Are schools a good setting for adolescent sexual health promotion in rural Africa? A qualitative assessment from Tanzania

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Abstract

African adolescents are at high risk of poor sexual health. School-based interventions could reach many adolescents in a sustainable and replicable way, if enrolment, funding and infrastructure are adequate. This study examined pupils’, recent school leavers’, parents’ and teachers’ views and experiences of rural Tanzanian primary schools, focusing on the implications for potential sexual health programmes. From 1999 to 2002, participant observation was conducted in nine villages for 158 person-weeks. Half of Year 7 pupils were 15–17 years old, and few went on to secondary school, suggesting that primary schools may be a good venue for such programmes. However, serious challenges include low enrolment and attendance rates, limited teacher training, little access to teaching resources and official and unofficial practices that may alienate pupils and their parents, e.g. corporal punishment, pupils being made to do unpaid work, forced pregnancy examinations, and some teachers’ alcohol or sexual abuse. At a national level, improved teacher training and supervision are critical, as well as policies that better prevent, identify and correct undesired practices. At a programme level, intervention developers need to simplify the subject matter, introduce alternative teaching methods, help improve teacher–pupil and teacher–community relationships, and closely supervise and appropriately respond to undesired practices.

Introduction

Adolescents in sub-Saharan Africa are at risk of contracting human immunodeficiency virus and other sexually transmitted infections, even in rural areas [1]. However, attempts to implement adolescent sexual and reproductive health (ASRH) interventions in Africa on a large-scale are uncommon. School-based programmes can reach large numbers of young people in a replicable and sustainable way, given their use of an existing institutional framework and relatively educated, long-term staff [2–4]. Interventions conducted prior to sexual debut may be most effective [2], and most youth in Africa initiate sexual activity while they are still of school age [5]. However, evaluation of existing school-based ASRH programmes in Africa suggests that success has been limited, i.e. some positive influence on knowledge and reported attitudes, but less consistent impact on reported behaviours [4, 5].

A World Health Organization review of school-based health education programmes identified

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a number of factors as critical to success, including: specific health-related information, attitudes and skills; participatory teaching which provides information, addresses social pressures and models skills; adequate training of and ‘ownership’ by teachers; relevance to young people’s reality and maximizing the involvement of participants, parents and the community [6]. Barriers to effective skills-based health education included: inadequate teacher training; insufficient targeting of specific skills; lack of quality teaching materials and participatory methods; inconsistent messages; low intensity and scale, and poor monitoring and evaluation. Extremely limited resources make these barriers widespread in many African countries.

This paper examines facilitative factors and barriers for potential ASRH programmes in rural Tanzanian primary schools. Pupils’, recent school leavers’, parents’ and teachers’ views and experiences of primary schools were explored during 3 years of participant observation (PO), which was designed to examine rural youth lifestyles, particularly related to sexual risk behaviours. PO findings on other topics such as sexual norms, condom use, acquired immunodeficiency syndrome (AIDS) causation beliefs, and AIDS treatment practices are published elsewhere [7–10].

This qualitative study was designed to complement a 1998–2002 community randomized trial of the ASRH programme, MEMA kwa Vijana (MkV), in Mwanza, Tanzania [11]. The trial sought to develop and rigorously evaluate a multifaceted intervention, using biological end-points as well as quantitative and qualitative measures of knowledge, attitudes and behaviour. The trial took place in 20 communities (10 intervention, 10 comparison). The trial cohort consisted of 9645 primary school pupils who were born in 1984 or earlier (i.e. ~14 years or older at enrolment in 1998) [12]. MkV consisted of a teacher-led, peer-assisted primary school curriculum, a youth-friendly health worker training, and a youth condom promotion-distribution initiative [13]. PO data were collected during the 3 years of intervention implementation (1999–2001), during which time they were used to evaluate and improve it. A companion paper provides a process evaluation of the school component of the intervention (Plummer et al. doi: cyl103).

Tanzanian background

When compared with other developing countries, the Tanzanian education system has been described as a ‘very late developer’, characterized by extreme underfunding, bureaucratic inefficiency, corruption and one of the smallest secondary and tertiary education sectors in the world [14]. The legal age for primary school enrollment is 7 years, but often it is actually 2–3 years later [15, 16]. Consequently, in 2003, 54% of Tanzanian Year 7 (final year) pupils were 15–17 years old [17].

In 1998, only 54% of Mwanza Region primary schoolteachers had the expected academic qualification, i.e. a Grade A teaching certificate [18]. Most of the remaining teachers had not passed the Primary School Leaving Exam (PSLE), and thus never entered secondary school, or they had failed the Form 4 (Year 11) exam in secondary school [18]. Many teachers perceived teaching as a ‘last resort’, low-status, low-paid job, particularly if they were posted to rural areas, so teachers with higher qualifications were under-represented in rural schools [19, 20].

In 2003, the 931 primary schools in Mwanza Region had an average of 675 registered pupils and nine teachers per school [17]. Tanzanian primary school teaching style was mainly teacher-centered recitation routines [21, 22]. Emphasis was placed on passing national exams through memorizing information, rather than the development of critical thinking, knowledge application or problem-solving skills [14]. Material conditions were also very poor, particularly in rural schools, which rarely had running water, electricity or other basic facilities [19–22].

In the mid-1990s, primary school user fees were introduced, but high numbers of out-of-school children led to the abolition of fees in 2001. As a result, the national net primary school enrolment rate increased rapidly from 57% in 2001 to 85% in 2002 [23]. In the last year of the study, the pupil population may thus have included more poor children. The remaining 15% may have come
from families who found little benefit to schooling, because of perceived irrelevance of the subjects studied, low passing rate for the PSLE and remaining cost issues [14, 24]. In 2002, only 30% of Mwanza Region Year 7 pupils passed their PSLE [17].

Methods

This study was approved by the Tanzanian Medical Research Coordinating Committee and the London School of Hygiene and Tropical Medicine Ethics Committee.

PO was conducted by six East African field researchers in nine villages from 1999 to 2002, for a total of 158 person-weeks. The field research team consisted of male and female secondary school graduates in their 20s. For PO, the analytical abilities of fieldworkers are crucial. Two field researchers were university graduates (J.W. and G.M.), while the remaining four (including K.N. and Z.S.S.) were selected for their critical thinking skills from several dozen secondary school graduate MkV survey interviewers. The latter four had attended primary school in rural Mwanza, but not the study schools.

Before PO began, fieldworkers spent 1–2 months working on the study, discussing and contributing to the central research questions. For PO, their observation and analytical skills were developed in 2 weeks of initial training and 1 week of pilot PO with detailed debriefing and feedback on field notes. Each 7-week PO session included a day long debriefing meeting in the middle and immediately afterwards, and field notes and summary reports were reviewed and commented on in detail. Over the 3 years of the study, field researchers were closely supervised and involved in all study development, in order to maximize their research skills, their understanding of the key research questions, and their contribution to, and ownership of, the study. In addition, they participated in informal mentorship and in-service training, e.g. 3 days of field training highlighting events and conversations to record, or group discussions of selected articles and textbooks. The team’s ability to analyse data and generate further research questions improved with each round of fieldwork.

The nine PO villages were selected from four intervention and five comparison communities. Most were multi-ethnic, with some primarily basing their income on fishing, while others on farming (Table I). The bulk of observations took place in four villages, two intervention and two comparison, for 7 weeks per year over the 3-year period. The remaining villages were visited from 1 to 7 weeks over the entire study period. Most villages had only one school. Where the village was large enough to have two, the researchers tended to focus on the one that was in their immediate sub-village.

Researchers visited each village singly or in pairs. Pairs generally consisted of a graduate researcher and an opposite-sex secondary school graduate. Each researcher lived in a different household and returned to the same household for each subsequent visit. PO households were selected with the assistance of village authorities, after being assessed to have an MkV cohort member and to be representative of village life in terms of size, livelihood, wealth and other criteria (Table I).

Beginning with the contacts they made in their household, and continuing later with contacts made elsewhere, researchers accompanied young people in diverse daily activities (e.g. fetching water, preparing meals, going to market, farming, fishing and socializing) and at special events (e.g. funerals, drumming/dancing events, video shows and Christian and national holidays). In the process, relationships were developed opportunistically with prioritization on relationships with young people (i.e. 10–24 years old), particularly those in the MkV trial cohort and their peers (i.e. approximately 14–17 years old in 1999). Each day or evening, researchers wrote PO field notes for 1–3 hours.

Researchers usually did not initiate discussions about schools or teachers, but instead documented comments that villagers made spontaneously, sometimes following up informally with open-ended questions. Researchers sometimes visited schools when passing by on an errand, or meeting with a pupil or teacher informally. While they
<table>
<thead>
<tr>
<th>Village number (MkV/comparison)</th>
<th>Number annual PO visits (total person-weeks)</th>
<th>Village characteristics&lt;sup&gt;a&lt;/sup&gt; (months visited: seasonal events)</th>
<th>Village facilities</th>
<th>Researcher initials: head of household characteristics&lt;sup&gt;b&lt;/sup&gt; (number in household)</th>
<th>Number PO informants in MkV trial&lt;sup&gt;c&lt;/sup&gt;</th>
<th>Key PO reports related to ASRH and primary schools&lt;sup&gt;d&lt;/sup&gt; (first- and/or third-person sources)</th>
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| 1 (MkV)                       | Three (35)                                  | Large, roadside villages, ~6 km from gold mines. Vast majority Sukuma. (December–January: Weeding crops, end cultivation, start of some harvesting. Christmas and New Year) | One law court, eight shops/kiosks, two mills, two storage facilities, one bar and two churches | a. J.W.: poor farmer, monogamous couple (8) b. Z.S.S.: very poor farmer, AIC widow (8) | 21             | • Teachers beat two pupil lovers and their pupil intermediary (first and multiple third).  
• All girls in class beaten after discovery of one’s love letter (multiple third).  
• Mandatory pregnancy exams for female pupils (multiple third).  
• Parent of boy who impregnated pupil paid teacher to not bring charges (third).  
• Teacher and pupil caught having sex in classroom: both suspended for one month (third).  
• Different teacher married pupil on graduation (first).  
• Many reports that five of six male teachers pressurized female pupils and had sex with them (multiple first and third). |
| 2 (comparison)                 | Three (36)                                  | One government health facility, 15 shops/kiosks, one mill, three storage facilities, one bar, two churches and a mosque | a. G.M.: kiosk owner, political leader, farmer, monogamous AIC couple (18) b. c. K.N., later Neema Busali: Poor farmer, divorced female (9) | 24              | • Parents of girl paid head teacher to transfer her to another village where she married (multiple third).  
• Teacher had sex with pupil and was transferred (third). |
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<tr>
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● Parent paid teacher to remove pregnant pupil’s name from registry and to not charge boy (third).  
● Teacher regularly gave pupil money, later impregnated her and paid parents not to publicize (multiple third).  
● Other teacher pressured female pupil to have sex (first).  
● Head teacher had on-going sexual relationship with pupil (multiple third).  
● Deputy head teacher beat pupils who joked about his pupil lover (third).  
● School committee arranged transfer of teacher for excessive use of corporal punishment (third).  
● Parent of boy who impregnated pupil paid head teacher to not bring charges (multiple third).  
● Different pregnant girl beaten by teachers on day she was expelled (third).  
● Drunkenness problem for several teachers (multiple first).  
● Head teacher transferred because of drunkenness (first).  
● Teacher impregnated pupil but did not marry her (third).  
● Another teacher impregnated and married a pupil (third). |
| 4 (MkV) Three (27)         | Several kiosks, one mill, one storage facility and two churches | a. G.M.: Very poor farmer, previously polygynous couple (8) b. Halima Abdallah: kiosk owner, alcohol brewer/seller, political leader, farmer, Nyakyusa Seventh Day Adventist widow (6) c. K.N.: Traditional healer, farmer, polygynous Muslim husband and wives (12) | 26 |
Table I. Continued

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<tr>
<th>Village no. (MkV/comparison)</th>
<th>Number annual PO visits (total person-weeks)</th>
<th>Village characteristics (^a) (months visited: seasonal events)</th>
<th>Village facilities</th>
<th>Researcher initials: head of household characteristics (^b) (number in household)</th>
<th>Number PO informants in MkV trial (^c)</th>
<th>Key PO reports related to ASRH and primary schools (^d) (first- and/or third-person sources)</th>
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<td>5 (comparison) One (7)</td>
<td>Large, roadside villages on or near Lake Victoria. Many involved in fishing economy. Majority Sukuma, but multi-ethnic. (5 and 6: July–August 7: April–May 8: June pilot)</td>
<td>Over 30 shops and kiosks, two mills, two storage facilities, four churches and a mosque</td>
<td>a. J.W.: Teacher, kiosk and bar owner, farmer, polygynous Sukuma/ Zinza couple (7)</td>
<td>—</td>
<td>• Third teacher caught having sex with pupil was fined and sought transfer (third). • Two male pupils discovered raping a female pupil: all three beaten by teachers (third). • Teachers receive a cow to allow pregnant girls to drop out without reporting it to authorities (multiple third). • Head teacher impregnated pupil, taken to court, paid fine and voluntarily left village (multiple third).</td>
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<td>6 (MkV) One (7)</td>
<td>Many shops and kiosks, one mill, two cement buildings, two storage facilities and four churches</td>
<td>a. G.M.: Retired teacher, farmer, monogamous AIC couple (4)</td>
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<td>• Sexually promiscuous girl repeatedly beaten by teachers (third). • Teacher had sex with pupils; pupils reported him to authorities and he was transferred (third).</td>
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<td>7 (MkV) One (10)</td>
<td>Many shops and kiosks, two mills, several bars and video halls, three guest houses, two churches and one mosque. Private church facilities (an air strip, a dispensary, schools).</td>
<td>a. Z.S.S.: Poor fisherman, farmer, monogamous Kerewe couple (8)</td>
<td>—</td>
<td>13</td>
<td>• Parent paid head teacher when pregnant pupil married (first). • Teacher dismissed after revealed he had sex with a pupil (third).</td>
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<td>8 (comparison) One (1.5)</td>
<td>One law court, a police post, 15 shops and kiosks, three mills, one storage facility, one bar/video hall, and one guest-house</td>
<td>a. J.W.: Government employee, landlord, monogamous couple (11)</td>
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<td>Village no. (MkV/comparison)</td>
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| 9 (comparison)              | Three (9)                                   | Remote village with dispersed population. Cattle important to economy. Almost 100% Sukuma. (March, June, October, December pilots) | One storage facility | a. G.M.: Poor farmer, monogamous couple (6) b. Z.S.S.: Poor farmer, polygynous couple (10) c, d. K.N., later Neema Busali: Tailor, farmer, polygynous husband and wives (9) | —               | • Teacher beat two pupils who had sex at sports match (third).  
• Mandatory pregnancy exams for female pupils (third).  
• Teachers receive money/goats to allow pregnant girls to drop out without reporting it to authorities (multiple third).  
• Teacher attempted to have sex with pupil who bit him and ran away (multiple third).  
• Another teacher discovered having sex with pupil in latrine (multiple third).  
• Teacher impregnated pupil, tried to have sex with another pupil, and was transferred (third). |

<sup>a</sup>In all villages, most villagers engaged in farming cotton, cassava, maize, sweet potatoes, groundnuts, cowpeas, millet and/or sorghum. In all villages, many families also kept cattle.  
<sup>b</sup>Heads of household were Sukuma and Catholic, unless otherwise noted. ‘Polygynous couple’ signifies that another formally recognized wife lived in another household. AIC = African Inland Church (Protestant).  
<sup>c</sup>Data on cohort status were not collected at first four PO sites.  
<sup>d</sup>Corporal punishment was commonly practiced in all schools.
observed general school activities on such occasions, they rarely observed teachers teaching in class, so most in-class PO data relied upon reports rather than observation. Occasionally, researchers formally interviewed teachers and young people on broad topics related to youth lifestyles, including sexual health and behaviour.

In addition to PO data collected by the field researchers, each of the authors observed teachers teaching classes in many non-PO MkV trial schools during the study period. For example, when visiting a school to observe survey interviews or intervention implementation, researchers sometimes sat in on normal Year 5–7 classes.

PO field notes were transcribed and translated into English, and coded using 32 broad codes in the NUD*IST Programme Version 4. Then the PO data from two of the broad codes (‘schools’ and ‘peer education’) were organized into 33 pre-identified sub-themes, such as ‘teaching methods’, ‘pupil likes/dislikes of teachers/school’ and ‘teacher–community relationships’. New themes that emerged from the data were also coded, e.g. ‘forced pregnancy examinations’. Hypotheses were generated through repeated reading of the notes, tested by how well they adequately explained the data, and discussed with field workers and other co-authors.

In this paper, PO field note excerpts are a researcher’s reconstruction of what was said at an earlier time, so when they are offset, quotation marks are only used for villagers’ verbatim quotes. Non-English words in italics are Swahili, and words in bold italics are Sukuma. Informant initials have been anonymized. PO field notes are identified by an abbreviation in brackets following each quote, indicating method (PO), year (1999–2002), MkV intervention or comparison status (I or C), village (nos. 1–9), and researcher number and sex (nos. 1–6; m or f), e.g. PO-00-I-3-3m.

**Results**

This section describes primary schools’ material resources and maintenance; enrolment, attendance, dropping out and end of school exams; teacher–pupil relationships (with particular focus on three problems: corporal punishment, handling of pupil pregnancies and teacher sexual abuse of pupils) and teacher–villager relationships. Themes identified in this section generally reflect findings that were reported or observed on multiple occasions, usually in multiple villages, although space only allows for one or two illustrations. Where a field note excerpt instead represents an unusual finding, it is identified as such.

**Material resources and school maintenance**

Most primary school compounds in rural Mwanza consisted of 2–3 large buildings with several classrooms each, several houses for teachers, agricultural plots, and a dirt football field. Classrooms were constructed of mud or cement brick walls, iron-sheeted roofs, dirt floors and open doors and windows. Classroom supplies usually included a worn blackboard, chalk and two-person desks. Often desks were inadequate, so some pupils sat on the floor, or several at one desk. Resources were very limited. Head teachers and pupils’ families
reported that a pupil’s annual school expenses amounted to ~8000 Tsh. Yearly costs included school fees (2000 Tsh), sport fees (1000 Tsh), running costs (1000 Tsh) and other materials (2000–3000 Tsh). In addition, families paid an initial school-joining fee (2000 Tsh) and other occasional expenses, such as school uniforms and shoes (2000–3000 Tsh), photographs for Year 4 and Year 7 exam purposes (1000 Tsh), and special costs (100–1000 Tsh), e.g. for funerals or the Year 7 graduation party.

School and village authorities sometimes raised funds for school renovations or supplies by requiring parents to contribute in cash or in kind. When one researcher heard whistling outside her home one night, she was told it was to remind villagers to collect sand from a distant river, ‘as every home was required to bring a tin full of sand to school for brick-making .... Whoever didn’t bring sand would be fined 1000 Tsh’ [PO-00-I-4-4f].

Some parents told researchers that they avoided the school and parents’ meetings so as not to be asked for school-related payments. When parents were late in making school payments, one head teacher reported enlisting the sungu sungu, a voluntary local militia, to collect them. In the absence of a village-level police force, the sungu sungu were responsible for enforcing local laws and policies, including sometimes beating people found to be guilty of theft, violent crimes or witchcraft. A few parents reported paying school payments because they feared the sungu sungu.

Enrolment, attendance, dropping out and end of school exams

Many children of primary school age did not attend school, or did not attend regularly. In one school with 473 pupils, the head teacher showed a researcher 1998 census data which identified 113 village children aged 7–12 years who had never started school. Researchers observed that children who never went to school tended to be very poor, from large families, and/or had year-round work, such as cattle herding. An example of a 23-year-old man was recorded by a researcher:

He never attended school because he was the only boy left at home to keep the cows after his brother had gone to school. ... He said he could not ask his parents to take him to school, because they expected him to help them with home activities, and that when you wake up in the morning, you find that the tasks you are supposed to do are already waiting for you [PO-99-I-6-1m].

Absenteeism was common in many schools, most often because of family work responsibilities. Occasionally, researchers observed out-of-school pupils playing, but usually they were engaged in seasonal farming, casual labour, livestock herding, or market work. A 16 year old explained that her parents kept her home to harvest beans, while her grandmother kept her home to harvest cassava. One boy, ‘... said he had gone to fish on Thursday, because he was accumulating money to take to school for exam registration and the photographs required for exams’ [PO-99-C-5-2f].

In several areas, particularly in the remote Sukuma villages, teachers attributed high absenteeism and drop out rates to parental choices. Some teachers were sympathetic to the economic pressures facing pupils’ families, while others thought that parents could prioritize their children’s formal education (e.g. by selling a cow), but they did not do so because they did not see an advantage to formal education. All teachers mentioned above commented that patchy attendance contributed to poor pupil motivation and performance.

First-person reports were numerous of young people who had completely dropped out of primary school because of work obligations and/or inability to pay their school expenses. One head teacher estimated that only half of those who started Year 1 in his school would complete Year 7. In several villages, parents reported particular reluctance to use their scarce resources (e.g. land or cattle) to pay for a girl’s schooling, as they felt it would delay her marriage and payment to them of a bride price, or be detrimental to both if she became pregnant out-of-wedlock. One teacher explained why a Year 5 pupil had dropped out by saying, ‘Her father wants her to get married. Her father has stopped paying
her school fees, and is waiting for a suitor to come by’ [PO-01-C-2-1m].

Other reasons for dropping out included pregnancy, illiteracy, fear of punishment and frequent illness. Some people attributed the last reason to ancestral displeasure at school attendance. Pregnancy-related drop-outs will be discussed below.

The majority of pupils who completed Year 7 stopped schooling after failing their PSLE. Both males and females took on adult work responsibilities after leaving school, and parents often arranged for their daughters to marry immediately. Completion of Year 7, or dropping out of school earlier, thus marked a transition to adulthood for most village youth, regardless of their age.

General teacher–pupil relationships

Teaching was almost entirely lecturing, formal question-and-answer sessions, recitation and writing sentences on chalkboards for pupils to copy into their exercise books. Teachers generally spoke to pupils in an authoritarian way, commanding a pupil to answer a question or to run an errand, rather than requesting it. Pupils were generally reticent to answer questions posed to the whole class, so teachers usually directly addressed an individual, who formally stood to answer. There was rarely a mutual exchange of views and experiences, but rather teachers provided knowledge and pupils received what was said. Pupils rarely spoke back or challenged teachers, as punishment could be severe.

Sometimes teachers marked exercise books during the lesson, though at least one teacher charged for this:

I noted that when pupils brought books for marking, the teacher asked each of them if they had 10 Tsh for him to buy a red pen for marking them. Some of the pupils had it and handed it to him together with their book, while those who did not went away with their books unchecked [PO-01-I-1-2f].

Only occasionally did teachers try to engage more casually with their pupils, as in the following example observed while passing a volleyball game:

A teacher joined the group playing volleyball. There were also pupils playing there and some felt shy to play with their teacher. ... The teacher kept telling them to play well, and some preferred to stand and watch [PO-00-C-3-2f].

In discussions with teachers, researchers found that many had a limited understanding of both the subjects they taught and non-didactic teaching techniques. Some village authorities also commented on this. One Village Chairman said, ‘Education currently is poor, because the teachers are unqualified, or rather, untrained’. He explained this using the Swahili saying, ‘A blind man cannot easily lead another blind man’ [PO-99-C-5-2f]. Most teachers expressed interest in additional training to improve their teaching.

Teachers’ motivation seemed to vary considerably. Some were enthusiastic and strove to teach their pupils well, despite few resources, while others were poorly motivated, reporting that their pay was insufficient and/or their pupils disinterested. One teacher said, ‘Most pupils don’t know the importance of school ... There comes a time when the teachers also get tired, so some pupils complete Year 7 without even knowing how to read and write’ [PO-01-C-3-3m].

Young people generally liked or felt neutral about school overall, and only had one or two things which they specifically disliked. Some hoped that school would be a means to build a better life, and some reported liking certain subjects, sports or the chance to spend time with their peers. An 18 year old, ‘... talked about the way she liked school. She shows me an album with her snapshots and talked about three girls, all once close friends while in school’ [PO-00-C-3-2f]. Similarly, a 19 year old who had dropped out of school due to pregnancy, ‘... said she enjoyed science oriented subjects and ... was an active choir member at their school. ... She also said she was liked by teachers as she was sharp in class’ [PO-99-C-5-2f].

Often, young people reported liking school because of a particular teacher, as in the example of a rather large-sized teacher who was affectionately called Limwalimu, or ‘big teacher’. Many
pupils reported that teachers who were fair and sparing in their use of corporal punishment were the most liked. A recent school leaver reported, ‘Many pupils like [a certain] teacher because he is polite and sympathetic. If you have made a mistake, you can defend yourself’ [PO-01-C-2-5f].

Occasionally, pupils and former pupils reported disliking school or a specific teacher due to verbal disrespect or abuse. This was observed by researchers, one of whom noted: ‘In the short time I was with the three teachers ... whenever a pupil passed by they would make fun of her or him by commenting about them’ [PO-00-C-3-2f]. Another teacher referred to all female pupils as wasimbe, a disrespectful term for women living independently of a man [7].

**Corporal punishment**

When describing what they did not like about school or a specific teacher, most pupils mentioned excessive or unfair use of corporal punishment. Three male pupils, one of whom was the son of a teacher, said:

... many young people like going to school. However due to some teachers mistreating and beating pupils without genuine reason, some pupils decide to quit school [PO-00-C-3-3m].

A few pupils reported hating school because of caning. One dreaded the opening of school after a holiday: ‘She said they were soon going to open the school and start beating [pupils] again ... she longed for the next year to come, so that she would have completed school’ [PO-02-I-4-5f].

In all schools, corporal punishment was routinely used for minor and major infractions, such as sending love letters, being late for school, being seen as disrespectful to teachers or being caught having sex. Corporal punishment usually involved beating with a switch, but it could include other forms of physical discomfort or pain. A researcher observed an entire class being forced to lie in the dirt on their stomachs at the hottest time of the day:

We saw all the pupils lying on the ground. Afterwards, a few were caned while holding their ears, while some dispersed. ... [Later, a 16 year old pupil from the group] said that some were beaten because a pupil laughed and others responded. Another Year 7 girl complained that ... lying on her stomach on the hot ground was torturous punishment [PO-01-C-2-5f].

Corporal punishment was such an established way of maintaining discipline at school and at home that no teachers and few parents questioned it during PO. Many pupils also took it for granted, and considered it acceptable if used fairly and moderately. A 15-year-old school leaver:

... said [a certain boy] was always being beaten heavily. One day when he was beaten, he fell down and dislocated his arm. He went home, but his parents didn’t do anything. She said, ‘Some parents are very arrogant. When their children are caned, they insult the teachers and even accuse them’ [PO-01-C-2-5f].

All teachers routinely used corporal punishment, but there were often one or two teachers per school who were widely reported to be particularly unfair and excessive. A girl who had recently finished Year 7 told a researcher, ‘I only like some of the teachers. I don’t like [a certain teacher], because he hits so much. He can even hit you twenty times’ [PO-01-C-2-5f]. There were only two PO reports of teachers being reprimanded for excessive use of force, both from the same village. One teacher was given a warning, and the other was transferred.

**Pupil pregnancies**

When the topic arose, most pupils, teachers and villagers estimated that one to three girls per school became pregnant and dropped out of primary school each year. By contrast, the official figures for Mwanza Region in 2003 were that an average of only one girl in seven schools dropped out due to pregnancy [17].

Out-of-wedlock pregnancies were common in rural areas, and in some instances pregnant girls were able to make a discreet transition from school into adulthood as a married or single mother. This might occur if a girl was very close to finishing
Year 7, and/or if the girl’s family directly negotiated bride price compensation from the family of the man responsible, and teachers did not become involved. However, in many instances such discretion was difficult, and in all study districts there were reports of a man, or his family, being forced to pay both the pregnant girl’s family and schoolteachers (Table I). In exchange, schoolteachers falsified the girl’s school records (e.g. removing her name, or attributing her departure to another reason), and did not report the pregnancy to the authorities, so he avoided punishment. In one village, the following incident was independently reported by several informants:

The head teacher threatened that if he took the matter forward the boy would ‘die in jail’. ... After the young man and his guardian pleaded for the amount to be reduced, it was decided that ... the daughter’s father would get 100,000 Tsh and the head teacher would get 70,000 Tsh [PO-00-I-4-1m].

In two other villages, total fines paid to the girl’s family and teachers were reported as 100,000–130,000 Tsh, with or without a cow. In a fourth village, a man whose son had impregnated a schoolgirl explained that he only paid a bride price (e.g. two to three cows) and a small amount of money to the girl’s family and head teacher, because he had a good relationship with the teachers.

Financial motivation may have contributed to teachers taking groups of schoolgirls for mandatory pregnancy examinations at the nearest health facility. In one village, a former MkV class peer educator:

... said she went for a compulsory pregnancy exam along with other pupils while still in primary school [as] teachers selected all those who appeared big to go for exams [PO-01-I-1-2f].

Similarly, in another district, a Year 7 girl: ‘... said that the mandatory pregnancy exam was embarrassing to them, as it was done by hand, they were told to remove all of their clothes, and the person doing the exam was a man’ [PO-00-C-3-2f].

In addition, pregnant schoolgirls sometimes experienced other forms of ostracism or public shaming. Punishment could include beating the responsible boy or man, and sometimes even the pregnant schoolgirl. The potentially harsh consequences for sexual activity and pregnancy contributed to pupils being very secretive about their sexual relationships [7].

Teacher sexual abuse of pupils

There were reports of sexual relationships between male teachers and female pupils in eight (four comparison, four intervention) villages (Table I). Usually, this involved stories about one or two male teachers per village who in recent years had impregnated schoolgirls (four schools), had been caught having sex with pupils (three schools) and/or had pressurized girls to have sex (three schools). Several of these accounts were known and discussed by the wider public because teachers were dismissed (one school), transferred (three schools), suspended (one school), fined (two schools), left the village voluntarily (one school), or married one of their pupil lovers soon after she finished school (two schools), while other reports remained secret among peers.

Generally, sexual relationships began when a teacher isolated a girl in his office or home where the girl had been assigned chores. The teacher then threatened the girl with punishment and/or offered her special privileges to gain sexual contact and, ultimately, intercourse. One 15-year-old Year 7 girl reported:

[Her teacher] called her into the office when other teachers were away. He asked her whether she had handed in the exam [and] pretended to argue with her ... He then said he had just misplaced it. He told her she was the best girl in class with 45%, but he wanted to give her another 15%. She agreed to the free marks, and the teacher started caressing her breasts, buttocks and hands ... [and] asked her for sex [PO-01-I-1-2f].

If a girl refused sex, over the ensuing months the teacher sometimes made excuses to beat her,
interspersed with attempts to seduce her whenever he could get her alone.

Sometimes adults seemed aware of on-going abuse, but usually did not act to prevent it, because they did not have enough evidence, did not believe it affected their family or felt little recourse. For example, a 22-year-old nursery teacher:

... said that [a certain] teacher openly has sex with school girls and that other teachers know about it but don’t do anything. She said that she observed the teacher sending a girl to his house and then he followed. ... She said that most teachers at the primary school are known to befriend [have sex with] school girls, including the head teacher [PO-00-C-3-2f].

If parents and other adult villagers had strong evidence that a teacher had a sexual relationship with a schoolgirl, he was sometimes transferred to another school, either on his own initiative or by authorities. One example was told by a 25-year-old man:

One night [a pupil] went to the teacher’s house. ... Since there were rumours that she was having an affair with the teacher, her father went straight to the teacher’s home. ... The matter was heard before local authorities the following day, and the teacher was fined 15,000 Tsh. Later the teacher sought a transfer [PO-00-I-4-1m].

Only one reported case of teacher–pupil sexual relationship led to a formal court case. It involved a pregnant Year 5 girl, and was resolved 2 weeks prior to a PO visit:

The girl’s parents asked the head teacher if he was responsible and what he was ready to offer them. ... He denied responsibility. The parents sold one of their cows and took the case to court in the village. The head teacher bribed the magistrate, who judged unfairly ... The parents sold another cow to take the case to a higher court. ... The head teacher was found guilty and moved away from the village [PO-99-C-5-2f].

In one village, sexual abuse of girls by teachers seemed commonplace, as there were numerous first- and third-person reports that five of the six male teachers pressurized different girls for sex. For example, a 17-year-old girl in Year 4 reported that she had sex with her teacher for 1000 Tsh on Christmas Eve, and for 500 Tsh on Christmas Day:

[Earlier in the year] the teacher told her that he loved her and wanted her to be his girlfriend. She refused. She said that throughout the term the teacher caned her without reason and she thinks it was because of her refusal. ... She said she only agreed [to have sex] twice, because he had pestered her over a long time. ... She said it was in [her shared bedroom] ... and she assumes since it was dark her 12 year old sister did not see that it was their teacher [PO-99-I-1-2f].

Teacher–villager relationships

Teachers were considered by themselves and others to be different from most villagers, because they came from distant (sometimes urban) places, often did not speak the local languages, had higher education and status and had a relatively secure income. Many villagers had ambivalent relationships with teachers, reflecting their broader ambivalence about the value of formal education. As a 50 year old explained: ‘Teachers are highly respected ... because they teach children, [but] they are feared at the same time’ [PO-01-I-1-2f]. Fear related to the authority or power that teachers sometimes had within the village: because of their relative education and status, some took on leadership roles, speaking at village meetings and participating in decision-making bodies.

Sometimes teachers referred to villagers as backward or ignorant in the presence of researchers, and sometimes villagers reported that teachers were arrogant. A farmer’s wife who brewed and sold beer:

... gave a story of how the head teacher was told by other teachers to buy good things for his wife, so she can appear like a teacher’s wife and not a villager. ... [The farmer’s wife] said that she is nothing compared to teacher’s wives [PO-01-I-1-2f].

Some parents supported or were resigned to their children working for the school or teachers during
school hours, while others resented it. Several parents and pupils independently reported anger that teachers did not give pupils food or drink after hours of free labour in their homes. A pupil’s grandmother commented:

‘Do you think our school is a school?’ ... She said the pupils are made to work horribly. ... ‘The children are made to cultivate [teachers’ and school gardens] as if they were cattle’ [PO-01-C-2-5f].

In addition to school fees and pupil labour, parents sometimes voiced concerns about teachers’ use of corporal punishment, drunkenness and womanizing (not including sexual relationships with pupils). In one village, a researcher encountered teacher drunkenness firsthand when a drunken teacher accosted her on the road to request 200 Tsh to purchase alcohol. This teacher was later transferred because of drunkenness.

Parents rarely challenged teachers about their concerns. A 17 year old:

... said that most parents complain when they see their children cultivate maize at school because the returns from it are all used by the teachers ... but [they] do not tell the teachers their complaints [PO-01-I-1-2f].

One exception to this pattern was provided by a recent school leaver:

She said that if a teacher is very cruel to pupils, some children tell their parents and some parents are members of the school committee. When they call for a committee meeting, they mobilise each other to press for his transfer [PO-00-C-3-2f].

A school committee existed for every school, and usually consisted of some relatively educated parents and community leaders who were responsible for the daily running and improvement of the school, e.g. the repair or building of classrooms. However, their authority seemed limited in some villages. During one PO visit, a head teacher reportedly took a 40 000 Tsh bribe to register a girl as transferred to another school, when in fact she had dropped out to marry. School committee members were angry that the head teacher did not share the money, so he disbanded the committee until they abandoned the matter.

In general, dissatisfied parents felt they had little legal or bureaucratic recourse against teachers. However, in several villages there were rumours about teachers being forced to move after they or their families fell ill due to witchcraft. A young shopkeeper:

... said that if any teacher troubles the students ... parents would fix them by using witchcraft. He gave me an example of a certain teacher who ... used to beat pupils frequently. He said that the teacher was bewitched and started frequently getting boils until he decided to move to another village [PO-99-I-6-1m].

Some teachers also reported bewitchment of themselves or their colleagues, and genuinely seemed frightened by the possibility of villagers taking revenge in that way. One teacher was in the process of transferring to another school because of the ‘bad luck’ she and other teachers had experienced in the village, including theft, fire and her child’s death, all of which she attributed to people’s mischief, hatred and/or witchcraft.

Discussion

School systems provide one of the few opportunities to target a large number of young people to receive interventions in resource- and media-poor settings. In Tanzania, the relatively late age of most primary school leavers and the low proportion that go on to secondary school suggest that primary schools are currently the best institution for implementation of ASRH programmes at relatively low cost and on a large-scale. In addition, primary schoolteachers are likely to be some of the most literate and educated individuals in rural areas, and once trained, they can potentially deliver sexual health programmes until they retire.

However, Tanzanian primary schools face great challenges which might undermine ASRH
interventions. Many rural adolescents may not fully participate in a programme because they never enrolled in school, they attend inconsistently or they have dropped out. Until greater enrolment and attendance are achieved, ASRH programmes may partially address this through flexible scheduling and implementation, e.g. allowing for seasonal periods of high absenteeism, and repetition of key concepts or sessions throughout the curriculum.

Severe material resource constraints must also be taken into consideration in ASRH programme planning, e.g. guides for teachers rather than individual textbooks for pupils, and teaching exercises which do not require additional materials.

Problematic teacher–pupil relationships create one of the greatest barriers to potential ASRH programme success. The established teaching culture—characterized by recitation and corporal punishment—contrasts fundamentally with trust-building and participatory methods that are generally promoted in ASRH programmes [2, 25]. For example, ASRH programmes often seek to promote youth leadership and peer education, in the belief that they contribute to positive role modelling and skills development. However, when pupils are habituated to very subservient relationships with teachers, it may be difficult for them to take effective leadership roles.

Even in an authoritarian system, teachers and pupils may be eager to learn new material in interesting ways. Nonetheless, as ASRH intervention developers and evaluators have found elsewhere in Africa, substantive change to didactic and authoritarian school-teaching methodologies can be very challenging [3, 26–28]. While some success may be demonstrated in very intensive, small-scale interventions [29], it can be difficult to take such efforts to scale without dilution of quality [30]. Effective scaling-up may require fundamental changes in teacher training and supervision [6].

In addition to teaching methods and general classroom dynamics, several official and unofficial school practices have serious implications for teacher–pupil relationships, and thus teacher-led ASRH programmes. Mandatory pregnancy examinations raise ethical concerns about pupil privacy and teachers’ motivation, and further leads to pupils leaving school, being beaten, fined and/or imprisoned. Instead of reducing pupil sexual activity, forced examinations and corporal punishment seemed to contribute to pupils’ secretiveness about their sexual activity [7].

Sexual abuse of schoolgirls by teachers has been found in a number of countries in sub-Saharan Africa [2, 21, 27, 31–34]. An abusive teacher might cause great harm to an ASRH programme by modelling inappropriate behaviour, by instilling fear and distrust of the programme associated with the teacher, and even by exploiting ASRH classes as new opportunities to abuse pupils. Punishing such offences by transferring the guilty party simply moves the problem to another school. In such contexts, close supervision and appropriate responses are crucial within ASRH programmes. In addition, there is a broader need for national policies and norms that better prevent, monitor and correct such abuses [2, 33].

Finally, while some teachers and villagers seemed to have fairly positive and respectful relationships, in other villages substantial tensions existed between the two, which could affect the acceptability of teacher-led ASRH programmes. Pre-existing problems, such as teachers’ alcohol abuse or sexual abuse of pupils, could create or reinforce controversy and stigma associated with an ASRH programme in a community.

All studies have strengths, limitations and biases. In this study, PO conducted for more than 3 years may have provided valid data, especially considering the number of villages and different respondents encountered [8, 35]. However, most PO findings were based upon self-report or observation outside of school, with little classroom observation, limiting our understanding of teacher–pupil dynamics. In addition, the informal and opportunistic nature of data collection may have resulted in unusual or problematic experiences being overrepresented in the data. For example, there were many male and female teachers for whom there were no reports of sexual abuse. Reports about teachers who worked hard to teach their students well, despite limited resources and difficult circumstances, may thus have...
been under-represented. Furthermore, while corrupt or abusive teachers must be held accountable, such practices must be understood within their historical and socio-economic contexts, such as establishment of corporal punishment in schools during the colonial period and the low wages of teachers [2]. The latter may contribute to the exploitation of pupil labour, or the demanding of bribes.

The Tanzanian primary school system is one of the most disadvantaged in the world. This is unlikely to change without substantial, long-term efforts to improve infrastructure, resources and teacher capacity and supervision. Reform of the Tanzanian educational system is currently underway [17, 23], and this may be important in improving adolescent sexual health even in the absence of specific ASRH programmes. In the meantime, despite limitations of the current primary school system, school-based ASRH programmes may be the best way to reach Tanzanian adolescents in cost-effective, large-scale and relatively in-depth ways. School-based ASRH programmes have potential if adapted to the realities of the local educational system by such means as simplification of the subject matter, in-service training on alternative teaching methods, improvement of teacher–pupil and teacher–community relationships and close supervision and appropriate responses to abusive or exploitative practices.

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Conflict of interest statement

None declared.

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