents would go to the garden and spend almost the entire day in the garden. Right now, there are few people who are involved in peasant farming and currently the land is now small.
P2: In the past, it was the responsibility of parents to look for a woman who will be married to their son, but right now young men look for their partners themselves.
P3: Things have changed because we are now in dotcom era "
– FGD younger male participants, 18 to 23 years old, trading center

The increasing use of entertainment spaces – both virtual and physical - has given young people more opportunities and spaces to socialize, network and court one another than in previous generations. As raised by younger female participants, mobile phones have also enabled young women to approach and initiate communication with men, giving them more choice and control in the types of relationships or partners they choose prior to marriage.

III. "The normative transition": Changes in reference groups and social sanctions

The above structural changes transformed marriage norms for young people, creating a 'normative transition,' through two important mechanisms: first, through the waning of key reference groups such as parents and elders who traditionally guided young people's relationship choices and; second, by weakening social sanctions and punishment of behaviors previously considered taboo, including premarital courtship and sex. These changes have expanded young people's romantic geographies and opportunities, while at the same time, challenging pre-established norms and systems governing young people's marriage choices.

The replacement of key reference groups. Older and younger participants alike reiterated the waning role of parents in guiding their children's marital decisions. As one older female participant from a peri-urban community shared, "*these days, children decide and you as a parent cannot force them*." Other family and community institutions – like the Senga (paternal auntie), grandparents and elders – are also playing a less important role in guiding young people's courtship

and marriage decisions. In their place, new key reference groups - like employment and schooling institutions - are replacing families and elders in regulating young people's behaviors. For example, the owner of a bakery in a trading town shared how she has become an 'elder' to the young men she employs:

> *"I provide shelter for these young employees, and I am almost playing the role as their parent. Sometimes they refer to me as "mukadde" [an elder person]; I do provide guidance to a young person. If one of my employees go somewhere, I am free to ask a question. For instance, that young boy [16-year-old boy] who just entered, and I just asked him, 'what have you been doing?' There are so many places that have been opened right from my bakery up to the boda [taxi] stage. On the same street, young women get involved in commercial sex work. Therefore, I must regulate my employees, they must be inside the bakery at exactly 8PM."*
>
> **- Female key informant, 42 years old, employer in a trading center**

Schools have also changed how young people navigate peer and romantic relationships, and in the process, have replaced family and elder support systems. Both younger and older female participants discussed the growing role of schools in replacing the guidance of parents and elders, as shown in the exchange between participants below:

> *"P1: Women of long ago would first be counselled by elders to be patient with a man, treat the man like this and that. Generally, she goes into marriage when she is well trained on how to behave in her marriage.*
> *I: Is that different from what your parents went through?*
> *P2: These days parents don't have time for their children. When tomatoes on her stall are rotting, you think she gets time to counsel her daughter? (Laughs) We give little time to our children.*
> *I: So, is it different from before?*
> ***All participants:*** *Yes*
> *P1: We give our children little time.*
> *P2: That's why you see children in schools are given trainings in "ekisakaate" (adolescent training camps about the Buganda norms and values). Because these days, parents do not have time for their children. And these days, children spend most of their time in schools."*
>
> **- FGD younger female participants, 19 to 24 years old, trading center**

The above exchange elucidates the sizeable role of schools in guiding adolescents' lives, as well as parents' reduced availability to mentor children. Consistent with this, the notion that parents no longer have 'time' for their children was frequently raised in both group discussions and interviews. Participants commonly attributed this phenomenon to increased costs of living and schooling, which placed higher pressures on parents to work outside the home and financially provide for their children's schooling and livelihood needs.

The weakening of social sanctions around premarital sex. In Rakai, community regulation of young people's sexual lives appears to be changing. Both older and younger participants pointed to lower levels of stigma and 'shame' around premarital sex between young people relative to previous generations. For example, a religious leader from a peri-urban community shared how 'shame' due to premarital sex no longer guided young people's behaviors:

> *"P: Me, I was born here in Rakai. True, I saw HIV killing some of my relatives, my aunties. I even have some of their children here. But now a young person says this is a custom [sexual relationships], which wasn't there those days. It's now open unlike those days [in the past].*
> *I: How was it?*
> *P: There was shame, but now there is no shame, there was also fear, knowing that your [sexual] actions would lead to punishment, but now young people decide for themselves."*
>
> **- Male key informant, 40 years old, Protestant religious leader in a peri-urban community**

The changing influence of parents, family members, and elders – coupled with waning social sanctions around premarital sex – has contributed to the erosion of collective systems that previously governed and monitored young people's behaviors. Participants commonly pointed to the tension between young people's autonomy, and elders' and parents' responsibility in monitoring young people's behaviors. Older participants reflected on changes in community ownership of children over time, in which children 'belonged to the community' and when elders,

neighbors, or other community members could offer guidance and counseling to young people. Such reference groups were also responsible for holding young people accountable for behaviors outside of the established norm, as shared by one savings group leader here:

> *"P: In the past, an elder man would find you standing with a young man and then get some punishment. At the same time, this old man reports the same case to your parent's home and then get more punishment. Today, once I find a young person on my way, he or she just changes their position and I look at his or her back. The moment I reach home, I just keep silent rather than have this young person turn violent toward me.*
> *I: Are you trying to say that people in the past were not involved in seducing or creating relationships?*
> *P: In the past, seducing and creating romantic relationship was there, but the moment that your actions was reported to your parent's home, you were punished."*
> **- Female key informant, 54 years old, Savings group leader in a peri-urban community**

Other older participants similarly described fears of repercussions and potential violence from young people as a result of reporting their courtship behaviors. Although older participants described potential violent repercussions, young participants – neither male nor female participants – raised these issues during FGDs.

IV. The 'normative transition': Unanticipated challenges ahead

The erosion of pre-existing 'collective' systems changed marriage norms and processes – delaying age at marriage along the way -- while also introducing new challenges for young people. Although some participants perceived later age at marriage as a positive development, they also perceived adverse consequences, including an overall lack of counseling and preparedness for marriage available to young people. As one young man explained '*there were some rules governing this exercise [of marriage]'* in prior generations; however, these rules – or norms – around marriage have been disappearing given the decreased role of parents, family members and elders in the marriage formation process.

Overall, participants – both older and younger – shared unanticipated challenges that young people were facing today because of familial, community and economic changes. Common challenges included the increased cost of living and education in Uganda, employment insecurity, young people's more transactional relationships, as well as perceived risks to HIV/STIs and unwanted pregnancies.

As well, some older women and men reporting general anxiety and financial pressure to provide for their children's more expensive needs. The inability to provide for children's schooling and living needs could lead children – particularly adolescent girls – to seek money and resources elsewhere, through romantic and sexual relationships. In the below excerpt, an older female participant connected how the increased pressures to provide more for their children might result in girls' pursuit of transactional sexual relationships:

> *"If she comes to you and says that the one nicker I have is no longer enough and you reply that one nicker is enough for her because you also used it during your time, and you grew up. Let me say that the way we lived to adulthood is different from our children because things are now running on high speed. If you ignore her concern, then you're pushing her to get sicknesses that will kill her [HIV or STIs] because she is looking for another nicker [in a sexual relationship] that you have refused to buy her. As mothers, we must take care of our children and make sure that when my child is still in those years and going to school, I should provide her whatever she asks from me."*
>
> **– FGD older female participant, 40 to 51 years old, Peri-urban community**

Despite declines in pregnancy and HIV rates among adolescents and young people in Rakai over the last 20 years, younger participants emphasized the more transactional nature of romantic relationships in present times, which has contributed to young people's risk to unwanted pregnancies, HIV and STIs. As one younger male participant shared, "seducing and courting is governed by money today," making both young women and men susceptible to sexual

relationships with older men and women, contributing to greater HIV and STI risk. Most participants pointed to the increased use of entertainment spaces and mobile phones during courtship – or the "era of dotcom" -- as having contributed to young people's risk of unwanted pregnancies, HIV and STIs:

> *"Now, people are always on WhatsApp in this era of dotcom. Imagine, you can visit your WhatsApp page and find a photo of a certain young woman who like your page. In return, you also like her page and then you start chatting with each other and nobody knows each other. After chatting, you find where to meet physically."*
>
> **- FGD younger male participant, 18 to 23 years old, trading center**

Commonly, participants cited unwanted pregnancies as a continuing challenge for young people. For both young women and men, unwanted pregnancies resulted in dropping out of school early and economic instability following school leaving. Further, unwanted pregnancies led some young men to "run away," to avoid financial and legal sanctions arising from the pregnancy. However, unwanted pregnancies were primarily associated with a problem related to 'young women.' Below, a younger male participant described why pregnancies continue to be the 'biggest' problem for young women:

> *"For young women, the biggest problem is early pregnancy nothing else. If a parent discovers that you're pregnant, the one who was going to support you to study nursing or teaching, instead they take you for tailoring [vocational training], or if not leaving you at that [schooling] level when you got pregnant. This means that pregnancy has destroyed all your future."*
>
> **- FGD younger male participant, 19 to 25 years old, peri-urban community**

The continued stigmatization of premarital pregnancies provides an interesting contrast to the changes in norms regulating premarital sex. Although young people's sexual relationships have become more accepted and normalized than in prior generations, the visual and social

manifestation of those sexual behaviors – a premarital pregnancy – continues to be highly stigmatizing for young women and men.

Discussion

In comparing generational perspectives, I identified a 'normative transition', in which an emerging marriage market is challenging and replacing pre-existing marriage processes for young people. A combination of epidemic, economic, and social changes catalyzed this 'normative transition.' First, the HIV epidemic significantly weakened family structures, and in the process, courtship and marriage guidance previously provided by families and elders; second, the loss of land ownership and transfer between generations made marriage preparations more difficult for young people; and third, the introduction of new spaces outside the family home – including discos, mobile phones and schools - expanded young people's romantic geographies, prolonging their courtship period prior to marriage. These structural changes have reduced the importance of the family institution in the marital decision-making process, while increasing young women's and men's autonomy in engaging in premarital sex, choosing their partners, and delaying marriage. Although these changes have delayed age at marriage, this transition has also introduced unanticipated challenges for young people as they enter adulthood, including lack of parental and familial support in relationship and marriage formation processes, and continued risks to HIV/STIs and unwanted pregnancies.

These findings point to the unanticipated consequences of normative change. In the case of marriage in Rakai, changes in social spaces – coupled with the shrinking size of agricultural land and growth of the commercial sector – have delayed age at marriage while at the same time making young people more unprepared for marriage. Thus, while adolescent marriage may be

indeed on the decline (as shown in dissertation Chapter 2, and other global trends; UNICEF, 2021), young women and men appear to be facing new challenges in their family formation process, including lack of family and elder guidance, and inability to establish a formal home and secure stable employment. Moreover, while 'formal' marriage among adolescents may be on the decline, these findings suggest that cohabitation and informal unions are becoming more common. It is unclear whether survey data like the RCCS and demographic health surveys (DHS) -- commonly used to measure age at marriage -- are capturing rising cohabitation patterns among adolescents and young adults. Taken together, these findings point to the urgent need to apply a broader systems perspective to understanding adolescent 'marriage' formation, one that incorporates multiple forms of formal and informal marital arrangements, as well as their structural and social normative influences.

In this paper, I use a social norms framework to demonstrate the mechanisms that catalyze norm change. The importance of social sanctions and reference groups in dictating adolescent behavior is well-recognized (Costenbader et al., 2019; Pulerwitz et al., 2019), but we understand little about how they might catalyze larger norm ***change***. In this paper, both social sanctions and reference groups appear to play an important role in catalyzing change. First, social sanctions and punishment around sex before marriage are no longer as salient and enforced in Rakai, as communicated by many older focus group participants. Stigma and taboos around adolescent sex are widely considered to be a key driver of adolescent marriages in many settings, including Uganda (Bantebya et al., 2014; Greene & Stiefvater, 2019). In the Rakai context, I find that that the broader relaxation of sanctions and punishment against pre-marital sex may be opening young people's romantic geographies and changing relationship patterns. Although sex and romantic

relationships during adolescence may be less stigmatized, my findings do suggest that premarital pregnancies remain highly stigmatized and a salient concern for young women and men.

Second, family, and elder institutions - who were key reference groups in previous generations for young people – are no longer guiding young people's romantic and marriage decisions. Family members, and parents more specifically, are not as involved in the marriage decision making process. In particular, families and elders are no longer able to enforce and monitor norms and sanctions around young people's sexual and marital behaviors. This finding reflects a broader shift from the previous communal systems, in which 'children belonged to the community' and where young people's behaviors were monitored and regulated by family members, neighbors and elders, at times with physical and emotional repercussions. The tension between social norms and young people's agency in adolescent marriage has been explored (Lokot et al., 2021; Taylor et al., 2019), but this analysis is the first paper to explore this tension in the context of vast structural change.

Lastly, there is significant debate about the competing influence of social norms versus structural factors in delaying age at marriage, particularly among practitioners and intervention evaluators (Chandra-Mouli & Plesons, 2021; Malhotra & Elnakib, 2021; Steinhaus et al., 2019). This paper shows that both structural drivers and social norms are intrinsically connected and important in driving change in adolescent SRH behaviors, rather than operating as two separate, competing influences. On one hand, structural programs could benefit by integrating more social norms theory and research, while social norms interventions could learn much more about the role of larger structural factors in driving social norm change within their programs. Overall, future research should build-upon the framework used in this analysis to explore the relationship between social structures and norms across other contexts and areas of adolescent SRH.

A key strength of this study is the integration of gendered and generational perspectives to understand how normative transformation occurred in the evolving context of Rakai, Uganda. Although these perspectives enabled me to better explore norm change, the original interview guides were not originally designed with social norms theory in mind. Relatedly, it was difficult to distinguish between the different types of norms – descriptive or injunctive norms – that might be more influential in dictating behavior, given that FGD and KII guides did not follow the prescriptive social norms language (e.g., descriptive norm language = "most people in my community marry later than earlier generations"; e.g., injunctive norm language = "most people in my community think that I should marry later than my parents did"). Nevertheless, the social norms framework used for this analysis enabled me to capture rich data about generational changes, reference groups and social sanctions. This analysis framework could be adapted and used for other social change research not explicitly designed using social norms theory and frameworks. Lastly, these data were collected before the start of the COVID-19 pandemic, and do not reflect more recent changes in norms due to the pandemic and closure of schools in the region.

These findings prop open future opportunities for research and programs. First, adolescent marriage research and programs should expand upon their conceptualization and measurement definitions of transformational change, beyond measuring age at marriage. Although 'age at marriage' may be conventionally used and measured as the conventional 'success' marker of positive adolescent change, a growing chorus of researchers, practitioners and advocates are pushing program and research boundaries to incorporate other indicators and measures of social change (Aguilera et al., 2022). Relatedly, the growing presence of informal 'come we stay' and cohabitation unions among young people should be better incorporated in current qualitative and quantitative instruments, including the RCCS in Rakai, Uganda. As more funding and resources

continue to be invested toward adolescent marriage programs, additional research should focus on understanding the unintended consequences of catalyzing norm change and delaying age at marriage, including how these changes might affect familial and community relationships and kinships. Lastly, the findings show that unwanted teenage pregnancies continue to be a stubborn problem for both young women and men. As such, programs focused on adolescents and young people should focus on the provision of sexuality education and contraception to young women and men in the context of Uganda.

This paper untangles the complex web connecting the structural landscapes and social norms changing adolescent marriages in southcentral Uganda. These changes have had consequences for young people, affecting their relationship, family, and life experiences into adulthood. While these changes have led to later marriage ages for both young women and men, they have also introduced new and uncharted challenges for young people, not experienced by previous generations of parents and elders. Rather than focusing on age at marriage as a marker of social change, future research and programs should focus on the social and economic forces changing courtship and marriage processes for adolescents.

References

Aguilera, A., Green, S., Greene, M. E., Izugbara, C., & Murphy-Graham, E. (2022). Multidimensional Measures are Key to Understanding Child, Early, and Forced Marriages and Unions. *Journal of Adolescent Health*, *70*(2), 345–346.

Bantebya, G. K., Muhanguzi, F. K., & Watson, C. (2014). *Adolescent girls in the balance: Changes and continuity in social norms and practices around marriage and education in Uganda* (p. 184). Overseas Development Institute (ODI).

Bicchieri, C., Jiang, T., & Lindemans, J. W. (2014). *A Social Norms Perspective on Child Marriage: The General Framework*. 21.

Bruce, J. (2003). Married Adolescent Girls: Human Rights, Health, and Developmental Needs of a Neglected Majority. *Economic and Political Weekly*, *38*(41), 4378–4380. JSTOR.

Burgess, R. A., Jeffery, M., Odero, S. A., Rose-Clarke, K., & Devakumar, D. (2022). Overlooked and unaddressed: A narrative review of mental health consequences of child marriages. *PLOS Global Public Health*, *2*(1), e0000131.

Chandra-Mouli, V., & Plesons, M. (2021). A Groundbreaking Systematic Review, but That Alone Is Not Enough to Change the Course of Programming on Child Marriage Prevention. *Journal of Adolescent Health*, 3.

Cislaghi, B., & Heise, L. (2018). Theory and practice of social norms interventions: Eight common pitfalls. *Globalization and Health*, *14*(1), 83. https://doi.org/10.1186/s12992-018-0398-x

Cislaghi, B., Mackie, G., Nkwi, P., & Shakya, H. (2019). Social norms and child marriage in Cameroon: An application of the theory of normative spectrum. *Global Public Health*. Scopus.

Clark, S. (2004). Early Marriage and HIV Risks in Sub-Saharan Africa. *Studies in Family Planning*, *35*(3), 149–160. https://doi.org/10.1111/j.1728-4465.2004.00019.x

Cole, J., & Thomas, L. M. (2009). *Love in Africa*. University of Chicago Press; eBook Comprehensive Academic Collection (EBSCOhost).

Costenbader, E., Cislaghi, B., Clark, C. J., Hinson, L., Lenzi, R., McCarraher, D. R., McLarnon-Silk, C., Pulerwitz, J., Shaw, B., & Stefanik, L. (2019). Social Norms Measurement: Catching up With Programs and Moving the Field Forward. *Journal of Adolescent Health*, *64*(4, Supplement), S4–S6. https://doi.org/10.1016/j.jadohealth.2019.01.001

Cummiskey, J. (2020). Early AIDS Research in Rakai: Ugandan Experiences and Expertise in the Creation of the African AIDS Paradigm. *International Journal of African Historical Studies*, *53*(1), 1–26.

Dagadu, N. A., Barker, K. M., Okello, S. B. T., Kerner, B., Simon, C., Nabembezi, D., & Lundgren, R. I. (2022). Fostering gender equality and reproductive and sexual health among adolescents: Results from a quasi-experimental study in Northern Uganda. *BMJ Open*, *12*(3), e053203. https://doi.org/10.1136/bmjopen-2021-053203

Frye, M., & Urbina, D. R. (2020). Fearing Such a Lady: University Expansion, Underemployment, and the Hypergamy Ideal in Kampala, Uganda. *Journal of Family Issues*, *41*(8), 1161–1187. https://doi.org/10.1177/0192513X19886895

George, A. S., Amin, A., de Abreu Lopes, C. M., & Ravindran, T. K. S. (2020). Structural determinants of gender inequality: Why they matter for adolescent girls' sexual and reproductive health. *BMJ*, *368*, l6985. https://doi.org/10.1136/bmj.l6985

Giddens, A. (1992). *The Transformation of Intimacy*. Polity Press; Alexander Street database. https://search.alexanderstreet.com/view/work/bibliographic_entity%7Cdocument%7C4735799

Greene, M. E., & Stiefvater, E. (2019). *Social and gender norms and child marriage: A reflection on issues, evidence and areas of inquiry in the field*. ALIGN: London.

Heise, L., Greene, M. E., Opper, N., Stavropoulou, M., Harper, C., Nascimento, M., Zewdie, D., Darmstadt, G. L., Greene, M. E., Hawkes, S., Heise, L., Henry, S., Heymann, J., Klugman, J., Levine, R., Raj, A., & Rao Gupta, G. (2019). Gender inequality and restrictive gender norms: Framing the challenges to health. *The Lancet*, *393*(10189), 2440–2454.

Horowitz, J., Graf, N., & Livingston, G. (2019). *Marriage and Cohabitation in the US* (p. 53). Pew Research Center.

Hunter, M. (2007). The changing political economy of sex in South Africa: The significance of unemployment and inequalities to the scale of the AIDS pandemic. *Social Science & Medicine*, *64*(3), 689–700. https://doi.org/10.1016/j.socscimed.2006.09.015

Kenny, L., Koshin, H., Sulaiman, M., & Cislaghi, B. (2019). Adolescent-led marriage in Somaliland and Putland: A surprising interaction of agency and social norms. *Journal of Adolescence*, *72*, 101–111. Scopus. https://doi.org/10.1016/j.adolescence.2019.02.009

Kim, T. Y., Igras, S., Barker, K. M., Diakité, M., & Lundgren, R. I. (2022). The power of women's and men's Social Networks to catalyse normative and behavioural change: Evaluation of an intervention addressing Unmet need for Family Planning in Benin. *BMC Public Health*, *22*(1), 672. https://doi.org/10.1186/s12889-022-12681-4

Lapinski, M. K., & Rimal, R. N. (2005). An Explication of Social Norms. *Communication Theory*, *15*(2), 127–147. https://doi.org/10.1111/j.1468-2885.2005.tb00329.x

Levy, J. K., Darmstadt, G. L., Ashby, C., Quandt, M., Halsey, E., Nagar, A., & Greene, M. E. (2020). Characteristics of successful programmes targeting gender inequality and restrictive gender norms for the health and wellbeing of children, adolescents, and young adults: A systematic

review. *The Lancet Global Health*, *8*(2), e225–e236. https://doi.org/10.1016/S2214-109X(19)30495-4

Lokot, M., Sulaiman, M., Bhatia, A., Horanieh, N., & Cislaghi, B. (2021). Conceptualizing "agency" within child marriage: Implications for research and practice. *Child Abuse & Neglect*, *117*, 105086. https://doi.org/10.1016/j.chiabu.2021.105086

Lundgren, R., Burgess, S., Chantelois, H., Oregede, S., Kerner, B., & Kågesten, A. E. (2019). Processing gender: Lived experiences of reproducing and transforming gender norms over the life course of young people in Northern Uganda. *Culture, Health & Sexuality*, *21*(4), 387–403.

Malhotra, A., Amin, A., & Nanda, P. (2019). Catalyzing Gender Norm Change for Adolescent Sexual and Reproductive Health: Investing in Interventions for Structural Change. *Journal of Adolescent Health*, *64*(4), S13–S15. https://doi.org/10.1016/j.jadohealth.2019.01.013

Malhotra, A., & Elnakib, S. (2021). 20 Years of the Evidence Base on What Works to Prevent Child Marriage: A Systematic Review. *Journal of Adolescent Health*, *68*(5), 847–862.

Moore, E.V. (2019). *Women who pay their own brideprice? Love, money, and maintaining masculinity in Kampala's thriving wedding industry*. [Conference presentation]. Power(s) of Love: New Insights on Intimacy in Africa. 10-12 December 2019, Stone Town, Tanzania.

Muhanguzi, F. K., Bantebya-Kyomuhendo, G., & Watson, C. (2017). Social institutions as mediating sites for changing gender norms: Nurturing girl's resilience to child marriage in Uganda. *Agenda-Empowering Women for Gender Equity*, *31*(2), 109–119.

Nour, N. M. (2009). Child Marriage: A Silent Health and Human Rights Issue. *Reviews in Obstetrics and Gynecology*, *2*(1), 51–56.

Otoo-Oyortey, N., & Pobi, S. (2003). Early marriage and poverty: Exploring links and key policy issues. *Gender & Development*, *11*(2), 42–51. https://doi.org/10.1080/741954315

Padilla, M. B., Hirsch, J. S., Muñoz-Laboy, M., Sember, R. E., & Parker, R. G. (Eds.). (2007). *Love and Globalization*. Vanderbilt University Press; JSTOR.

Parikh, S. A. (2007). The Political Economy of Marriage and HIV: The ABC Approach, "Safe" Infidelity, and Managing Moral Risk in Uganda. *American Journal of Public Health*, *97*(7), 1198–1208. https://doi.org/10.2105/AJPH.2006.088682

Porter, G., Hampshire, K., Abane, A., Munthali, A., Robson, E., De Lannoy, A., Tanle, A., & Owusu, S. (2020). Mobile phones, gender, and female empowerment in sub-Saharan Africa: Studies with African youth. *Information Technology for Development*, *26*(1), 180–193.

Pulerwitz, J., Blum, R., Cislaghi, B., Costenbader, E., Harper, C., Heise, L., Kohli, A., & Lundgren, R. (2019). Proposing a Conceptual Framework to Address Social Norms That Influence

Adolescent Sexual and Reproductive Health. *Journal of Adolescent Health*, *64*(4), S7–S9. https://doi.org/10.1016/j.jadohealth.2019.01.014

Raj, A. (2010). When the mother is a child: The impact of child marriage on the health and human rights of girls. *Archives of Disease in Childhood*, *95*(11), 931–935.

Santelli, J., Mathur, S., Song, X., Huang, T. J., Wei, Y., Lutalo, T., Nalugoda, F., Gray, R. H., & Serwadda, D. M. (2015). Rising School Enrollment and Declining HIV and Pregnancy Risk Among Adolescents in Rakai District, Uganda, 1994-2013. *Global Social Welfare: Research, Policy & Practice*, *2*(2), 87–103. https://doi.org/10.1007/s40609-015-0029-x

Santelli, J. S., Chen, I. S., Nabukalu, D., Lutalo, T., Spindler, E. J., Chang, L. W., Grabowski, M. K., Grilo, S. A., Kreniske, P., Wei, Y., Nalugoda, F., Hoffman, S., Maru, M., Chu, S., Ssewamala, F. M., Byansi, W., Kagaayi, J., Wawer, M. J., Gray, R. H., … Makumbi, F. (2022). HIV combination prevention and declining orphanhood among adolescents, Rakai, Uganda, 2001–18: An observational community cohort study. *The Lancet HIV*, *9*(1), e32–e41.

Smith, D. J. (2020). Masculinity, Money, and the Postponement of Parenthood in Nigeria. *Population and Development Review*, *46*(1), 101–120. https://doi.org/10.1111/padr.12310

Smith, D. R., Gordon, A., Meadows, K., & Zwick, K. (2001). Livelihood diversification in Uganda: Patterns and determinants of change across two rural districts. *Food Policy*, *26*(4), 421–435. https://doi.org/10.1016/S0306-9192(01)00012-4

Social Norms Lexicon. February 2021. Washington, D.C.: Institute for Reproductive Health, Georgetown University for the U.S. Agency for International Development (USAID).

Steinhaus, M., Hinson, L., Rizzo, A. T., & Gregowski, A. (2019). Measuring Social Norms Related to Child Marriage Among Adult Decision-Makers of Young Girls in Phalombe and Thyolo, Malawi. *Journal of Adolescent Health*, *64*(4, Supplement), S37–S44.

Stewart, R., Wright, B., Smith, L., Roberts, S., & Russell, N. (2021). Gendered stereotypes and norms: A systematic review of interventions designed to shift attitudes and behaviour. *Heliyon*, *7*(4), e06660. https://doi.org/10.1016/j.heliyon.2021.e06660

Taylor, A. Y., Murphy-Graham, E., Van Horn, J., Vaitla, B., Del Valle, Á., & Cislaghi, B. (2019). Child Marriages and Unions in Latin America: Understanding the Roles of Agency and Social Norms. *Journal of Adolescent Health*, *64*(4), S45–S51. Scopus.

Tolley, E. E., Ulin, P. R., Mack, N., Robinson, E. T., & Succop, S. M. (2016). *Qualitative methods in public health: A field guide for applied research* (2nd ed.). Jossey-Bass.

Uganda Bureau of Statistics (UBOS) and Macro International Inc. (2007). Uganda Demographic and Health Survey 2006. Calverton, Maryland, USA: UBOS and Macro International Inc.

UBOS and ICF. (2018). Uganda Demographic and Health Survey 2016. Kampala, Uganda and Rockville, Maryland, USA: UBOS and ICF.

UBOS. (2021). "Proportion of Poor Persons 1999_00 to 1999_2020" UBOS Income, Expenditure, Poverty Online Statistics. Updated on 12th August, 2021. Retrieved from: https://www.ubos.org/explore-statistics/33/

Uganda National Planning Authority (2007). Uganda Vision 2040. Government of Uganda. Retrieved from: http://www.npa.go.ug/wp-content/uploads/2021/02/VISION-2040.pdf

UNICEF. (2022). Child Marriage Database. Last updated May 2022. UNICEF. Retrieved from: https://data.unicef.org/topic/child-protection/child-marriage/

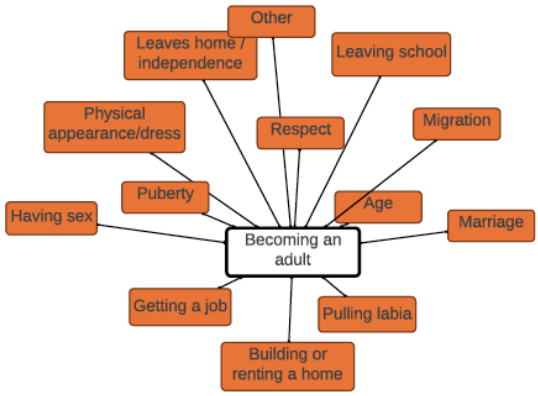
UNICEF. (2021). *Towards Ending Child Marriage: Global trends and profiles of progress*. https://data.unicef.org/resources/towards-ending-child-marriage/

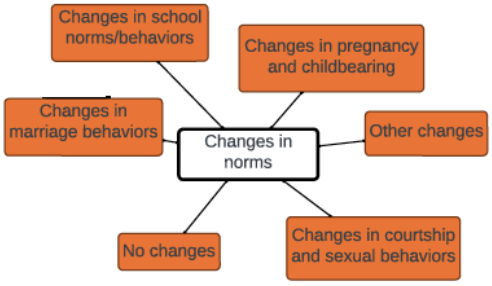
Viner, R. M., Ozer, E. M., Denny, S., Marmot, M., Resnick, M., Fatusi, A. O., & Currie, C. E. (2012). *Adolescent Health 2 Adolescence and the social determinants of health*.

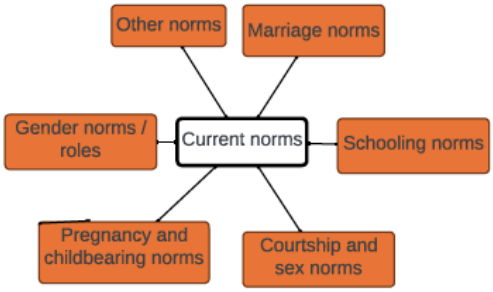
Wardlow, H., & Hirsch, J. S. (2006). *Modern loves: The anthropology of romantic courtship & companionate marriage*. University of Michigan Press.

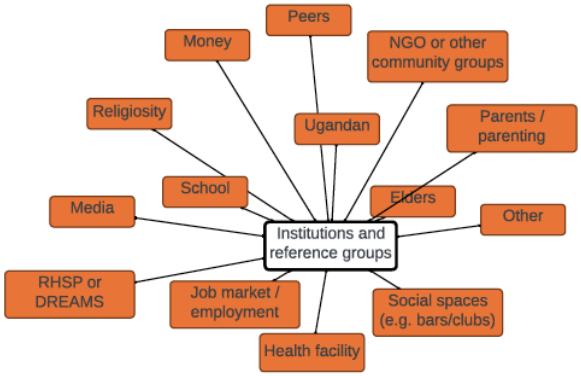
World Health Organization (WHO). (2010). *Social Determinants of Sexual and Reproductive Health: Informing future research and programme implementation*. WHO.

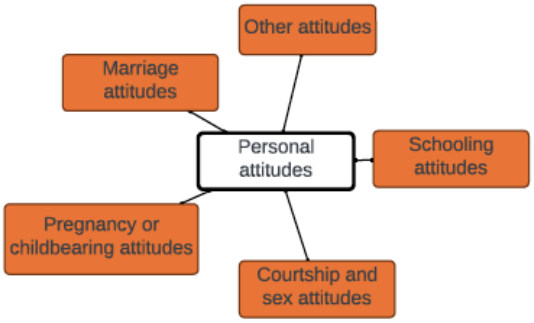
CHAPTER 3 APPENDIX 1: PARENT AND CHILD CODE DIAGRAMS

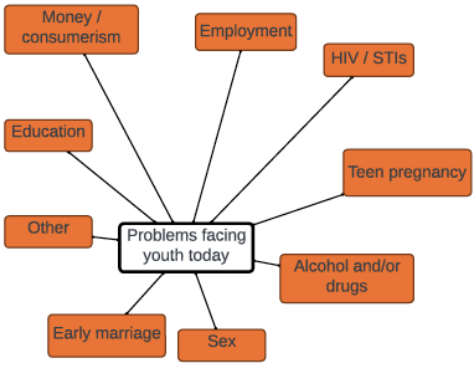


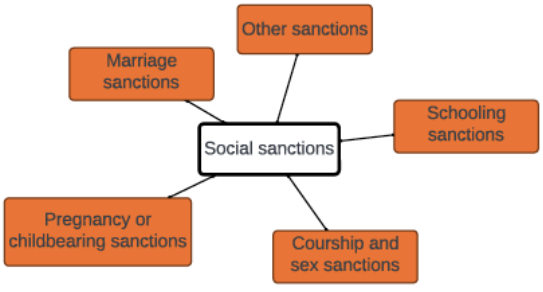












[*Note:* Codebook diagrams made using Lucidchart visualization app: https://www.lucidchart.com/]

CHAPTER 3 APPENDIX 2: FULL CODEBOOK

Id	Parent Id	Code	Code Description
1		**Becoming an adult**	**Use this code whenever anyone answers what it means to become an adult (it could be related to puberty, marriage, job seeking, etc).**
2	1	Age	Use this code when a participant mentions that becoming an adult depends on reaching a certain age (e.g. becoming 18 years old).
3	1	Building or renting a home	Use this code whenever anyone answers that building a home, renting a home or buying land is a sign of becoming an adult (particularly for young men).
4	1	Getting a job	Use this code whenever anyone answers that getting a job is a sign of becoming an adult (particularly for young men).
5	1	Having sex	Use this code whenever anyone answers that having sex is a sign of becoming an adult.
6	1	Leaves home / independence	Use this code when a participant mentions that becoming an adult when one becomes independent and/or leaves their childhood home. For example, when one has to leave the home and become an adult due to an unstable or conflictive home environment.
7	1	Leaving school	Use this code when a participant mentions that becoming an adult happens when someone leaves school.
8	1	Marriage	Use this code whenever anyone answers that getting married is a sign of becoming an adult.
9	1	Migration	Use this code whenever anyone answers that migrating to another community is a sign of becoming an adult.
10	1	Other	Use this code for any excerpts that do not fit in the other child code categories under "becoming an adult."
11	1	Physical appearance/dress	Use this code whenever anyone answers that one's physical and clothing appearance is a sign of becoming an adult (for example, girls wearing shorter skirts, and boys wearing longer pants).
12	1	Pregnancy or children	Use this code whenever anyone states that become pregnant or having children is a sign of becoming an adult.
13	1	Puberty	Use this code whenever anyone answers that undergoing puberty is a sign of becoming an adult (for example, starting menstruation for girls, 'pulling' labia for girls, or growth of facial/body hair for boys).
14	1	Pulling labia	Use this code when a participant talks about pulling labia as a marker of either adulthood or womanhood (typically done when a woman reaches womanhood)
15	1	Respect	Use this code whenever anyone answers that being respectful of others (in language, greetings, or otherwise) or being respected in their community is a sign of becoming an adult.
16		**Changes in norms**	**Use this code whenever anyone mentions any changes in sex, courtship, pregnancy or marriage norms from when they were young to now, or between parents/offspring generations.**
17	16	Changes in courtship and sexual behaviors	Use this code whenever anyone mentions any changes in courtship and sexual activity norms from when they were young to now, or between parents/offspring generations (this include new courtship patterns, including 'detoothing a man')
18	16	Changes in marriage behaviors	Use this code whenever anyone mentions any changes in marriage norms from when they were young to now, or between parents/offspring generations (for example marrying earlier or later; or co-habitating with their partner rather than undergoing a customary marriage ceremony).
19	16	Changes in pregnancy and childbearing	Use this code whenever anyone mentions any changes in norms around adolescent pregnancy from when they were young to now, or between parents/offspring generations.
20	16	Changes in school norms/behaviors	Use this code whenever anyone mentions any changes in schooling behaviors or norms from when they were young to now, or between parents/offspring generations (for example when someone says that youth stay in school longer/shorter amount of time, or when school fees being more expensive comes up in the conversation).
21	16	No changes	Use this code whenever anyone mentions that there HAVE NOT been any changes in a type of norm from when they were young to now, or between parents/offspring generations.
22	16	Other changes	Use this code for any excerpts that do not fit in the other child code categories under "changes in norms."
23		**Current norms**	**Use this code when a participant talks about CURRENT typical or expected noms (or typical or expected behaviors) in their community related to marriage, pregnancy or courtship/sex**
24	23	Courtship and sex norms	Use this code when a participant talks about CURRENT typical or expected norm or behavior in their community related to courtship and sexual behaviors (this can include 'detoothing' a man)
25	23	Gender norms / roles	Use this code when a participant talks about CURRENT typical or expected gender norms or roles for men and women in their community (this is typically discussed when participants are asked about 'what does it mean to be a good/bad woman/man').
26	23	Marriage norms	Use this code when a participant talks about CURRENT typical or expected norm or behavior in their community related to marriage among young people
27	23	Other norms	Use this code for any excerpts that do not fit in the other child code categories under "current norms."
28	23	Pregnancy and childbearing norms	Use this code when a participant talks about CURRENT typical or expected norm or behavior in their community related to pregnancy and/or childbearing
29	23	Schooling norms	Use this code when a participant talks about CURRENT typical or expected noms (or typical or expected behaviors) in their community related to schooling

30		**Institutions and reference groups**	**Use this code when participant talks about influential institutions or groups that might affect youth behaviors in their community, such as schooling, social media, employment sector, religious groups, peers and parents.**
31	30	Elders	Use this code when participant talks about community elders influencing or NO longer influencing youth behaviors in their community (including how youth no longer respect or follow elders' advice).
32	30	Health facility	Use this code when participant brings up government or private health facilities when talking about a particular youth
33	30	Job market / employment	Use this code when participant brings up a job, employment or job market when talking about a particular youth behavior.
34	30	Media and phones	Use this code when participant talks about media and/or cell phone relating to youth behaviors in their community (for example, when participants perceive TV, social media or cell phones to be 'bad influences' on youth).
35	30	Money	Use this code when participant talks about increased access and use of money in relation to youth behaviors in their community (including how money influences youth courship and sex).
36	30	NGO or other community groups	Use this code when participant talks about the role of NGO or other community groups (like savings groups) in influencing youth behaviors.
37	30	Other	Use this code for any excerpts that do not fit in the other child code categories under "key institutions and reference groups."
38	30	Parents / parenting	Use this code when participant brings up parents, parenting or a home environment when talking about a particular youth behavior (including how parents should guide youth in their life, school and marriage goals).
39	30	Peers	Use this code when participant talks about friends or peers in relation to youth behaviors in their community (including peers pressuring youth to take up certain behaviors).
40	30	Religiosity	Use this code when participant talks about their religion or their religious institution in relation to youth behaviors in their community (such as God, church or a mosque).
41	30	RHSP or DREAMS	Use this code when participant talks about the role of RHSP or the DREAMS program in their community
42	30	School	Use this code when participant talks about how schooling might relate to youth behaviors in their community (this includes any excerpts about school fees, leaving school, and desires to study in school longer, etc).
43	30	Social spaces (e.g. bars/clubs)	Use this code when participant brings up a type of social space (e.g. a disco, bar, club) when talking about a particular youth behavior. This code could also be used for the mention of gambling/ betting.
44	30	Ugandan laws	Use this code when a participants mentions age of majority law (this includes the legal age of adulthood that is set to 18 years, minimum age at marriage laws (also set to 18 years), and/or sex defilement laws (where age of sexual consent is set to 18 years).
45		**Personal attitudes**	**Use this code to practice coding any excerpt that is a personal attitude about sex, pregnancy, marriage or schooling (AND IS NOT A SOCIAL NORM). An example of a personal attitude is "I believe or think that girls should marry at 18 years old," whereas a social norm is "Most girls in my community marry at 18 years old" (and this is a descriptive norm more specifically).**
46	45	Courtship and sex attitudes	Use this code to practice coding any excerpt that is a personal attitude about courtship and sex (AND IS NOT A SOCIAL NORM).
47	45	Marriage attitudes	Use this code to practice coding any excerpt that is a personal attitude about marriage (AND IS NOT A SOCIAL NORM). An example of a personal attitude is "I believe or think that girls should marry at 18 years old," whereas a social norm is "Most girls in my community marry at 18 years old" (and this is a descriptive norm more specifically).
48	45	Other attitudes	Use this code to practice coding any excerpt that is any other personal attitude (AND IS NOT A SOCIAL NORM).
49	45	Pregnancy or childbearing attitudes	Use this code to practice coding any excerpt that is a personal attitude about pregnancy or childbearing (AND IS NOT A SOCIAL NORM).
50	45	Schooling attitudes	Use this code to practice coding any excerpt that is a personal attitude about schooling (AND IS NOT A SOCIAL NORM).
51		**Problems facing youth today**	**Use this code for any excerpts that describe the main problems facing youth today (could be issues related to HIV, poverty, pregnancy, etc).**
52	51	Alcohol and/or drugs	Use this code for any excerpts that describe alcohol and/or drugs as the main problems that youth face today.
53	51	Early marriage	Use this code for any excerpts that describe adolesent/early marriage as the main problems that youth face today.
54	51	Education	Use this code for any excerpts that describe lack of education or school drop out as the main problems that youth face today.
55	51	Employment	Use this code for any excerpts that describe lack of employment or employment issues as the main problems that youth face today.
56	51	HIV / STIs	Use this code for any excerpts that describe HIV and STIs as the main problems that youth face today.
57	51	Money / consumerism	Use this code for any excerpts that describe access and use of money, or consumerism ("to admire"), as the main problems that youth face today.
58	51	Other	Use this code for any excerpts that describe other issues as the main problems that youth face today.
59	51	Sex	Use this code for any excerpts that describe sex and sexual behaviors as the main problems that youth face today.
60	51	Teen pregnancy	Use this code for any excerpts that describeteenage pregnancy as the main problems that youth face today.
61		**Social sanctions**	**Use this code when a participant describes a punishment or reward related to a specific norm. A punishment could be for example, experiencing shame or stigma as a result of violating or going against a specific norm; a reward could be for example, gaining respect as a result of abiding with or being in compliance with a norm. This code can also be used for when participants answer what it means to be a "good/bad woman or man." THESE CODES SHOULD ALWAYS BE DOUBLE-CODED WITH EITHER "CURRENT NORMS" OR "CHANGES IN NORMS."**
62	61	Courship and sex sanctions	Use this code when a participant describes a punishment or reward related to a courtship or sex norm. A punishment could be for example, experiencing shame or stigma as a result of violating or going against a specific norm; a reward could be for example, gaining respect as a result of abiding with or being in compliance with a norm. This code can also be used for when participants answer what it means to be a "good/bad woman or man."
63	61	Marriage sanctions	Use this code when a participant describes a punishment or reward related to a marriage norm. A punishment could be for example, experiencing shame or stigma as a result of violating or going against a specific norm; a reward could be for example, gaining respect as a result of abiding with or being in compliance with a norm. This code can also be used for when participants answer what it means to be a "good/bad woman or man."
64	61	Other sanctions	Use this code when a participant describes a punishment or reward related to an other type of norm. A punishment could be for example, experiencing shame or stigma as a result of violating or going against a specific norm; a reward could be for example, gaining respect as a result of abiding with or being in compliance with a norm. This code can also be used for when participants answer what it means to be a "good/bad woman or man."
65	61	Pregnancy or childbearing sanctions	Use this code when a participant describes a punishment or reward related to a pregnancy or childbearing norm. A punishment could be for example, experiencing shame or stigma as a result of violating or going against a specific norm; a reward could be for example, gaining respect as a result of abiding with or being in compliance with a norm. This code can also be used for when participants answer what it means to be a "good/bad woman or man."
66	61	Schooling sanctions	Use this code when a participant describes a punishment or reward related to a schooling norm. A punishment could be for example, experiencing shame or stigma as a result of violating or going against a specific norm; a reward could be for example, gaining respect as a result of abiding with or being in compliance with a norm. This code can also be used for when participants answer what it means to be a "good/bad woman or man."
67		**Stellar quotes!**	**Use this code for any excerpts that stand out to you as excellent or surprising illustrative quotes.**

Conclusion

Taken together, these findings highlight the complexity of adolescent marriage change and prevention efforts globally, nationally and in the southcentral region of Uganda. First, global and national 'child marriage' movements played significant roles in policy uptake in Uganda, molding the issue from one of 'adolescent sexuality' to one of 'child protection.' Yet looking at the context of southcentral Uganda, adolescent pregnancy and marriage declines appear to be closely linked, highlighting the importance of reframing adolescent marriage as not just a child protection issue, but as an issue of adolescent sex and sexuality. As well, the findings from Chapter 2 affirm the importance of education in preventing adolescent marriage in Uganda, but also call attention to the role of adolescent pregnancies in explaining the protective effect of education. Last, I find that broader structural and social changes in Rakai have substantially changed adolescent norms around sex, courtship, and marriage, delaying age at marriage in between generations. However, young people are encountering new and unaddressed challenges as they enter adulthood and romantic relationships in the absence of pre-existing family and elder supportive systems.

While the dramatic declines in adolescent marriage in Rakai, Uganda, should be celebrated, the global and national focus on delaying age at marriage may ultimately sideline other emerging problems that adolescents may be facing as they enter adulthood. As shown in Chapter 3, these new and recurring problems include lack of overall parental and familial guidance in the relationship formation process, continued risks to STIs and HIV, and unwanted teenage pregnancies. These findings point to a paradox in adolescent marriage programs and investments which on one hand, have tried to focus on the 'root' structural drivers of adolescent marriages, while at the same time, focusing on 'delaying at marriage' as a marker of movement success. Rather than focusing on age at marriage as a marker of social change, future research and programs

should focus on the sexual, social, and economic structures transforming courtship and marriage processes for adolescents and young people.

Using adolescent marriage as a case study, this dissertation research provides a comprehensive understanding of how structural, sexual, and normative factors influence girls' marital changes, propping open important doorways for future programs and research in Uganda and East Africa. First, the area of Rakai, Uganda is a unique context with over two decades of global health and development work, driven largely by the start of the HIV epidemic in the late 1980s in the region. The substantial economic and educational improvements seen in the region appear to have affected adolescent marriages and pregnancies, reminding us that behavior change does not happen overnight, or with one intervention or program. Specifically, the long-term investments and changes occurring in Rakai provide strong evidence toward funding long-term investments and perhaps, over decades to observe substantial changes in adolescent SRH behaviors.

From a research perspective, national and sub-regional studies are needed to compare large-scale drivers of adolescent marriage changes across different contexts. Second, additional research is warranted to assess whether declines in adolescent marriage in southcentral Uganda -- and elsewhere -- are occurring due to increasing cohabitation patterns and informalization of marriages among adolescents and young people. Relatedly, the growing presence of informal 'come we stay' and cohabitation unions among young people should be better incorporated in current qualitative and quantitative instruments in East Africa, including the RCCS in Rakai, Uganda. As well, adolescent marriage research and programs should expand upon their conceptualization and measurement definitions of transformational change, beyond age at marriage measurements. As more funding continues to be invested toward adolescent marriage

programs, additional research should focus on understanding the unintended consequences of catalyzing norm change and delaying age at marriage, including how these changes might affect familial and community relationships and kinships.

Looking toward the future, an ongoing tension for the 'child marriage' movement will be balancing the buy-in appeal of its 'child protection' message, with the need to address more downstream factors such as sexuality and gender norms that contribute adolescent marriages. In the context of Uganda specifically, the topic of adolescent sex and sexuality is politically fraught, making the political brand of 'child' marriage particularly attractive to more conservative political and religious stakeholders. Yet, these findings suggest that 'child marriage' prevention efforts have not adequately centered the issue of adolescent sexuality and pregnancies, pointing to an urgent need to better integrate sexuality education and pregnancy prevention efforts in adolescent marriage policies and programs. To end adolescent marriage in the context of East Africa as per Sustainable Development Goal (SDG) Target 5.3, stronger investments toward adolescent pregnancy prevention are urgently warranted, including systems-based programs and policies that address norms and issues related to sex, contraception, and sexuality among girls and boys.

Twenty years into the global push to end 'child marriage', this dissertation research provides new insights into the complex structural, social and sexuality drivers of adolescent marriage changes in Uganda. Despite the substantial progress in adolescent marriage declines, this research points to key gaps that will need to be addressed to improve adolescent SRH rights and needs in Uganda, the East African region, and beyond. Of particular importance is the need to center adolescent sexuality within current child marriage efforts, as well as focusing on the broader social changes affecting adolescent relationship formation, rather than exclusively focusing on age at marriage as a marker of social change.