The Timing and role of Initiation Rites in Preparing Young People for Adolescence and Responsible Sexual and Reproductive Behaviour in Malawi

Alister C. Munthali[1] *and Eliya M. Zulu*[2]*,*

Abstract

This paper examines timing of puberty and mechanisms through which society prepares adolescents to understand and deal with it in Malawi. Data from a national representative survey of adolescents and in-depth interviews also conducted with adolescents are used. SPSS was used to analyse survey data while N6 was used to analyse qualitative data. Results show that the onset of menarche in girls and various pubertal body changes in boys can be a cause of joy, excitement, or distress depending on how adolescents understand what this means to them at this critical stage when they start defining and comprehending their sexuality. Much more emphasis is put on educating girls about reproductive implications of menarche than on what is expected of boys as sexual beings, which may contribute to boys' greater indulgence in risky sexual behaviors than girls. The significance of initiation ceremonies in some communities provides an important platform through which programs can reach many adolescents and intervene, particularly in addressing the widely held notion among initiates that attending these ceremonies symbolizes that one is not a child anymore and can have sex. (*Afr J Reprod Health* 2007; 11[3]:150-167)

Résumé

Détermination du moment et le rôle des rites d'initiation pour préparer les jeunes gens pour l'adolescence et pour un comportement de reproduction et sexuel responsable au Malawi. Cet article étudie la détermination du moment de la puberté et les mécanismes à travers lesquels la société préparent les adolescents à la comprendre et à s'en occuper au Malawi. On s'est servi des données tirées d'une enquête à représentation nationale des adolescents et des interviews en profondeur menées auprès des adolescents. Les données de l'enquête ont été analysées à l'aide de SPSS alors que les données qualitatives ont été analysées à l'aide de N6. Les résultats montrent que le commencement de l'établissement de la menstruation chez les filles et des modifications corporelles pubertaires chez les garçons peuvent causer la foie, l'excitation ou la détresse selon la manière dont les adolescents comprennent ce que ceci représente pour eux à ce stade critique où ils commencent à comprendre leur sexualité. On met beaucoup plus d'accent sur l'éducation des filles au sujet des implications de l'établissement de la menstruation sur la reproduction que sur ce qui peut arriver aux garçons en tant que des êtres sexuels; ce qui peut contribuer davantage à l'indulgence par les garçons aux comportements sexuels risqués. La signification des cérémonies d'initiation dans certaines communautés fournit une tribune à travers laquelle des programmes peuvent atteindre beaucoup d'adolescents et intervenir surtout en s'occupant de la notion bien répandue parmi les initiés que la fréquentation à ces cérémonies symbolise que l'on n'est plus un enfant et que l'on peut donc avoir des rapports sexuels. (*Rev Afr Santé Reprod* 2007; 11[3]:150-167).

Key Words: *adolescents, initiation ceremonies, HIV/AIDS, Malawi*

[1]*Centre for Social Research, University of Malawi. Email: amunthali@csrunima.org*

[2]*African Population and Health Research Centre, Kenya. Email: ezulu@aphrc.org*

Introduction

Anthropologists working in African societies have described the various rites marking the transition from one critical stage of life to another. For example, Richard's classical work on the *chisungu* describes the rites Bemba girls undergo as they grow into womanhood[1]. Various scholars have also described other critical stages such as birth, marriage and death; and the rites and traditions that African societies conduct in relation to these transitions[2]. For example, there have been reports about the Sena of Malawi requiring a woman whose husband died to have sex with another man to please the dead and prevent bad omen happening to the widow and other relatives in the village[3]. There are also various rites that are conducted following birth of a child to protect infants from various diseases[4].

These rituals and associated ceremonies constitute what van Gennep calls the Rites of Passage[5]. There are three phases that constitute the rites of passage namely: the rites of separation, the rites of transition, and the rites of incorporation. During rites of transition, initiates are given instructions and advice in preparation for their expected new roles in society. For instance, puberty rites mark the transition into a sexual world[5]. The somatic and other changes that occur at puberty are set in motion by the increase in the levels of testosterone and oestrogen that occur at puberty. During puberty, girls and boys experience various body changes such as: growth in height and weight; growth of pubic and axillary hair; genital development; development of acne and other skin eruptions; growth of facial hair and deep voices for boys; and growth of breasts for girls.[6-7] The onset of menarche in girls and the ability to ejaculate seminal fluid in boys constitute major milestones marking the end of childhood and the beginning of the biological ability of boys and girls to have children.[6, 8]

The period of adolescence has been described as a period of *storm and stress* arising out of, among other factors, the dramatic physical maturation processes.[9] The experience of pubertal changes may be associated with excitement, anxiety, distress and other psychological problems depending on the expectations and understanding of what the changes signify and mean. The growing interest in understanding the formulation of adolescents' sexuality has been brought about by the mounting evidence that they are uniquely vulnerable to sexually transmitted infections (including HIV/AIDS) and unplanned pregnancies. Adolescents' exposure to out-of-wedlock sex has been increasing over time because they are maturing earlier and marrying later than previous generations did. Globally, the ages at first menstruation for girls and the experience of first pubertal body changes/wet dreams are dropping mostly as a result of better nutrition and socio-economic status.[7]

While many studies have examined the timing of pubertal changes and their implications for sexual and reproductive health, there is scanty evidence demonstrating how adolescents experience the process of puberty and how prepared they are to correctly interpret and understand the associated pubertal body changes. Yet, examination of such processes could help understand how boys and girls in different cultures and settings define and comprehend their sexuality and what is expected of them as sexual beings. This paper contributes to filling this knowledge gap by examining contexts in which Malawian boys and girls experience puberty, how society prepares them to deal with various challenges associated with this life-changing transition, and the meanings that the adolescents attach to various pubertal changes and associated rituals. The paper uses quantitative data to examine timing of pubertal changes for boys and girls and the extent to which puberty is marked by initiation ceremonies and rites in the country. We then use qualitative data in order to understand how adolescents know about issues

relating to sexuality and what meanings they attach to various puberty changes as they experience them. Furthermore, we examine the nature of information that is imparted to adolescents in initiation ceremonies in order to assess the extent to which such institutional socialization systems prepare adolescents for the challenges associated with their sexual development during puberty and later in life. The potential implications of these findings for sexual and reproductive health are explored in the discussion section.

Data

We use data from the *Protecting the Next Generation: Understanding HIV Risk among Youth* (PNG) project which was conducted by The Guttmacher Institute and partner research institutions in Burkina Faso, Ghana, Kenya, Malawi, and Uganda between 2002 and 2006. The goal of this project was to provide an in-depth understanding of adolescent behaviors, attitudes and motivations which make them vulnerable to HIV/AIDS, other STIs and unwanted pregnancy.

This paper is based on 102 in-depth interviews (IDIs) conducted in Malawi with male and female in-school and out-of-school adolescents and married and unmarried adolescents aged 12-19 in October/November 2003. There were 48 interviews with males and 54 interviews with females. Fifty one of the IDIs were done in Blantyre City; while the rest were spread over 4 rural districts of Mangochi (13) in the Southern Region; Mchinji (13) and Ntchisi (14) in the Central Region; and Rumphi (11) in the Northern Region. The distribution of these IDIs was meant to capture Malawi's major three ethnic groups namely the Chewa, Tumbuka and Yao. Fifteen (15) other interviews were conducted with "special groups" of adolescents who were not resident in typical households, including those who lived or worked on the streets and orphans living in orphanages. This group was targeted to assess the extent to which they face unique risks compared to adolescents who live in households. In urban Blantyre, 4 enumeration areas were selected, one each in Zingwangwa, Ndirande, Bangwe and Chilomoni residential areas. All these areas are low income residential areas. In each of the selected enumeration areas, a centre was determined and households were randomly selected by visiting every 6th household. The target was to interview adolescents aged 12-19 years old and if an adolescent belonging to this age group was not present in the household then we went to the next household until we had the required number of respondents. Social mapping was used to identify respondents in the rural districts. These interviews were conducted by young men and women aged 17-25 years old (with matched gender for respondents and interviewers) and were done in three languages: Chichewa, Yao and Tumbuka. All interviews were tape-recorded, transcribed and translated into English by specially trained research assistants. The qualitative analysis software N6 was used to analyze the IDIs. Among other issues, the IDIs collected information on reported pubertal body changes and the experiences and reactions of adolescents to these changes [10] and how society prepares them for these changes.

This paper also draws on data from the Malawi PNG project survey, which was carried out to produce nationally representative data on knowledge, attitudes and practices that put adolescents at risk of HIV infection or unintended pregnancies. It was conducted between March and August 2004. A total of 2,027 female and 2,101 male adolescents were interviewed. A number of questions relating to pubertal body changes and participation in initiation rites such as circumcision were asked.[11] These data are used in this study to examine the timing of menarche and the percentage of adolescents who participated in initiation or puberty rites. The quantitative data was analysed using SPSS.

Results

Timing of first experience of pubertal changes and participation in initiation rites

In the survey, female adolescents were asked the question: "As girls grow into women changes happen to their bodies, such as the start of menstrual periods. At what age did you have your first menstrual period, or have you not had one yet?" Boys were asked: "As boys grow into men, certain changes happen to their bodies, such as growing pubic hair, voices get deeper, or sometimes they have "wet dreams". At what age did you first notice any of these changes happening in your body, or have none happened yet?" Since there is no specific body change or development in boys that marks puberty in the same way that onset of menstrual periods marks puberty for girls, the reports for boys are bound to be more prone to recall and specificity errors than the reports from girls.

Table 1 shows the percentage of girls who reported that they had started menstruation and boys who reported that they had experienced various pubertal body changes. As expected, older adolescents were more likely to have experienced pubertal changes than younger adolescents for both boys and girls. The big difference between the two age categories indicates that most adolescents experience pubertal changes after age 15. The data show that rural residents slightly are more likely to report that they experienced pubertal changes than urban residents, and that there were no marked differences across the three administrative regions in Malawi, with the exception of the young boys in the North (24%) who were substantially less likely to report that they had experienced pubertal changes than boys in the other two regions (32-37%).

The median age at menarche for girls was 15 years, while the median age when boys started experiencing pubertal body changes was 14 years. The data on menarche compare quite closely with data from other sources in Malawi. For example, the Malawi Diffusion and Ideational Change study conducted in the three regions of the country since 1998 show a median age of menarche of 14.9 years.[24] There were no rural-urban differences in the timing of onset of pubertal changes for boys; however, the onset of menarche was one year earlier for urban-based girls than it was for their rural-based counterparts. Likewise, girls in the north also start menstruation about a year earlier than girls in the other two regions. The regional and rural-urban differences are in line with what one would expect in that girls in the areas with better nutritional and health indicators initiate menstruation relatively early. As noted above, menarche for girls is more distinct and dramatic than the other body changes such as growth of breasts and growth of pubic hair which are experienced much earlier. So, the sex differences in the median age when they experience pubertal changes noted above may be more reflective of the difference in the distinctiveness of the changes that boys and girls were referring to as opposed to differences in the actual age when boys and girls mature.

A number of anthropological studies have described the elaborate ceremonies that various African societies practice to mark the transition from childhood to adulthood. In the PNG survey, adolescents were asked whether they had ever attended such a ceremony using the following questions: "Now I would like to ask you some questions about growing up. Have you ever participated in a puberty or initiation rite?" The responses to this question are presented in Table 2. The data show that girls are more likely to attend these ceremonies than boys; 43% of females and 33% of males reported they had participated in an initiation or puberty rite. Again, as expected, older adolescents are more likely to have attended the ceremonies than the younger ones. Rural adolescents (40%) were also more likely to attend puberty rites than urban adolescents (32%), although the difference was

more pronounced for boys than for girls. The differences remained virtually the same when we consider place of childhood residence.

The big regional differences in the percentage of adolescents who reported that they participated in, or attended an initiation rite demonstrate that these rites are strongly rooted in strikingly different cultures prevalent in the three regions. Both boys and girls in the Southern region are more likely to have undergone such rites than boys and girls in the other two regions. About 43% of males in the Southern Region reported participating in initiation or puberty rites; followed by the centre at 32% and the north at 6%. The survey also showed that 57% of females in the south underwent an initiation or puberty rite; followed by the Northern Region (44%) and the Central Region (26%). The ethnic differences closely mirror the regional differences in that the most dominant ethnic groups in the Southern Region (the Yao and the Lomwe) reported the highest attendance of initiation rites. The vast majority of Yao boys (73%) and girls (75%) reported that they participated in initiation rites. About 46% of Lomwe boys and 60% of girls attended the initiation rites. Less than 32% of the adolescents in the dominant group in the central region (Chewas) attended initiation ceremonies. The low percentage of boys who were initiated in the Northern region and among its dominant ethnic groups (Tumbukas and Tongas) shows that this practice is quiet alien in the region.

The differences by religious affiliation show that initiation ceremonies are strongly promoted and adhered to among Muslims, where over 80% of both boys and girls participated in a pubertal rite. Among the three Christian groups between 22-28% of boys and 32-40% of girls reported

Table 1: **Experience of and age at first menstruation and other pubertal changes among adolescents by sex, age, and residence Malawi, 2004**

Characteristic	Male			Female		
	12-14 (N=943)	15-19 (N=1,055)	Total (N=1,998)	12-14 (N=908)	15-19 (N=1125)	Total (N=2033)
Experienced menstruation/male puberty changes						
All Areas	19.05	80.95	52.25	23.11	76.89	55.85
Place of Residence						
Urban	32.6	89.7	64.5	21.8	87.1	55.1
Rural	41.0	95.8	71.4	26.9	94.6	64.9
Region of Residence						
Central Region	32.4	89.7	66.1	17.7	88.1	52.9
Northern Region	23.8	93.2	63.9	26.0	91.3	59.6
Southern region	36.7	91.6	67.2	26.3	89.1	60.5
Median age at first menstruation/male puberty changes						
All Areas			14.0			15
Place of Residence						
Urban			14			14
Rural			14			15
Region of Residence						
Central Region			15			16
Northern Region			15			15
Southern region			14			16

that they participated in such rites. A close examination of region, religion and ethnicity shows that there is a strong relationship between the Yao ethnic group and Islam; 80% of Muslims in this survey were Yaos, 75% of all Yaos were Muslims, and 78% of all Muslims were resident in the Southern region.

Circumcision is one of the most commonly practiced rites of passage in many African societies outside the southern African region. PNG survey respondents were also asked if they were aware of circumcision and whether they had been circumcised themselves, using the following questions: "Have you heard of female/ male circumcision? … Have you yourself been circumcised? … How old were you when you were circumcised? ". The data (Table 3) show that the practice of female circumcision is very uncommon in Malawi (only 2% were circumcised), while male circumcision is mostly practiced in the Southern region among Yaos and Muslims. While only 21% of the boys had been

Table 2: **Percentage of adolescents who reported that they attended an initiation ceremony after attaining puberty by background factors, Malawi, 2004**

Characteristic	Male			Female		
	12-14 (N=906)	15-19 (N=1,146)	Total (N=2,052)	12-14 (N=945)	15-19 (N=1033)	Total (N=1978)
All Areas	22.3	37.9	32.8	29.7	55.0	42.9
Place of Residence						
Urban	22.5	28.5	25.8	21.0	51.3	38.0
Rural	27.4	41.0	35.0	32.4	56.4	44.6
Place of Childhood Residence						
City	20.0	26.9	24.1	18.5	71.4	41.7
Town	20.0	28.2	24.5	23.7	53.6	41.5
Country-Site	28.1	40.9	32.8	31.8	55.1	43.5
Region of Residence						
Central Region	25.5	37.1	31.6	19.1	33.0	26.0
Northern Region	4.0	7.8	6.2	22.2	63.8	43.6
Southern region	35.3	50.6	43.4	42.9	68.1	56.6
Ethnic Group						
Chewa	24.3	37.1	31.6	19.7	36.0	27.9
Yao	66.9	78.1	72.9	68.6	82.0	74.9
Tumbuka	4.6	9.6	7.4	15.4	56.9	37.2
Tonga	5.6	3.6	4.4	12.0	44.4	28.9
Lomwe	30.6	59.2	46.3	39.8	75.2	60.4
Sena	6.3	8.8	7.6	4.6	36.6	20.0
Mang'anja	16.1	25.0	20.9	38.6	64.7	52.6
Ngoni	7.7	12.6	10.7	9.3	47.1	32.4
Nkhonde	0.0	00	0.0	35.0	64.0	51.1
Other	15.6	21.6	18.8	34.5	60.0	47.5
Religion						
Catholic	13.3	29.1	22.2	20.0	42.3	31.6
Protestant	16.2	27.8	22.6	23.0	54.3	40.1
Revivalist	21.1	32.3	27.6	20.0	50.4	36.6
Muslim	81.9	91.2	87.1	76.7	87.5	81.8
Other	33.3	31.0	32.0	7.1	42.7	19.1

Table 3: **Percentage of adolescents who have been circumcised by background factors, Malawi, 2004**

Characteristic	Male			Female		
	12-14 (N=906)	15-19 (N=1,146)	Total (N=2,052)	12-14 (N=945)	15-19 (N=1033)	Total (N=1978)
All Areas	17.0	24.2	21.0	1.9	2.5	2.2
Place of Residence						
Urban	17.2	20.8	19.2	1.8	1.4	2.4
Rural	16.9	25.2	21.6	1.9	2.9	1.6
Place of Childhood Residence						
City	14.3	17.3	16.1	0.0	0.0	0.0
Town	16.5	19.7	18.3	2.0	2.1	2.1
Country-Site	17.3	25.7	21.9	1.9	2.8	2.4
Region of Residence						
Central Region	9.7	14.1	12.3	0.8	1.7	1.3
Northern Region	0.0	3.4	2.0	0.5	0.0	0.3
Southern region	27.4	40.9	34.5	3.5	4.2	3.9
Ethnic Group						
Chewa	9.0	13.0	11.3	0.6	1.8	1.2
Yao	63.5	71.6	67.8	3.2	2.9	3.1
Tumbuka	0.9	0.7	.8	0.8	2.8	1.8
Tonga	0.0	0.0	0.0	4.0	0.0	1.9
Lomwe	15.9	44.2	31.4	5.3	4.5	4.8
Sena	6.3	1.8	3.8	0.0	7.3	3.5
Mang'anja	9.7	16.7	13.4	4.6	2.0	3.2
Ngoni	0.0	4.9	3.0	0.0	1.2	0.7
Nkhonde	0.0	0.0	0.0	0.0	0.0	0.0
Other	'12.5	16.2	14.5	3.5	0.0	1.7
Religion						
Catholic	3.0	11.7	7.9	1.7	2.0	1.8
Protestant	6.3	14.6	10.8	2.0	3.1	2.6
Revivalist	14.3	16.8	15.8	0.0	1.5	0.8
Muslim	78.0	88.1	83.6	3.3	2.9	3.2
Other	6.1	4.8	5.3	2.4	0.0	1.6

circumcised nationally, 35%, 12% and 2% of boys in the Southern, Center, and North were circumcised, respectively. In the IDIs, it was also mainly male respondents from the southern districts of Blantyre and Mangochi who reported having been circumcised. Even in the South, where male circumcision is relatively common, only 4% of girls were circumcised. The regional, ethnic, and religions differences for circumcision for boys are very much similar to the ones we observed for participation in initiation rites, suggesting that initiation rites for boys are strongly linked to circumcision. The analysis of the age at circumcision (results not shown) shows that most boys are circumcised between ages 10 and 15. Out of those who were circumcised, 26% were circumcised before age 10 and about 8% above age 14. These results support those found by the recent Malawi Human Rights Commission study, which found that most children are circumcised between ages 10-15.[3]

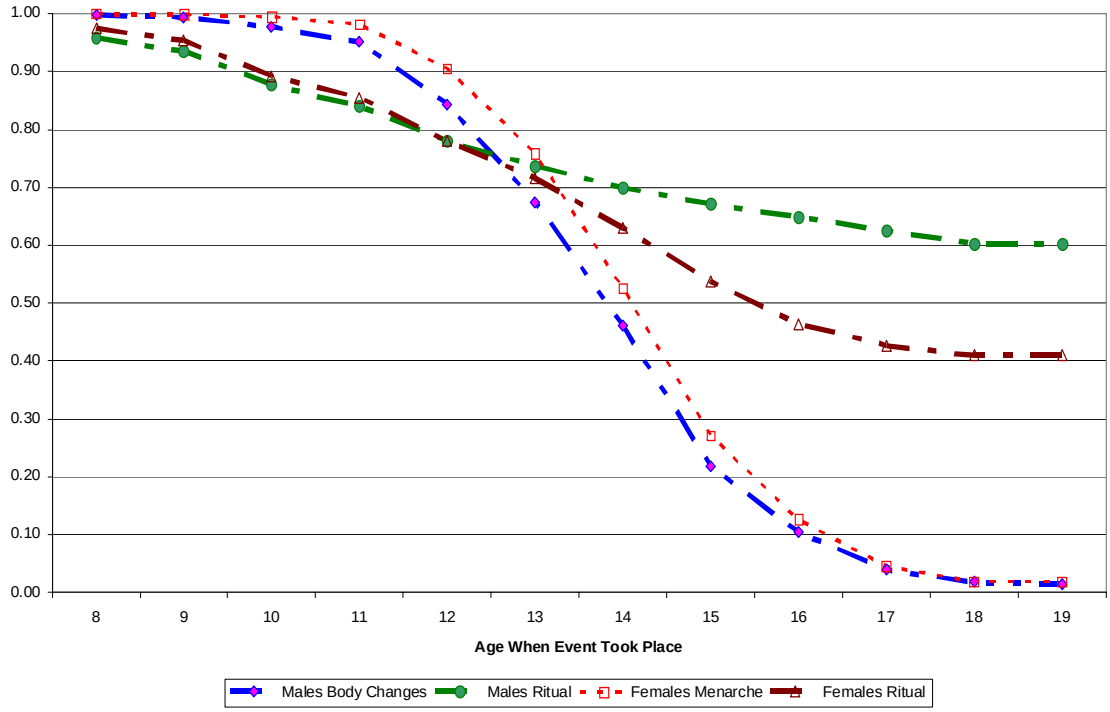
In order to understand how the timing of experience of pubertal changes and attendance of initiation rites are linked, we plotted life table

survival functions for the two rites of passage (Figure 1). The data show that before age 13.5 years (intersection point between the two functions when 70% of girls have not attained menarche), there were less girls who had attained menarche compared to those who had attended a ritual since the survival curve for initiation rites is above the one for menarche up to this age. For boys, fewer had experienced body changes compared to those who had participated in an initial rite by age 12.5 years, by which time 75% of boys had not observed pubertal body changes. Thus, the vast majority of both boys (75%) and girls (70%) are experiencing body changes well before they attend initiation ceremonies.

In order to check how male circumcision fits with these rites of passage, we plotted the three survival curves for experience of pubertal changes, participation in rituals, and age at circumcision only for Yao and Lomwe ethnic groups since they are the only groups where male circumcision is a widespread norm. The results show that the "rites/ritual" curve is continuously below the circumcision one, indicating that these ethnic groups organize initiation rites for boys before they actually turn up for circumcision (Figure 2). Furthermore, the "rite/ritual" curve is below the "body changes" curve up to age 14, when about 60% of the boys have already experienced pubertal body changes showing that most of the adolescents experience body changes after they have gone through initiation rites.

Most females in the IDIs reported that they attended initiation or puberty rites after they experienced menstruation. Males in the Centre and South gave elaborate details about the ceremonies that they attended at puberty, while only one person in the north reported to have attended a church advisory session. Although the survey data show that there is substantial distance

Figure 1: Proportion of adolescents who have not experienced puberty signs and been initiated



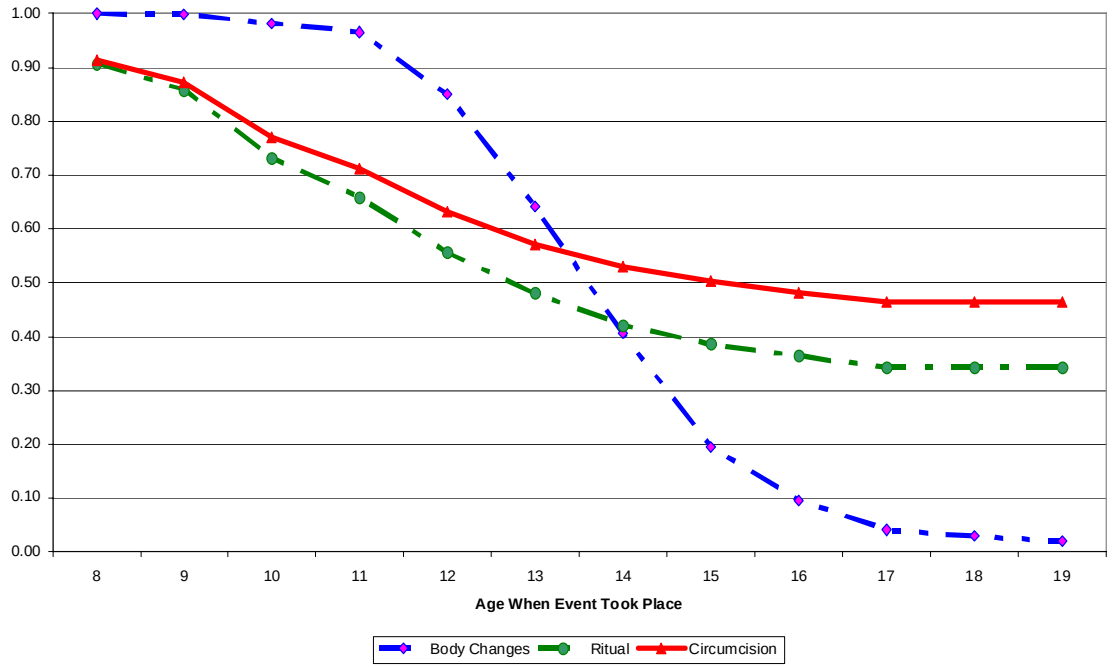
between onset of menstruation and puberty rites for girls, the qualitative data appeared to indicate that initiation rites for girls are usually organized after the girl attains menarche. As Swenson and Havens demonstrated, puberty rites heralding menarche are quite common across cultures[7] even those cultures where men don't normally undergo puberty rites as is the case with the northern region in Malawi.

Adolescent experiences with initiation rites

The qualitative data give insights into the nature of initiation ceremonies and what young people are actually taught when they attend the ceremonies. When asked what types of initiation ceremonies exist in the study communities, many young people as well as adults identify traditional rites and church ceremonies. Because of concerns relating to the explicit nature in which traditional initiation ceremonies are alleged to teach young people on sexual matters, many Christian groups in Malawi have come up with their own initiation ceremonies meant to teach young people what is expected of them as they grow up into adulthood. Traditional initiation ceremonies come in various forms ranging from ones that are very structured, involving large numbers of children, and also involving residential counseling in secluded places for several weeks. Such rites of passage are usually organized once a year and a cohort of young people who fulfill the set criteria (usually age) attend the ceremony. On the other end of the spectrum are rites that are loosely organized, and sometimes targets individuals soon after attaining a defined milestone such as menarche. Since the PNG survey was not specific on the nature of initiation ceremony, those who reported that they attended initiation rites could have meant any of these, including the church-based ones.

When asked why they attend initiation ceremonies, most young people admit that they

Figure 2: Proportion of Yao and Lomwe Male Adolescents who have not experienced puberty signs and been initiated



do it because it is an important part of their culture that marks their transition from childhood to adulthood and they have no choice since their parents ask them to. Those who attend the rites feel elevated from the ones who have not, and are actually encouraged to avoid associating with non-initiates because they are now adults. Below we present details about the nature of traditional initiation ceremonies that boys and girls attend.

Types and contents of female initiation ceremonies

In all the five study communities where IDIs were conducted, initiation rites take place soon after a girl starts menstruating, with varying levels of formality in the way the rite is performed. As soon as it is known that a girl has started her first menstruation, elderly women (usually excluding the girl's mother) come together to provide counseling to the girl on how she should take care of herself when menstruating; how she should carry herself, be obedient, and respect elders since she is no longer a child but an adult; and the need for her to avoid sex since she can now get pregnant. Most villages in Malawi have an elderly woman (known as *nankungwi*) who is an expert on sexual and reproductive health issues (often a traditional birth attendant as well) who acts as the chief counselor to the young initiates. In areas where such a designated counselor does not exist (such as in urban centers), women close to the mother organize the counseling for the girl and give more or less the same advice.

Initiates are taught that the start of menstruation means the girl can now get pregnant, and they, therefore, are advised to avoid sex, as shown by the following excerpt:

> *Interviewer: Who did you tell when you had your first menstruation?*
>
> *Respondent: I told my grandmother*
>
> *Interviewer: What did she do?*
>
> *Respondent: She explained to me that what I have experienced means that I am now an adult.*
>
> *Interviewer: What else did she tell you?*
>
> *Respondent: She also told me that I should avoid having sex with boys because I can end up being pregnant and I was also told to take care of myself, and up to now I am still protecting myself.*
>
> *Interviewer: How were you told to dress?*
>
> *Respondent: I was told to put on a very long skirt or dress and not short ones.*

The rather informal individualized counseling that is provided to a girl at the time that she starts menstruation may last for a few days in the Northern Region, and involve dancing and singing in the village on the last day of the rite.[14,16] Initiates are also advised about personal hygiene during menstruation, that they should not have sex when menstruating because they can hurt the man if he gets in contact with the menstrual blood, that they should not apply salt to food because doing so would make those who eat the food sick.[3,14,23] The excerpt below demonstrates how the elderly women teach the initiates how to read and understand the menstruation process:

> *Interviewer: Have you had an initiation ceremony?*
>
> *Respondent: I am from Nkhatabay and in my district we don't go through an initiation ceremony, what happens is that we are just counseled.*
>
> *Interviewer: Can you tell me what really happened when you were being counseled?*
>
> *Respondent: Firstly my mum friends came when they heard that I have started my menstruation, and they brought maize flour and a burnt brick. Then, they scraped the brick and mixed the powder from the bricks with flour and left it aside. Then, they made other mixtures of flour and water, brick powder on separate plates. When they did this, they then told me what the three mixtures meant. They said that once my monthly period are on, firstly I will see red things like brick powder mixture, then after some time two to these days I would see the blood changing and it will look like the mixture of flour and brick powder and lastly in order to know that the menstruation is now over, they said my vagina will now produce some fluids which will look like the mixture of flour only.*

The language used in both group and individualized initiation ceremonies is not always explicit. For example, many girls mentioned that they were advised to be careful with boys and not play with them in order to avoid pregnancy and sexually transmitted infections including HIV/AIDS. Indeed, many grandparents and elderly women who counsel the young girls propagate "silence" on sexual matters by simply advising the girls not to play with boys without giving further explanations. As Costos et al have argued, sex is another taboo issue in most societies (including the West), and mothers and other elderly women tend to make cryptic and incomplete references to the connection between menstruation and sex.[15] This could lead to confusion in cases where the young girls may not be sure what playing with boys actually means.

Apart from providing the one-on-one counseling to a girl who attains menarche, most parts of the southern region also organize big initiation ceremonies involving all girls who have attained menarche that year. For example, a number of respondents in Mangochi and Blantyre mentioned that they attended *msondo,* an initiation ceremony for girls who have experienced menstruation. The girls are taken to a special house or area called *Tsimba* for this ceremony and the counseling is done by *anankungwi* (traditional initiation counselors) who sing songs and teach young women how to dance. The ceremony may take up to one month, and the initiates are taught the three key things at initiation ceremonies namely: respect and obedience, hygienic practices, and avoiding sex.

Respect is a central theme in initiation rites not only for girls, but also for boys. The following excerpt, from a young female who attended an initiation ceremony termed *ndakula* (meaning "I have grown up) for girls who have started menstruating, shows the central importance of the "respect" theme in initiation rites":

> *Interviewer: Have you ever had an initiation ceremony?*
>
> *Respondent: Yes, I have had it.*
>
> *Interviewer: What kind of initiation ceremony?*
>
> *Respondent: "Ndakula."*
>
> *Interviewer: Can you tell me what happened at the initiation ceremony?*
>
> *Respondent: We were told never to be rude to our parents, when we see/talk to adults we should kneel down, we should not enter our parent's bedroom etc.*
> [19 year of female respondent, Blantyre]

Even though adolescents in this study did not mention that they were taught how to perform during sexual intercourse to ensure maximum satisfaction for the partner, some studies have reported that the initiation syllabus in the elaborate ceremonies includes this topic and encourages adolescents to experiment sex after the initiation.[3,13,14] During such ceremonies, girls are also advised to pull their labia because of the understanding that men enjoy pulling them during sexual intercourse[24]. This gives further credence to van Gennep's argument that initiation rites denote entry from an asexual world to a sexual one.[5]

Further probing to find out if girls are at some point told to go and look for partners to experiment sex after the initiation did not yield much. In addition to the traditional ceremonies girls also attend church ceremonies at or after menarche. The church announces dates for advisory sessions for girls. Elderly female members of the church perform these ceremonies. Apart from the three main items taught during traditional initiation ceremonies, the church-based ones also focus on Christian teachings against premarital sex. Unlike traditional ceremonies which touch on teaching young girls about sex and how to please sexual partners, these issues are not discussed during religious advisory sessions. The introduction of Christian oriented '*initiation rites*', it has been argued, is to introduce an alternative way of orienting boys and girls into the adult world without really putting emphasis on sexual intercourse.[16]

Types and contents of male initiation ceremonies

The distinctiveness and significance of menarche in the reproductive process is very instrumental in getting communities have organized systems of counseling girls on sexuality issues even in societies that typically do not have formal initiation ceremonies. Lack of such a distinctive pubertal sign for boys means that they typically get limited and adhoc counseling on sexuality matters. In Rumphi, and most parts of the Northern Region, there is virtually no organized initiation ceremonies for boys, and boys get to learn about sexuality issues from their friends, uncles, and grand-parents.[14] In the Central and Southern regions, however, some ethnic groups practice elaborate initiation ceremonies for boys.

The Chewas, who are the majority ethnic group in the central region, initiate their boys into adulthood through secret male-only cult called *Gule wankulu* (meaning the "big dance")[12]. The cult involves masquerading dancers (called *Nyau*), who harass and often beat up any male person who is not a member of the cult. *Nyau* members are responsible for recruiting young men to join the cult, mostly through intimidation. The summary of an interview with a 17 year old male adolescent in Ntchisi explains what happens during the initiation as summarized below:

Initiation takes place at the dambwe which is a camp specifically erected for holding initiation rites. During the ceremony, boys are advised to respect parents and other adults, ensuring that they kneel before them and run errands for them. They are also told not to beat women. Elders also explain how *nyau* is made saying that once initiated men put on sacks and masks, they are transformed and are called *zirombo* (monsters). They are also taught various questions and answers [code language]. If one meets *gule wankulu* and is asked these questions and answers correctly then they know he has been initiated; hence cannot be threatened or beaten by *Gule wankulu*. After initiation, initiates are told to have sex as a proof they are grown ups. They are also taught how to have sex. Some elders advise initiates to use condoms while others say no. Elders also encourage that girls should urinate after sex and they will not become pregnant. On the last day, initiates eat *'ndomila'* [concoction meant to help initiates to be quiet and calm as one way of showing that they have grown up and changed their behavior].

Sometimes boys may be kidnapped or threatened to join the *gule wankulu* cult, as narrated below by a 12 year old male adolescent:

> *Interviewer: What happened for you to go and join gule* [*wankulu*]*?*
>
> *Respondent: Because from time to time these 'virombo' [monsters] could threaten me.*
>
> *Interviewer: Where was it?*
>
> *Respondent: Where we were grazing cattle.*
>
> *Interviewer: Where do you graze cattle?*
>
> *Respondent: In the valley.*
>
> *Interviewer: Who came up with this decision that you should join 'gule?'*
>
> *Respondent: My father.*
>
> *Interviewer: How was it done?*
>
> *Respondent: After noting that I was being threatened now and again, he just said go join.*
>
> *Interviewer: Did these "Zirombo" come to grab you; all else what?*
>
> *Respondent: No.*
>
> *Interviewer: How was it done?*
>
> *Respondent: I just went.* [Interview with a 12 year old male adolescent, Ntchisi]

The *Gule wankulu* cult, which was mostly mentioned by respondents in Mchinji and Ntchisi in central Malawi during the IDI study, is fiercely opposed by churches and any Christian who joins the cult is ex-communicated from the church. The cult's cold relationship with Christianity (which provided most of the early schools in Malawi) and its central place among the Chewas is probably one of the explanations why the central

region has lagged behind the Northern Region in education levels in Malawi.

The other major initiation rite that boys attend is circumcision, which is locally known as *jando* among the Yaos and Lomwes in Mangochi. When asked why they went for circumcision, a number of boys in Mangochi noted that it is their cultural norm that people should be circumcised and this is what society expects. Attending an initiation ceremony is also a source of envy for those who have not attended one not only because those who have attended feel like they are grown ups, but also because initiates put on new clothes on their graduation day as can be seen from the following excerpt:

> *Interviewer: What happened for you to undergo the initiation ceremony?*
>
> *Respondent: Everyone in the family is initiated, my grandparents, my mother and father. So they just said I should also be initiated. Even my elder brother is initiated.*
>
> *Interviewer: What was your expectation when you were told of the ceremony?*
>
> *Respondent: When I saw my friends after initiation, wearing suits, I envied them. So when I was told that I would undergo the initiation ceremony I was very happy that I would also have a suit.[* 16 year old male, Mangochi District]

One in-depth interview with a 16 year old boy in Mangochi explains what happens at the initiation camp:

He explained that he stayed at the initiation camp for 2 months. He was escorted to the camp by people who were already initiated. He was worried that he was going to be circumcised and would feel pain. He was encouraged by those who escorted him who assured him that everything would be fine and therefore he should not be worried. At the camp people who were already initiated sang advisory songs. He and his friends were told not to tell the non-initiated about activities at the camp otherwise their parents would die and they would be orphans. At the end, the campsite was burnt and the initiates and their camp leaders went to an open area where they sang and relatives brought money and gave it to the *Mlombwe*, one's guardian at the camp. The *Nakanga* is overall leader at the camp and does the counseling. The actual cutting of the foreskin is done by the *Ngaliba*. He said they were also advised to have sex with girls who do not refuse as they are told the same thing by the elderly women when they are being initiated in a ceremony called *msondo* (an initiation rite for girls who have experienced menstruation).

Some respondents who were circumcised said that they were not told to have sex in what is known as *kusasa fumbi*, which means cleaning the dust. According to Brown, *kusasa fumbi* is interpreted as shaking off the inexperience in sex by actually doing it.[13] It is evident from this respondent that this is some of the information that they are told. The advice given to initiates centers on respecting and obeying parents and other adults, not being rude, never to swear, not sleeping in the same house with parents and not to enter their parents' bedrooms. The songs with advisory messages are sung during such ceremonies, like advising the boys to respect their sisters and not peep on them when they are dressing, to respect their parents and never go into their bedrooms, etc.

It is clear that both *Gule wankulu* and *jando* emphasize on respect and sex. The fact that some adolescents mentioned they were told how to have sex and actually to go and have sex and that girls should urinate after sex to avoid pregnancy implies that these ceremonies also teach sexual and reproductive health issues.

Reactions to menarche and other pubertal body changes

In order to assess how adolescents in the study communities are prepared to deal with pubertal body changes, we examine IDI transcripts pertaining to a series of questions that sought to find out whether someone had discussed with

them the body changes and if so, at what point the discussions took place. Because of distinctiveness and importance of menarche in reproduction, this discussion is focused on female adolescents' accounts on whether someone talked to them about menstruation before they attained menarche and how the girls reacted to the first menstruation and other pubertal body changes.

The findings of this analysis show that friends, grandparents, mothers and other female relatives including sisters were the key people who discussed body changes with adolescents although most of these discussions took place after the body changes were already experienced. These findings mirror other studies that have shown that adolescent girls obtain information about menarche primarily through discussions with the mother, other female relatives, and close girl friends, while males and schools were not as important.[7, 17] Just over a third of the IDI female respondents reported that no one ever discussed with them the body changes they were to experience as they were growing into womanhood, while half or so who were talked to indicated that the major issue that was discussed was menstruation.

Female respondents stated that during the discussions on menstruation, they were mainly taught how to take care of themselves during menstrual periods, most importantly how to use a piece of cloth in order to avoid staining their clothes with menstrual blood. They were also advised not to hang the menstrual cloth in the open because evil people would use them for magical purposes that can result in death. They were also told not to engage in sexual intercourse when menstruating. The main explanation for this is that if the man gets in contact with menstrual blood during sexual intercourse, he would get sick and possibly die if proper African medicine is not sought.[14, 23]. It can also be etically argued that the prohibition of sexual intercourse during menstruation is for purposes of hygiene. Several adolescent girls also mentioned that during menstruation they are also forbidden to put salt in food because this can cause people who will eat the food to fall sick and (in some cases like in Rumphi) that they should not cook anything during menstruation. These restrictions show that menstruation is viewed negatively (the woman who is menstruating is regarded unclean) and treated with great sensitivity in Malawi. Similar observations have been made in many other cultures. For example, Agyekum shows that, among the Akan of Ghana, menstruation is perceived as 'messy, revolting and polluting'.[19] Montgomery argues that the restrictions on and avoidance of women who are menstruating vary cross culturally.[17]. Such perceptions of women have largely disappeared in the western world where as late as the 19th century menstruating women were barred from industrial processes such as wine making, sugar refining and ham curing.[8, 18] Among the Hindus, menstruating women are treated as untouchables.[19]

Our results show that girls react differently to menstruation and other body changes, depending on the nature of change and whether someone talked to them about the change (in the case of menstruation). The reactions range from happiness, excitement, shock, and sadness, and total loss, depending on what they knew about the change before hand and whether the change is seen positively as a sign of transition to adulthood by their peers. For example one 13 year old female respondent in Mchinji narrated how excited she was when she started growing breasts because she would now be able to put on bras:

> *Interviewer: When you saw the breasts on you, were you happy or sad?*
>
> *Respondent: I was happy.*
>
> *Interviewer: Why were you happy?*
>
> *Respondent: Because I envied my peers who had breasts.*
>
> *Interviewer: What did you envy about having breasts?*
>
> *Respondent: I envied them when they put on bras.*

This excerpt shows that the experience of some body changes can be a source of happiness, and the girl was not surprised at all when she saw these changes. Knowing that one will experience body changes before hand also helps to prepare girls about what would come as can be seen from the following quotation from a 19 year old female in Blantyre:

Interviewer: How did you feel about these changes happening to you?

Respondent: I was not surprised because I was foretold.

Interviewer: Who told you about the body changes that happen in a young person's body growing into an adult?

Respondent: My parents

Interviewer: Can you tell me what they told you so that I may know what they told you?

Respondent: They said I should not be surprised to see these things happening to me because a person's body starts to grow breasts among others.

Interviewer: Did you find what they told you useful?

Respondent: Yes, they were helpful.

Interviewer: In what way were they helpful?

Respondent: They helped me because I was not surprised when these changes happened. [19 year old female from Blantyre]

Most young women, after experiencing the first menstruation, asked their mothers, sisters, counselors and other elderly women who told them that there was nothing fearful or strange about the onset of menstruation as that was a sign of maturity that every woman experiences. Girls often asked older women *after* experiencing menstrual flow, as the following example shows:

Interviewer: When did you first experience your menstruation?

Respondent: It was on 3rd, but I have forgotten the month, but it was last year (2002).

Interviewer: How did you feel about these changes happening to you?

Respondent: I was so surprised to see blood coming out of my vagina after I experienced some abdominal pain and I thought that may be something has gone wrong, then I decided to notify my mother, who later told me what was happening.

Interviewer: Why were you surprised?

Respondent: Because I didn't know that this also happens to girls. [A 16 year old female respondent, Blantyre]

In some cases girls thought they were injured while another female respondent thought she was suffering from bilharzia. The girls who were briefed on menstruation before hand were better prepared and reacted positively to their first menstruation, supporting Swenson and Havens's argument that a more positive and accepting attitude towards menstruation can be achieved if girls are physically and emotionally prepared for these changes.[7]

Discussion

This paper was set out to examine the timing of menarche and other pubertal changes, the rites of passage and initiation ceremonies through which various communities teach adolescents on sexual and reproductive health issues, including how to deal with pubertal body changes, and the meanings that the adolescents attach to various pubertal changes. Previous studies on this topic have focused on menarche, given its distinctiveness and significance in the reproductive system. However, we argue that in order to understand the experiences that adolescents go through during adolescence and how these experiences shape adolescents's sexual attitudes and behavior, it is important to examine the contexts in which both adolescent boys and girls experience the broader range of pubertal body changes. To the extent that such evidence could help enhance understanding of how boys and girls in different cultures and settings could be helped to comprehend their sexuality and what is expected of them as sexual beings, this paper contributes to the discourse on

how to reduce the excessively high levels of HIV infection and under-age childbearing in Malawi and other countries with similar socio-cultural characteristics in sub-Saharan Africa.

The results of the study show that the median age at menarche is 15 years, while half of the boys start experiencing pubertal body changes by age 14. Although menarche is a much more definitive marker of sexual maturity than any of the pubertal body changes that boys experience, the resemblance of the pattern for experiencing pubertal changes for boys and girls suggests that one could put reasonable confidence in the reliability of the data for the timing of biological maturity for boys.

The study demonstrates that initiation ceremonies are not universally practiced in the Malawi, as only 43% of girls and 33% of boys reported that they participated in such rites of passage. The big regional and ethnic differences in the practice of initiation rites demonstrate that these rites of passage are strongly rooted in culture. The Southern region records the highest attendance of initiation ceremonies for both boys and girls. The Yaos, most of whom are Muslims, are the ethnic group where initiation rites are a standard norm for both boys (73%) and girls (75%) followed by the Lomwe, who constitute the major ethnic group in the Southern Region.

The qualitative data shows that initiation or rite of passage ceremonies take many forms ranging from ones that are very structured, involve large numbers of children, and involve residential counseling in secluded places for several weeks to those that are loosely organized, and sometimes target individuals soon after attaining a defined milestone such as menarche. While girls in the three regions receive either formal counseling through initiation ceremonies or informal forms of counseling through older female relatives or mothers when they attain menarche in all the three regions, there is far less focus on teaching boys about sexuality. Even among the Chewas where boys are initiated through the *gule wamkulu cult* and among the Yaos where they are initiated through *jando* (circumcision) the teachings that the boys get dwell less on sexuality issues relative to the teachings that girls get. Initiation ceremonies for boys appear to be totally alien in the Northern region, where only 6% of boys reported that they participated in such ceremonies. The importance of initiation ceremonies for boys among the Chewas and the Yaos/Lomwes provides program designers an opportunity to reach out to adolescents through ceremonies attached to these rites.

The results for the timing of initiation ceremonies show that the vast majority of boys and girls either do not attend initiation rites at all or attend initiation ceremonies or rites well after they have experienced pubertal body changes. Among the Yao and Lomwe boys, however, initiation rites are organized before most of them get circumcised or experience the pubertal changes. Because most adolescents are experiencing pubertal body changes before they attend initiation ceremonies (where such ceremonies exist) or someone talks to them about the changes, many adolescents do not know anything about pubertal body changes until they experience them. This explains why they are anxious, surprised and in some cases sad at the first experience of these pubertal body changes especially menstruation. Adolescents who were prepared before hand ended up having a more positive feeling about experiencing pubertal body changes than those who were taken unawares. Brooks-Gunn and Furstenberg have also demonstrated that girls who mature early and who receive no information about pubertal changes have the most negative experience.[20]

Various stakeholders in Malawi have expressed concerns regarding the role of traditional initiation ceremonies (particularly those practiced in the Southern Region and some parts of the central region) in promoting sexual adventure among adolescents who graduate from these systems. Because the ceremonies are taken to symbolize

that the young boys and girls are not "children" anymore, many adolescents tend to take this transition to imply they can also start having sex. Indeed, while issues of respect and new roles in society are discussed, a key focus of initiation or puberty rites for both girls and boys is to advise them on the transition to a sexual world. PNG survey data appear to indicate that boys who undergo initiation ceremonies actually take this as a license to have sex since they are much more likely to be sexually experienced than those who were not initiated. For instance, while 37% of circumcised boys aged 12-14 had ever had sex, 16% of the uncircumcised ones had done the same. For the 15-19 year olds, 77% and 53% had ever had sex among the circumcised and uncircumcised, respectively. Those concerned about the role of initiation ceremonies have highlighted the explicit and suggestive way in which traditional initiation ceremonies are alleged to teach adolescents on sexual matters. Due to this concern, for example, many Christian groups in Malawi have come up with their own initiation ceremonies meant to teach your people what is expected of them as they grow up into adulthood. While the concerns on what is taught in these ceremonies are warranted, the fact that such a high proportion of adolescents go through initiation ceremonies in some communities presents a great opportunity for programs to intervene and promote positive aspects of sexuality through them. This could be achieved by sensitizing community leaders involved in organizing initiation ceremonies on promoting abstinence and use of protective mechanisms such as condoms for adolescents to avoid sexually transmitted infections and unwanted pregnancies.

Another key lesson from the study relates to the mixed messages that are sent to adolescents through initiation ceremonies. While the focus in ceremonies with girls are on them to avoid having sex to avoid pregnancies, the need for abstinence is not emphasized as much in ceremonies focused on boys, which gives the impression that abstinence is an issue for girls but not for boys; yet the boys are the ones who mostly initiate sexual relations with girls.[24] Actually, the allegation that some initiation ceremonies actually encourage adolescents to go and have sex to test themselves in some sort of ritual termed *kusasa fumbi* (remove the dust) needs to be investigated and addressed as a matter of urgency. More research needs to be carried out to demonstrate the extent to which initiation ceremonies play a facilitative or protective role in promoting risky sexual behaviors for adolescents as well as later in life as they grow up.

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References

1. Richards, A. (1956). *Chisungu: a girls' initiation ceremony among the Bemba of Northern Rhodesia.* London: Faber and Faber.
2. For example see Wilson, M. (1957). *Rituals of kinship among the Nyakyusa*. London: Oxford University Press.
3. Malawi Human Rights Commission. (2005). *Cultural practices and their impact on the enjoyment of human rights, particularly the rights of women and children*

in Malawi. Lilongwe: Malawi Human Rights Commission.

4. Munthali, A.C. (2007). Beliefs about pregnancy, childbearing and newborn infants in a rural district in northern Malawi. In: Liamputting, P. (ed). *Childbearing and infant care issues*. New York: Nova Science Publishers.
5. Van Gennep, A. (1960). *The rites of passage*. Chicago: Chicago University Press.
6. Boxer, A.M., M. Tobin-Richards and A.C. Petersen. (1983). Puberty: physical change and its significance in early adolescence. *Theory into practice* 22(2):85-90.
7. See also Swenson, I and B. Havens. (1987). Menarche and menstruation: a literature review. *Journal of Community Nursing* 4(4):199-210.
8. Montgomery, R. (1974). A cross cultural study of menstruation, menstrual taboos and related social variables. *Ethos* 2(2):137-170.
9. Elkin, F. and W.A. Wesley. (1955). The myth of adolescent culture. *American Sociological Review*. 20(6):680-684.
10. For the results of the IDIs with adolescents see Munthali, A.C, A.M. Moore, S. Konyani and B. Zakeyo. (2006). *Qualitative evidence of adolescents' sexual and reproductive health in selected districts of Malawi*. *Occasional report No. 23*. New York: Guttmacher Institute.
11. For the results of the national survey of adolescents see Munthali, A.C., E. Zulu, N. Madise, A. Moore, S. Konyani, J. Kaphuka and D. Maluwa-Banda. (2006). *Adolescent sexual and reproductive health in Malawi: Results from the 2004 national survey of adolescents*. Occassional report No. 24. New York: Guttmacher Institute.
12. See www.kungoni.org.pdf for a full description of *Gule wankulu*. [Accessed 7th March 2007].
13. Brown, J.L. (2004). *HIV/AIDS alienation: between prejudice and acceptance*. Capetown: University of Stellenbosch (Unpublished PhD Thesis).
14. Zulu, E.M. (1996). *Social and cultural factors affecting reproductive behaviour in Malawi*. Pennsylvania: University of Pennsylvania (Unpublished PhD Thesis)
15. Costos, D., R. Ackerman and L. Paradis. (2002). Recollections of Menarche: Communication. Between Mothers and Daughters Regarding Menstruation. *Sex roles* 46(1/2):49-60.
16. See Kishindo, P. (1995). *Family planning and the Malawian male*. Nordic Journal of African Studies 4(1):26-34.
17. See van de Walle, E. and N. Franklin. (1996). Sexual initiation and the transmission of reproductive knowledge. *Health Transition Review Supplement 6*:61-68 for similar work among the Kaguru of Tanzania.
18. Brooks-Gunn, J. and F.F. Furstenberg. (1990). Coming of age in the era of AIDS: puberty, sexuality and contraception. *Milbank Quarterly* 68: 59-84.
19. Agyekum, K. (2002). Menstruation as a verbal taboo among the Akan of Ghana. *Journal of Anthropological Research* 58(3):367-387.
20. Kirk, J. and M. Sommer. (nd). *Menstruation and body awareness: linking girls' health with girls' education*. http://www.kit.nl/smartsite.shtml?ch=FAB&id=5582.
21. See Shukla, S. (2005). Working on menstruation with girls in Mumbai, India: Vacha women's resource centre. *Equals* 5:5
22. Brooks-Gunn, J. and F.F. Furstenberg. (1990). Coming of age in the era of AIDS: puberty, sexuality and contraception. *Milbank Quarterly* 68:59-84.
23. Zulu, E. M., (2001) "Ethnic variations in rationale and observance of postpartum sexual abstinence in Malawi." *Demography* 38(4): 467-479
24. Details about the Malawi Diffusion and Ideational Change Study can be acceded on: http://www.malawi.pop.upenn.edu/Level%203/Malawi/level3_malawi_main.html