

**Emerging Issues from the APHRC Education Research in Urban Informal Settlements of
Nairobi, Kenya**

*A synthesized report outlining the main findings and emerging policy and programmatic issues from
studies carried out within the Education Research Program at APHRC, 2005 – 2007*

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1. Introduction

The African Population and Health Research Center (APHRC) have carried out a number of studies based on data generated from its longitudinal research program on education – the Education Research Program I (ERP1), which is nested on the Nairobi Urban Health and Demographic Surveillance System (NUHDSS). The Center also commissioned several papers on issues that are central to the achievement of the goal of Education for All (EFA) in Africa. This report is a synthesis of the main findings and emerging issues from APHRC’s experience in education research in Africa and Nairobi urban informal settlements in particular. The report is organized as follows: Introduction (this section) presents the status of some selected schooling outcomes in Africa, and compares them with other parts of the world. In the second section, the issue of access to schooling in urban informal settlements of Nairobi is presented while the third section is on transition to secondary. Quality of education in informal settlements is discussed in section four while section five presents links between health and education with special focus on HIV/AIDS related issues. The report ends with a conclusion which also gives the way forward in light of the emerging issues. This final section on the way forward creates the link between APHRC’s current work and a proposal it recently submitted to the Hewlett Foundation for the second phase of its education research program.

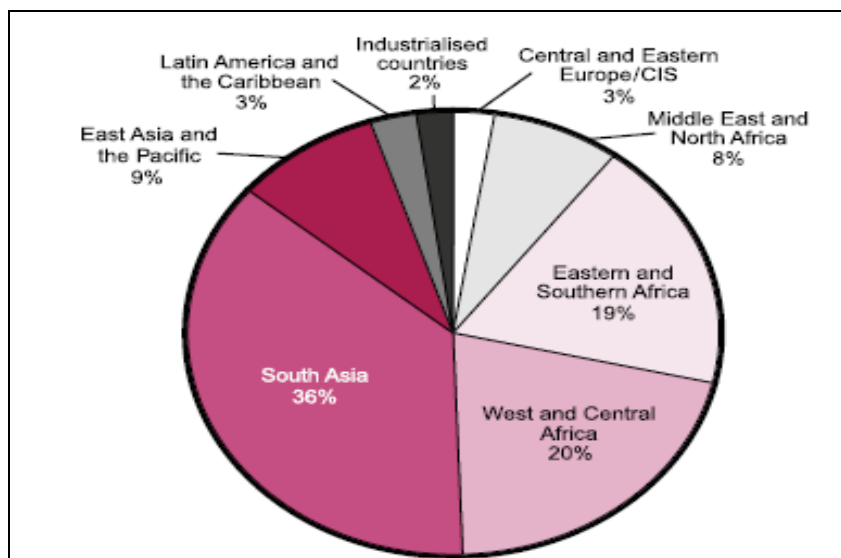
1.1 Emerging issues in Education in SSA

The second goal of the Millennium Development Goals (MDGs) is to ‘achieve universal primary education’, with the specific target of ensuring that by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling. The MDG on education echo other past declarations including the 1948 UN declaration on human rights; the Convention on the Rights of the Child (CRC) of 1989; the 1990 World Conference on Education for All in Jomtien, Thailand; and the 2000 Dakar Framework for Action. All these declarations, efforts, and commitments notwithstanding, EFA remains a mirage, especially in sub-Saharan Africa.

The majority of children in sub-Saharan Africa do not make it to secondary school. Analysis of Gross Enrollment Rate (GER) shows that two-thirds of all countries with secondary GER of 40% and below are in Africa (Gravenir & Wangenge-Ouma, 2007)¹. Current statistics demonstrate that in SSA, only a small minority participates in and finishes secondary schooling. In a number of sub-

Saharan African countries, the majority of primary school-age children are not in school, reaching as high as 50% to 66% of the relevant age group, for example, in Burkina Faso, the Central African Republic, the Democratic Republic of Congo, Guinea-Bissau, Mali, Niger and Sierra Leone (Gravenir & Wangenge-Ouma, 2007). More than one-third of all primary school-age children in the region are not in school. Somalia has the world’s highest proportion of primary school-age children not in school at 89%. Out-of-school rates exceed 50% in Eritrea and Ethiopia. Burundi, Comoros, Mozambique and Tanzania have out-of-school rates greater than 40%. The absolute number of out-of-school children in sub-Saharan Africa is rising, and the region may not realize the MDG goal of attaining universal primary education by 2015 (*ibid*). Around 20 countries in sub-Saharan Africa, with a total out-of-school population of 17 million have either gone backwards since 1990, or are off-track by more than a generation (Gravenir & Wangenge-Ouma, 2007). By 2015, approximately 19 million children in sub-Saharan Africa will still be out of school if current trends continue compared to 33 million in 2005 (UNESCO, 2007)². Particular groups of children such as street children, child laborers, child soldiers, children from poor household, children living in rural or remote and marginalized areas, and children orphaned by or infected with HIV and AIDS, are more likely to be out of school (*ibid*). These groups of children are out of school because either the respective activities conflict with school attendance and or the assumed roles consume most of the child’s schooling time.

Char 1: Distribution of out-of-school children of primary school age by region, 2001/02



Source: UIS & UNICEF (2005)³

Reasons for being-out-of-school

In SSA, children are out-of-school for various reasons including poverty, child labor, disintegration of households leading to street children, war and conflict leading to child soldiers, marginalization of geographic areas and orphanhood.

What is being done: Interventions implemented to address the issue of out-of-school children in sub-Saharan Africa include free primary education policies, alternative education delivery mechanisms (for example non-formal education, nomadic education, and accelerated learning), strategic interventions such as school feeding programs, and programs targeting orphaned and vulnerable children. Programs aimed at improving educational quality such as improving the relevance of school curriculum, and supplementing teachers with trained volunteers, among others, have also been tried (Gravenir & Wangenge-Ouma, 2007).

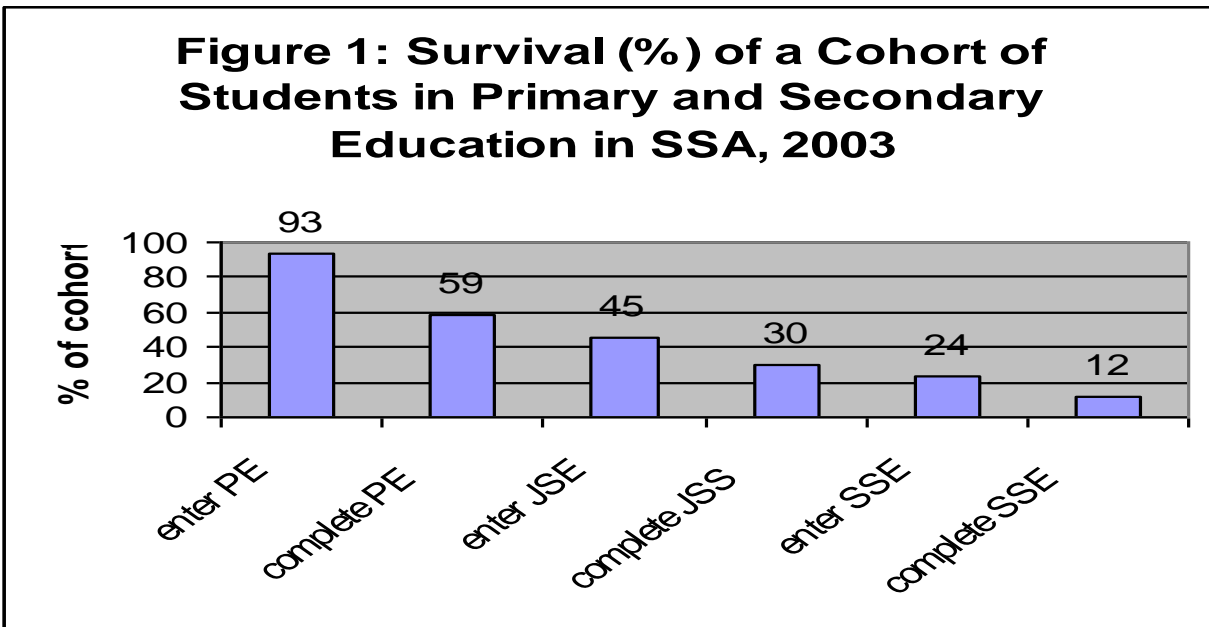
1.2 Transition to secondary in SSA

While much current effort by many countries in sub-Saharan Africa is geared towards realizing universal primary education (UPE), not much is being done to expand access to secondary education, especially by the poor. As such, secondary education remains a dream to many children who come from poor households in sub-Saharan Africa. The current secondary education system in many SSA countries is skewed in favor of the small minority of better-off members of society (Oketch, 2007)⁴. The biggest hindrance to secondary education in the region is cost, which locks out many children from poor families.

Less than one in two youth in sub-Saharan Africa enters junior secondary schools and less than one in four enters senior secondary schools (See Figure 1). Access to secondary schooling in Africa is inequitable with most countries having a secondary education system that benefits the economically better-off in urban areas, while remaining largely inaccessible to urban informal settlement and rural populations; with girls being particularly disadvantaged (SEIA, 2007)⁵.

As a result, only 12% of age-cohorts complete full secondary education in the sub-Saharan Africa region (see Figure 1). Secondary education is seen as being more critical for economic development and poverty reduction in sub-Saharan Africa. Indeed, according to the World Bank, access to quality secondary education is now considered the most important strategy for creating economic opportunities and social development for individuals and nations alike (Oketch, 2007).

Secondary education has several benefits which, if realized, will create the foundation for development and prosperity in sub-Saharan Africa.



Source: SEIA, (2007)

The biggest challenge lies in transforming the secondary education system in African countries to ensure that it benefits the poor, who form the majority in these countries. For the poor to fully participate in secondary schooling, they require not only the initiation of supply-side policies such as free primary education, but also demand-side interventions – which remove barriers on the side of the household that may hinder poor and disadvantaged children from attending school (Oketch, 2007). Such barriers include the need for children to work to support their families. Other identified factors influencing transition to secondary school include family networks and household composition; school quality, relevance and inequitable distribution of secondary school opportunities across different communities; early marriages and pregnancies; parental low levels of educational attainment; elitist secondary school system; limited private and public sector provision of secondary education; long distances to secondary schools, and orphanhood.

Demand-side interventions have been implemented in relatively similar underdeveloped regions of Latin America and some Asian countries, and could be modified to suit the situation in sub-Saharan Africa. Experiences from outside Africa show some mixed results of such interventions. Such pro-poor interventions have been implemented in programs such as the

PROGRESSA in Mexico, the female stipend program in Bangladesh, and the vouchers for private schooling in Colombia (Behrman, Sengupta & Todd, 2001, see Oketch 2007 for fuller discussion of these interventions)⁶. The interventions have had positive impacts in terms of increasing schooling years, reduced child labor hence more instructional time, school re-entry, decreased repetition and dropout, and most importantly, increased transition to secondary school. From this brief synthesis of literature, it emerges that:

- Despite concerted effort to raise enrollment and reduce dropout in SSA, many school-age children are still out of school, with the situation in some poor countries calling for immediate interventions.
- In poor and war torn countries, the proportion of out-of-school children remains high.
- Transition to secondary education remains very low with about 12% of a cohort that enters primary education completing secondary education.
- Due to low transition to secondary education, SSA is experiencing a very slow accumulation of stock of human capital needed for economic development now and in the future.

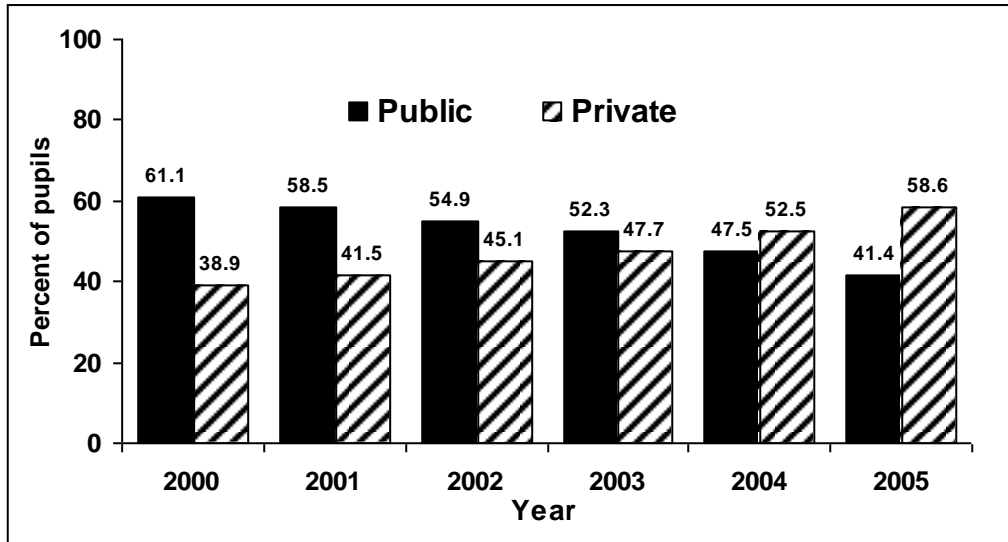
2. Access to Schooling in Urban Informal Settlements

2.1 School enrollment in urban informal settlements

Data from the ERP study areas show that more children (see Figure 2) in the informal settlements are attending private schools (owned by the community, private enterprises and religious organizations) than in the non-slum areas. Although most of these schools attempt to follow the formal curriculum and often send their final year primary students to take the Kenyan Certificate of Primary Education at nearby centers, they are largely non-formal with unqualified volunteer teachers and often lack basic facilities. More importantly, parents whose children attend these schools pay monthly school fees and the schools generally do not benefit from the support public schools receive under the free primary education policy. With a population of over 9,000 primary school-age children in the two informal settlements, the eight public schools within and around these informal settlements cannot meet the huge demand for primary education among parents and their children in the informal settlements. Consequently, these private non-formal

schools provide an essential service to the community. In the absence of new public schools in the informal settlements, identifying effective strategies for link these private non-formal schools that largely serve these communities to the formal education system will be critical in ensuring the very poor benefit in some ways from the free primary education policy.

Figure 2: Percentage of enrolled pupils attending public and private schools in the urban informal settlements of Nairobi, 2000-2005



Gross and net enrollment ratio are common measures of school participation that can be compared across space and time. Gross enrollment ratio is the number of students enrolled in a level of education, regardless of age, as a percentage of the population of official school age for that level. Net enrollment ratio refers to the number of students enrolled in a level of education who are of official school age for that level, as a percentage of the population of official school age for that level.

Table 1. Gross and Net Enrollment in different regions in the World, Kenya and Informal Settlements of Nairobi

Region	GER		NER	
	1999	2005	1999	2005
Sub-Sahara Africa	80	97	57	70
Arab States	90	95	79	83
Central Asia	99	101	88	90
East Asia and Pacific	112	110	95	94
Latin America and Caribbean	121	118	92	94
Central and Eastern Europe	100	103	90	91
North America and Western Europe	103	102	97	95
South and West Asia	94	113	77	86
Kenya	92	107	69	83
Nairobi Province	51	38	45	56
Nairobi Informal settlements	n.a	101	n.a	83
Nairobi formal settlements	n.a	107	n.a	95

Sources: UNESCO (2007); Government of Kenya (2007, 2005)⁷; APHRC field data (2005).

The UNESCO Institute for Statistics (2003) advises that in order to make substantial progress towards universal access to primary education, a high GER exceeding 90 percent should be accompanied by a decline in the enrollment of over-aged and under-aged pupils in order to free places for pupils from the eligible age group. From Table 1, in 2005, the results from the ERP study show that the urban informal communities of Korogocho and Viwandani have high GER (100.7%) although consistently lower than that for the communities living in the urban formal settlements of Jericho and Harambee (106.8). However these statistics are no different what is observed elsewhere in the World. GER and NER for Nairobi province appears low mainly due to under reporting.

Overall, APHRC data show a NER of over 70 percent for each of the study sites for the period 2000-2005 although the informal settlements have lower rates than the formal settlements. In 2005, the NER was 83% in the informal settlement and 95% in the non-slum areas. From this analysis, it is emerging that:

- Enrolment of children from urban informal settlements is lower than that of children from urban formal settlements. However it is higher than the reported average for Nairobi as shown in Table 1.
- Close to 17% of primary school age children in urban informal settlements of Nairobi are out of school, compared to 5% in the formal settlements. The 17% is almost the same proportion of primary school age children who were out of school for Kenya in 2005.
- More children from the urban informal settlements are attending non-public schools where fees are charged (59% in 2005) despite the introduction of Free Primary Education in 2003 in Kenya.

2.2 School Drop Out

As shown in Figure 1, less than 60% of children who started primary school in sub-Saharan African actually complete primary school. Compared with other countries in sub-Saharan Africa, Kenya has average national drop-out rate that is below the median for sub-Saharan Africa. In 2003, 41% of primary school students in SSA did not reach the final grade of primary school level (see Figure 1). APHRC-ERP data show that the free primary initiative in Kenya has substantially reduced primary school dropout rates. For example, ERP tracking data of different cohorts in the Korogocho and Viwandani informal settlements before and after the free primary initiative indicate that the average annual dropout rate between Standard 7 and Standard 8 reduced from 6.1% of children before free primary to 3.9% of children after, while dropout rate between Standard 6 and Standard 7 reduced from 2.9% to 1.9%; reductions in drop-out rates of 35 and 34 percent respectively. Nonetheless, these are very high rates of drop out. Compared to the informal settlements, dropout rates for these grades in urban formal settlements were very small both before and after the introduction of free primary education.

There is also relatively high primary enrollment rates, even in informal settlements. For example, among a cohort of pupils enrolled in Standard 1 in 2000 in both the informal and formal settlement schools, 95% was still in school 4 years later. However, substantial disparities remain: while only 2% of this cohort had dropped out 4 years later in the formal settlements, 9% of those living in the informal settlement communities had dropped out over the same period.⁸

2.3 Reasons for dropping out

Lack of money stands out as the principal reason for dropping out in all age categories (see figures 3 – 5 below). However, there are important informal – formal settlement differences in other reasons for dropout. These other reasons included loss of interest in schooling among children, sickness and disability, failure to get admission in a near by school, early marriage and unwanted pregnancies, domestic work and care for the sick and young ones, and orphanhood. Among younger children aged 5-9 years, while no one in the non-slum areas reported ‘no interest in school’ is a reason for dropping out, as high as 23 of the boys and 18 percent of the girls gave this reason. Among children aged 10-14, girls living in slums are more than six times as likely as those in non-slum areas to report loss of interest in school and they are also more than two times as likely to report early marriage or unwanted pregnancy as a reason for dropping out. The boys are almost three times as likely to report loss of interest in school. For older adolescents aged 15-19 years, almost a quarter of the girls in the slums reported early marriage or unwanted pregnancy are their main reason for dropping out compared to only 5% of the girls in the non-slum areas.

Figure 3

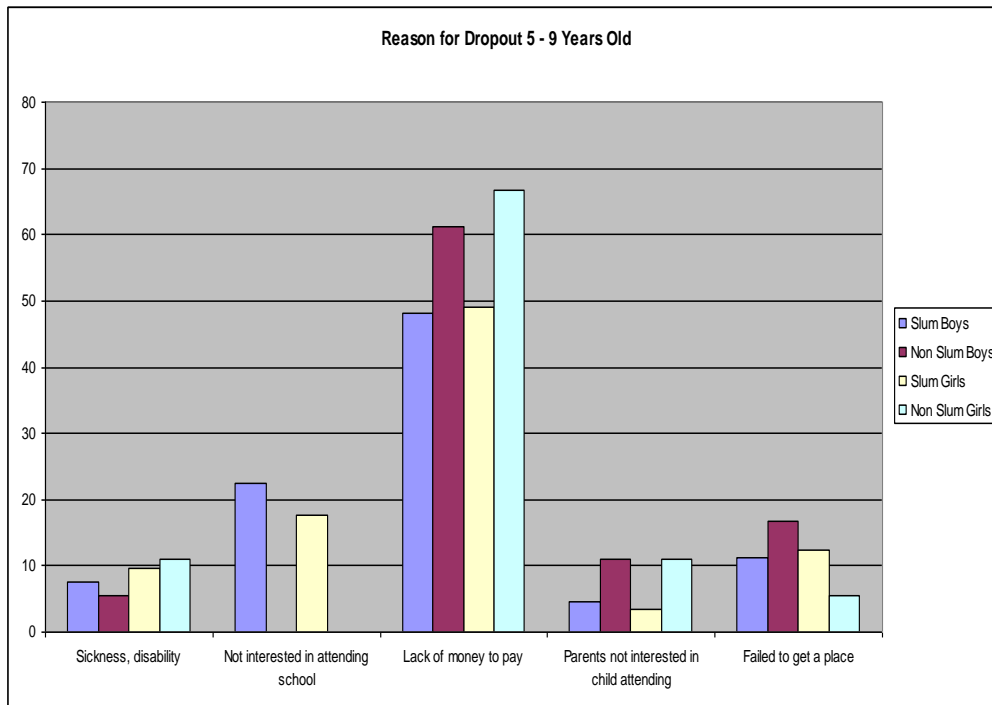


Figure 4

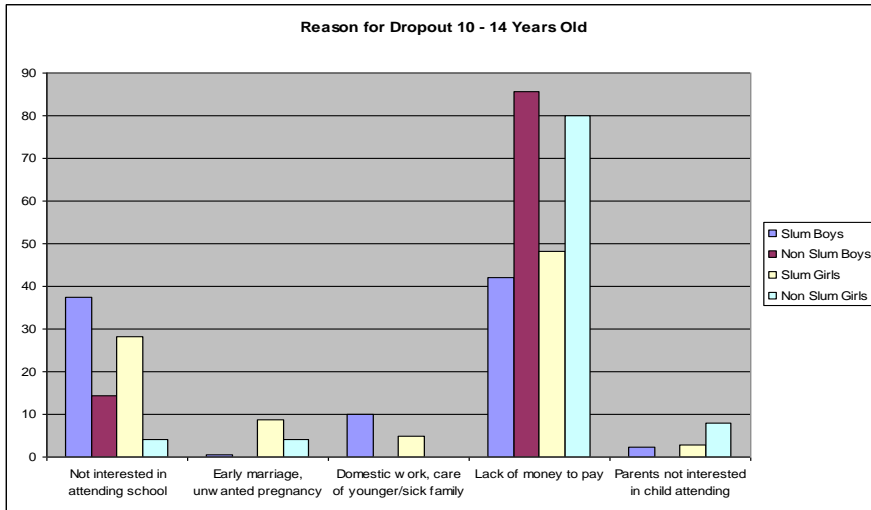
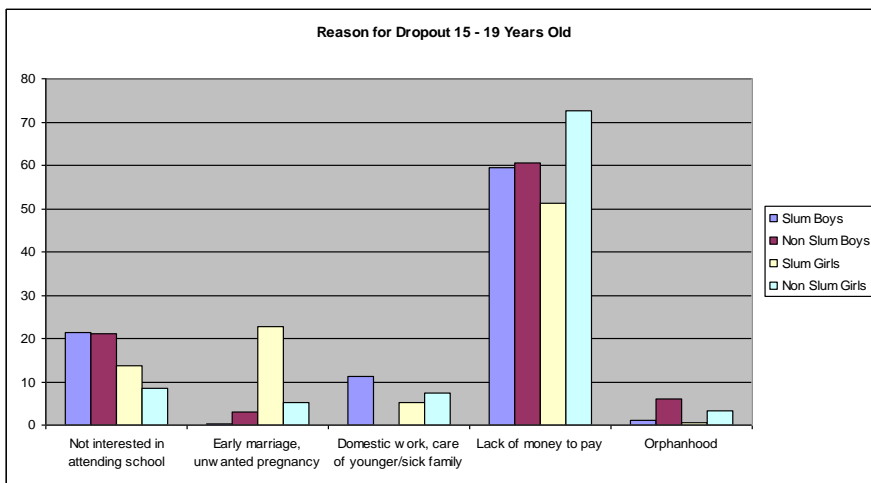


Figure 5



In addition to higher dropout rates, among children who continue with their schooling, those in the informal settlement areas are much more likely to repeat a class. While 95% of children in formal settlements who began Standard 4 in 2000, and were still in school by 2004, had reached Standard 8 by 2004, only 83% of similar children living in the informal settlement communities had reached Standard 8 by 2004. The others were still in Standard 7 (13%), Standard 6 (2%), and Standard 5 (1%).

The ERP data highlight significant differences between children living in informal settlements and those living in formal settlements in terms school participation as indicated by considerably higher dropout and repetition rates among children living in informal settlements. Besides lack of money to pay for school fees, loss of interest in schooling by children living in

informal settlements stands out in the younger age categories as a major reason for dropout while early marriage/unwanted pregnancies is a major factor among adolescent girls in the slum communities. This implies that supply-side factors (e.g. lack of school fees) and demand-side factors (e.g. loss of interest in schooling) combine to inhibit educational participation among school age children in informal settlements.

In the ERP study areas, there is high prevalence of risky behavior and in particular the use of alcohol and drug, and early exposure to and engagement in sexual activity (Mugisha, Arinaitwe-Mugisha & Hagembe, 2003; Zulu, Nii-Amoo Doodoo & Ezech, 2004)⁹. At 14 years of age, 50% of girls in the informal settlements have already had sex (Zulu et al., 2004). The corresponding age in rural areas of Kenya is 17 years, yet early marriages are more prevalent in rural areas. These factors reinforce one another to act as disincentives for children in the informal settlements from enrolling and continuing in school. From these analyses, it emerges that:

- Dropping out is still a common phenomenon in informal settlements even after the introduction of FPE.
- Dropout rates between classes in informal settlements are relatively higher (9%) than in formal settlements (2%).
- Lack of money and loss of interest in schooling are the main reasons for dropping out.
- Early marriages and unwanted pregnancies are major factors that explain dropping out among adolescent girls living in informal settlements.
- Risky behaviors are common among children in informal settlements.

3. Transition to Secondary among Children in Urban Formal and Informal Settlements

In Kenya, the public unit cost expenditure (i.e. government contribution) to secondary education is about USD 312.5. Average annual parental contribution per student is USD499, which is about 72 per cent of the 2006 per capita GDP of USD 689 (Government of Kenya, 2007; Ngware, et al., 2007)¹⁰. Net secondary enrolment rate stood at 23% in 2006 (Government of Kenya, 2007), but this figure hides important disparities as shown in the Figure 8, which tracks the enrollment of a cohort of Standard 6 pupils over time in the informal and formal settlements covered by APHRC's ERP program.

APHRC field data shows, 90% of youth in the formal settlements of Harambee and Jericho are still in school three years after beginning Standard 6, compared to less than 40% of youth in the informal settlements. Yet, this overestimates secondary enrolment because of high repetition rates among primary school children in the slums. APHRC data shows the enormous gap in transition rates between children living in informal settlements and those living in formal settlements. For example, in 2004, secondary enrollment reached its peak among this cohort, but stood at only 35% in the informal settlements. The gap with neighboring communities in formal settlements where 90% of those who enrolled in class six three years ago were still in secondary school is particularly striking. The gender differences are quite small in informal settlements, though quite large in formal settlements where boys are 10 – 15 percentage points more likely to be in secondary school than girls.

The gap in transition rates is most likely caused by a combination of three interrelated factors: (1) financial means of parents and guardians to support secondary education; (2) very low achievement in primary school as reflected in low KCPE exam scores; and (3) lack of interest in continuing with schooling very early at the primary level. For some, the first reason is the primary obstacle. For others, a lack of interest in continuing with school is also a compelling reason. Plausibly, for this group, the long-term benefits of secondary education may not outweigh the immediate drain in resources of \$499 per year for four years. Indeed, the loss of interest in school may itself be a result of limited opportunities for schooling beyond the primary level. From the foregoing observations on the situation of transition, it emerges that:

- Transition to secondary school among children living in informal settlements is very low.
- Cost of secondary education is relatively high and may be discourage children from remaining in school and or transiting to secondary school.
- Low learning achievements as reflected in low KCPE scores is a manifestation of low quality education in urban informal settlements. Low scores mean that these students will not get admission to public secondary schools given limited spaces.
- Loss of interest in the early years of school is not only increasing dropout but also reduces transition to secondary.

4. Quality of Primary Education in Urban Informal Settlements

4.1 Achievement

Within Kenya, achievements of pupils can be compared using the Kenya Certificate of Primary Education (KCPE), which is the Standard 8 primary school completion exam. In 2006, the average score nationally was 270 for boys and 256 for girls out of a possible 500 points, with English being the lowest score subject followed by Kiswahili for boys and Science for girls (Kenya National Examination Council, 2007). Nairobi highlights the regional and socio-economic inequities in primary school learning achievement. Some of the most prestigious and expensive primary institutions are found in Nairobi and these help elevate the national and provincial averages for Nairobi. In 2006, the average KCPE score for Nairobi province was 272, which ranks 4th among the districts (KNEC, 2007)¹¹. However, students studying in the two informal settlements of Nairobi that are part of the APHRC ERP program had, on average, a KCPE score of 234, which is 38 points lower than the average scores of schools in Nairobi province. That youth in informal settlements score significantly lower on the primary school leaving exam, limits their chances of acceptance and transition into secondary school. In fact, only 52% of the youth living in Korogocho and Viwandani informal settlements that took the KCPE exam in 2006 received the minimum required score to gain access into one of Kenya's public secondary schools, compared 79% of the youth living in neighboring formal settlements. In the past, the minimum marks for entry into a public district school varied between 200 and 250. In addition, due to limited space availability, most schools, especially public ones, set their own minimum marks way above the national mark thus limiting further access to these schools. Students with barely the minimum marks sometimes go to expensive but poor quality private and community owned secondary schools.

4.2 Teachers, infrastructure and learning materials

In the urban informal settlements, many different factors conspire against student achievement. In these settlements, an APHRC study has identified some factors that contribute to poor performance in examinations. These include poor school infrastructure, poorly lit classrooms and few teaching aids. Teachers are overburdened by large class sizes (Mugisha, 2006)¹². Partly because of large class sizes, teachers give fewer homework assignments and spend little time correcting the assignments that are given (ibid). Shortage of staff and teacher absenteeism reduce

student-teacher contact hours and hence reducing learning time. There is evidence that teachers in Kenya are absent from school 20% of the time and are absent from classes even more frequently (Glewwe & Kremer, 2005)¹³. In the slum areas, anecdotal information indicates that teacher absenteeism is high perhaps due to hardships associated with informal settlements and the fact that most of the teachers in the private schools are volunteers who spend part of their time looking for other jobs and leave as soon as they find one.

Students themselves may find it difficult to concentrate in class when they are hungry, tired, or sick. They may be distracted by bad company or their schooling interrupted by the consequences of their own risky behaviors, such as drug abuse, sex, and crime (Magadi & Ezech, 2002)¹⁴. All of these obstacles provide real challenges to children living in the slums and obstruct their path to quality and continued education.

Table 2 Class sizes in select public schools in the informal settlements, 2007

School Name	Streams	c1	c2	C3	c4	c5	c6	c7	c8	Total
Daniel Comboni	4	210	235	251	273	274	257	243	173	1920
Ngunyumu	3	80	136	132	181	229	222	190	91	1264
Star of Hope	1	78	70	90	84	54	50	42	46	515
St. Elizabeth	3	157	154	168	169	90	144	134	122	1141

In addition, most of the schools in the informal settlements are informal and attract often unqualified and unpaid or under-paid teachers or volunteers. Furthermore, these volunteer teachers often leave once better opportunities avail themselves, leading to high teacher turnover. To worsen the already bad situation is the large class sizes. From Table 2, class size in public primary schools ranged from 26 in Ngunyumu to 90 in Star of Hope. The situation in non-public schools, attended by majority of children in the informal settlement, is no different but generally less, constrained more by physical space.

More recently, there have been confirmations of the positive impact textbook availability has on student achievement in developing countries. Findings from more than forty years of research conducted through the International Association for the Evaluation of Educational

Achievement program demonstrate that the impact of increased textbook use on student learning in developing countries is strong (UNESCO, 2005). Although this UNESCO report highlighted socio-economic status as being influential in determining achievement, textbook availability and school resources were noted as having great potential to counter socio-economic disadvantage, particularly in low-income settings. In the informal settlements of Nairobi, APHRC study show that non-public primary schools do not have adequate learning materials (Mugisha, 2006). In addition, these schools have little chance of benefiting from learning materials supplied through the FPE as they are not formally recognized by the MoE.

To be a formal school and therefore registered by the ministry of education, the school has to fulfill certain conditions such as a certain number of qualified teachers, recreational facilities and scholastic materials. However, the congestion in the informal settlements does not allow schools to have an out door open space as a play ground and this is sufficient to deny them formalization and therefore unable to benefit from government programs. In addition, because the schools are small and mainly serve poor communities, their resource base is small and therefore the schools find it difficult to attract and retain qualified staff. This is in addition to a less than conducive environment for the staff in these informal settlements. From the foregoing, it emerges that:

- Children in the informal settlements access low quality education as manifested in temporary teachers, untrained teachers, high teacher absenteeism, inadequate scholastic materials, large class sizes, and poor quality learning facilities.
- Children in the informal settlements (though not an exception) are engaged in risky behaviors. This combines with poor quality education to impact negatively on their learning achievement.
- Poor performance in KCPE hinders children from informal settlements from gaining admission to public secondary schools.
- Majority (above 90%) of schools in slum areas are not formally recognized by the MoE and therefore do not benefit from the governments FPE programs.

5. Health and Education Linkages

Most research on the links between health and education often treat education as a predictor of health outcomes. Studies examining the impact of health status on educational outcomes are scarce. APHRC, through its extensive work on health (including reproductive health) and education in the

same informal settlements using a prospective longitudinal design, has the potential to examine both of these linkages. Current APHRC studies on HIV/AIDS and schooling outcomes finds that the cause of adult death in a household impacts minimally on enrollment and repetition outcomes. HIV-related adult deaths tended to have the greatest impact on the likelihood that a child will drop out of school. The data indicate that households that experienced an adult death attributable to TB and AIDS had higher proportions of children dropping out of school than those in which other types of adult deaths or no death had occurred. Other important findings of the study include that children from households with HIV-related adult deaths have a slightly higher proportion of children who fail to transit to secondary school as well as a higher proportion of children who regularly miss classes. Death of an adult member of a household from HIV/AIDS may therefore play a critical role in children's schooling outcomes. Prolonged period of illness, huge medical bills, and other losses associated with AIDS illnesses and death increase the vulnerability of children in such households. In poor informal settlements where household asset base is weak, the vulnerability of school-age children to poor schooling outcomes may be aggravated.

While there is need for further studies on this issue, the current finding suggests a need for programs that specifically target children from HIV affected households, with the aim of facilitating their retention in primary school, regular school attendance, grade progression, as well as their transition to secondary schools. Such an intervention must also be sensitive to issues of gender and age of the child which the present study highlighted as significant factors mitigating the impact of HIV-related adult deaths and children's schooling outcomes. The schooling plight of children in HIV- affected households could reinforce existing inequalities in access to educational opportunities if not addressed. This is particularly important as slum communities also have high HIV prevalence rates that are often as high as three times the national prevalence. Links between other health indicators at both the individual child (e.g. morbidity or nutritional status) and household levels can be investigated. From the APHRC study, it emerges that:

- Significantly more children dropout of school from households that have experienced a TB and AIDS related adult death. This indicates an increased vulnerability among children who are affected by the HIV/AIDS epidemic.

6. Conclusion and the Way Forward

From the experience of APHRC's research in education among children in formal and informal settlements in Nairobi, there exist challenges that could be addressed through carefully planned interventions involving all stakeholders. These challenges, if not addressed, will make the goals of Universal Primary Education and Education for All difficult to achieve in Kenya and most of sub-Saharan Africa where rapid rates of urban growth amidst poor economic performance is creating huge populations of urban poor people and rapid growth of slums. The main challenges that are of policy relevance are two fold: *One*, the lack of formal recognition of the informal schools by the MoE; and *two*, the low quality education being provided by informal schools in informal settlements. The latter is manifested in unqualified teachers in classrooms thus compromising teaching standards in informal schools, overcrowded classrooms, poor learning facilities and lack of scholastic materials. The poor performance in schooling outcomes among children from informal settlements is confounded by high prevalence of household poverty, overcrowded living arrangements, high cost of secondary education, and risky behavior among the children. This scenario has resulted to relatively low enrollment among children from informal settlements, loss of interest in schooling at very young ages, high dropouts and low transition to secondary school. While there is no quick fix to these challenges, it is imperative to institute policies that address the standards of education among poor and vulnerable communities and in particular those living in urban informal settlements. Though the first responsibility to provide a public good, such as education, rests with the Government, both local and international communities have a role to play if global efforts on Education for All are to bear the intended fruits. Such communities can provide the much needed catalytic resources that would trigger a process of educational reforms in urban informal settlements. In addition, a continued generation of strong evidence base will ensure that any designed educational reform programs will benefit from such wealth of information rooted on credible scientific base and extensive community experiences. Furthermore, in SSA, the debate on the impact of interaction of learning materials and learning achievement is far from over. This is largely because of the varying experiences and environments within which learning takes place.

Given that sub-Saharan Africa is very diverse, it is not possible to conclude that the factors influencing transition to secondary school or retention in primary school apply uniformly across the

continent. Hence, there exist major research gaps in relating specific factors to specific regions and/or identifying factors impeding transition to secondary school within a specific context. Nonetheless, lack of schools within a reasonable distance is a serious problem in rural and other marginalized and remote parts of a country. This limitation is shared with urban informal settlements that are often neglected in the provision of basic infrastructure, amenities and services. The rural and urban poor also share another common characteristic in constituting a majority of the poor that cannot afford good secondary schooling because of high fees. For policies and programs to significantly improve transition to secondary school in the region, they must target these segments of the population.

Way forward

- Recognition and acceptance by policymakers in sub-Saharan Africa, as happened in Latin America, that public poverty reduction interventions do not always benefit the poor. Experimentation with targeted interventions that works, for example, elements of the PROGRESSA in Mexico, the stipend for girls in Bangladesh or schooling vouchers in Colombia, would be timely as the focus shifts to expanding access to secondary education to meet the development needs of sub-Saharan Africa.
- In the Kenyan case, a review of the Education Act by Parliament would go a long way to providing for the legal recognition of informal schools. For example, exempting schools in densely populated areas from the requirement of a minimum of five acres of land for a school will be a critical step in recognizing the majority non-formal schools that serve slum residents.
- Concerted effort through decentralized funds and education programs to target and reach vulnerable and high-risk households and children is needed.
- There is need for a deliberate attempt to develop local capacity for supporting quality education programs through increased multi-level and multi-sectoral participation in informal schools.
- An efficient monitoring and evaluation and quality assurance system that is clearly linked to national education objectives need to be extended to all schools – regardless of their ownership status.

- Continued generation of research evidence in line with country specific education policies upon which education reforms among disadvantaged communities can be based is a priority. The use of research evidence in the formulation of policies and programs should include impact evaluations of targeted interventions. In view of this, there is need for more research in the area of quality of education and transition to secondary school.
- Stakeholders' participation in research processes and dissemination should be enhanced. This will create a framework for policy dialogue between research institutions and policy makers and implementers.

Next Steps

In view of the emerging issues from APHRC's current research, the center has developed a proposal that seeks to improve retention, achievement, and transition to secondary school through a set of interventions that address individual motivations, quality of instruction, scholastic learning materials, high costs of secondary school, and a mentoring and remedial program. Through a prospective longitudinal research platform, the program will assess the impact of these interventions on specific schooling outcomes among the urban poor in two slum and two non-slum communities in Nairobi, Kenya.

In summary, the proposed study intends to implement and evaluate education interventions in an urban slum area of Nairobi. The study builds on the findings of the ongoing Education Research Program of the African Population and Health Research Center (APHRC) through a randomized evaluation of three interventions designed to promote educational engagement and achievement at the primary school level. The ultimate goal of this action-oriented research program is to improve the quality of education provided by informal primary schools and enhance transition to secondary school among children living in poor urban neighborhoods in Nairobi, Kenya.

This is imperative as quality education will improve learning achievement while transitioning gives a chance to disadvantaged children to increase their human capital and hence become more competitive in life opportunities including a possible increase in their future private returns. The three interventions — a secondary school voucher program, a learning materials intervention, and a remedial tutoring and mentoring program — are aimed at addressing three main educational obstacles that face Nairobi children living in the slums: 1) high levels of primary school

drop-out; 2) low learning achievement scores at the primary school level, and 3) low transition rates to secondary school.

However, informal schools in the neighboring non-slum areas will also be considered for the interventions. This research program proposes the implementation and evaluation of these interventions among a 2008 cohort of grades 2, 3, 4, 5, 6 and 7 students, who will be followed as they make the transition from primary to secondary school. Once this transition is made, each cohort in the treatment group for the secondary school voucher program will be supported until the end of secondary schooling. At secondary school level, the treatment cohorts will be tracked with a view to understanding their progress at this level, while post-secondary tracking will be necessary but perhaps in a separate follow-up project. By comparing secondary graduates who received the voucher with comparison pupils not having attended secondary, long-term follow up will also enable the project to effectively assess the returns to secondary education (e.g. with respect to labor market and demographic outcomes) among slum and non-slum youth through a prospective randomized design.

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