

**DHS ED DATA
EDUCATION PROFILE**

Guatemala
1995 and 1998



DHS EdData Education Profiles

DHS EdData Education Profiles

This series of country education profiles uses internationally comparable data from USAID's Demographic and Health Surveys (DHS) to characterize children's participation in primary and secondary schooling and adults' schooling attainment and literacy. These profiles provide information that, combined with other country-specific data, can inform education decision-making. Although the DHS began collecting education data in 1984, there was no systematic effort to analyze and present these data in a format accessible to education planners and policy-makers until the DHS EdData Activity began in 1999.

In 2000, the DHS EdData Education Profiles for Africa were produced for nine sub-Saharan African countries. The current set of profiles updates those original profiles with data from recent DHS surveys, and adds to the number of countries profiled. In addition to the thirteen country profiles for sub-Saharan Africa (Benin, Ethiopia, Ghana, Guinea, Kenya, Malawi, Mali, Namibia, Nigeria, Rwanda, South Africa, Uganda, and Zambia), the current series includes profiles for countries in the ANE (Bangladesh, Cambodia, Egypt, India, and Nepal), LAC (Guatemala, Haiti, Nicaragua, and Peru), and E&E (Kazakhstan and Uzbekistan) regions.

Data Presented in the Profiles

These profiles present data from nationally representative household surveys, which provide data at the household and individual levels. The data include educational attainment and schooling status of household members, which allow for the calculation of net and gross attendance ratios (disaggregated by sex, urban/rural residence, and region); the percentage of students under age, on time, and over age, by grade; age-specific schooling status of youth (attending, dropped out, never attended); and adult primary and secondary school completion rates and educational attainment. Recent surveys provide data on repetition, dropout, and survival rates by primary school grade. The DHS also provides information on men's and women's literacy rates for a selected age range.

A Supplement to Other Sources of Education Data

The DHS measures of children's school attendance rates differ from, and supplement, traditional sources of international statistics, such as those produced by ministries of education or UNESCO. Statistics on children's participation in schooling usually are derived from country data on children's school enrollment, which are collected from school records and used to produce net and gross enrollment ratios (NER and GER).

DHS, on the other hand, measures children's participation in schooling using data on school attendance, collected from a representative sample of households. Net and gross attendance ratios (NAR and GAR) are calculated based on questions about whether children attend (or go to) school. While the NAR and GAR may be seen as proxies for the more commonly used NER and GER, discrepancies between attendance and enrollment ratios can be expected.

DHS EdData

The DHS EdData Activity is supported primarily by USAID's Office of Education in the Bureau for Economic Growth, Agriculture and Trade, with additional support from USAID's Africa Bureau. DHS EdData is closely linked to the population and health sector DHS. In addition to analyzing the education data collected by the DHS, DHS EdData conducts various data collection activities, including in-depth household education surveys in a subset of DHS households.

The DHS EdData household survey focuses on issues surrounding the household demand for schooling in order to provide information about the decisions households make about how much of what kind of education to invest in for household members. Specific topics in the core survey include: the reasons for school-age children never having attended school or having dropped out of school, household expenditures on schooling, parent/guardians' perceptions of the benefits of schooling and of school quality, distances and travel times to schools, and the frequency of and reasons for student absenteeism.

Data on these topics, together with the information from the DHS, provide information useful for education policy and program planning and for monitoring USAID basic education activities. The linkage between the DHS EdData and the DHS surveys allows for an analysis of the relationships between education and health, nutrition, family planning, and other individual and household characteristics.

Guatemala

DHS EdData Education Profile: 1995 and 1998

The Guatemala Demographic and Health Surveys (DHS) were conducted in 1995 and 1998.¹ Having data from two surveys allows for an analysis of changes in the educational setting over time.

Key Findings

Rates of primary school attendance increased between 1995 and 1998.

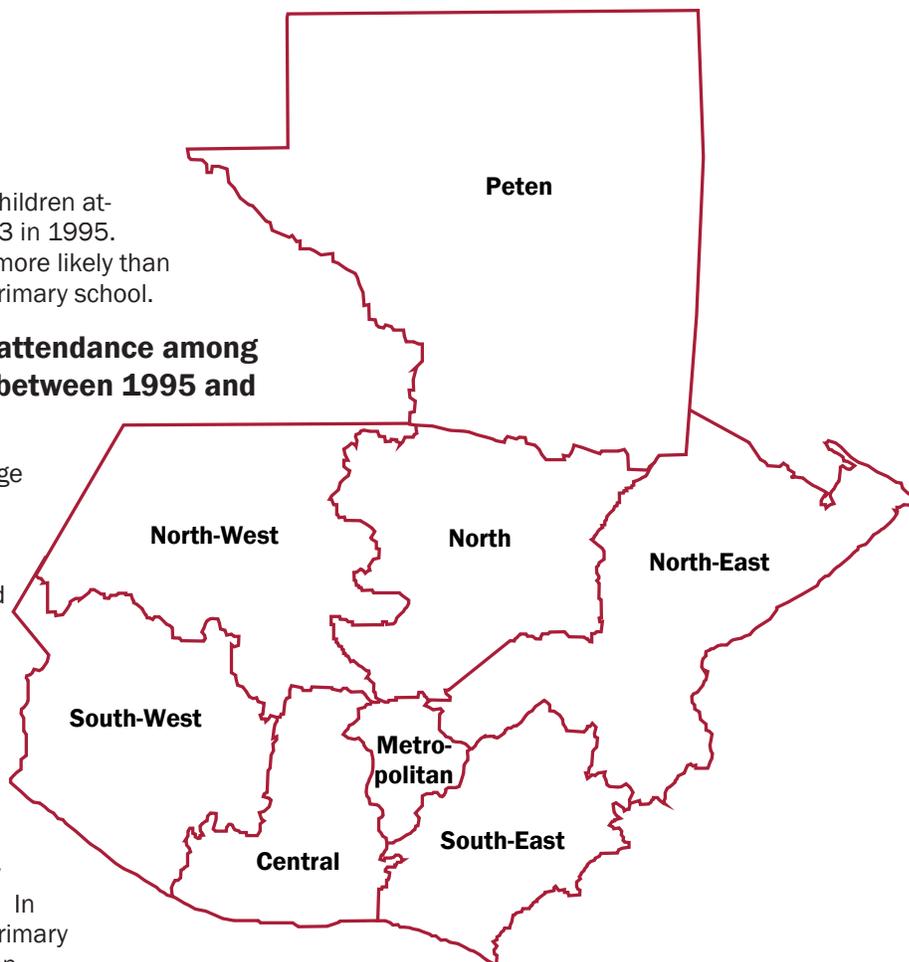
- In 1998, 3 in 4 primary school-age children attended primary school, up from 2 in 3 in 1995.
- In both years, males age 7-12 were more likely than females of the same age to attend primary school.

At the secondary level, rates of attendance among youth age 13-18 changed little between 1995 and 1998.

- In 1998, 30% of secondary school-age youth attended secondary school, compared with 26% in 1995.
- Secondary school attendance rates were roughly the same for males and females age 13-18.

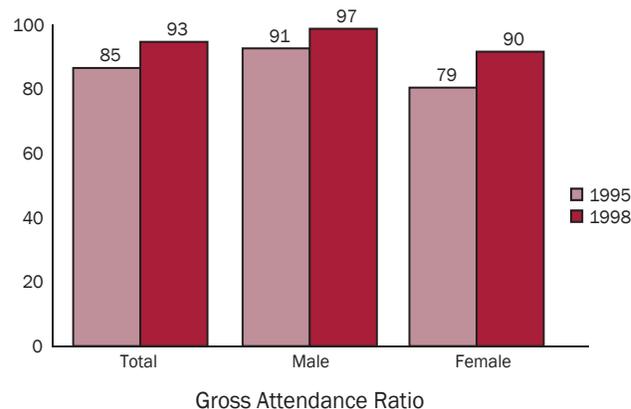
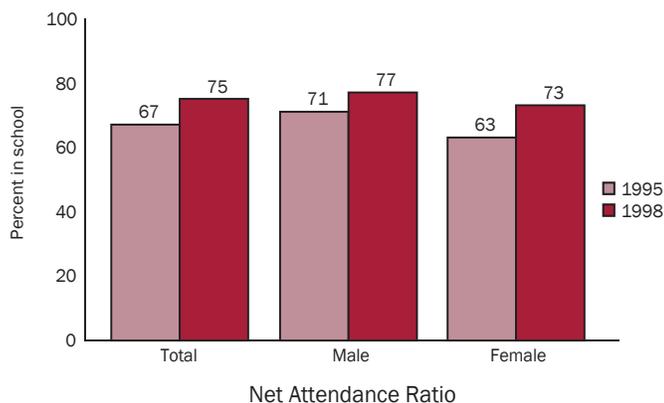
Adult educational attainment and women's literacy rates have increased over time, but gender disparities remain.

- In 1998, 40% of the population age 15 and older had completed primary school, up from 37% in 1995. In 1998, 44% of men had completed primary school, compared with 36% of women.
- In 1998, 14% of the men and 10% of women age 20 and older had completed secondary school.
- 81% of women age 15-19 were literate in 1998, compared with 56% of women age 45-49.



¹ The 1995 survey was administered to 11,297 households and 12,403 women age 15-49 from those households. The 1998 survey was administered to 5,587 households, and 6,021 women age 15-49.

Primary School Attendance Ratios: 1995 and 1998



Source: GDHS 1995 and 1998

The net attendance ratio (NAR) is the percentage of the official primary school-age population (age 7-12 in Guatemala) that attends primary school. The gross attendance ratio (GAR) is the total number of students attending primary school—regardless of age—expressed as a percentage of the official primary school-age population.

Primary Net Attendance Ratio (NAR)

The percentage of children age 7-12 attending primary school increased by 8 percentage points between 1995 and 1998.

- In 1998, 75% of school-age children in Guatemala attended primary school, up from 67% in 1995.

School-age males were more likely than females to attend primary school in 1998 and 1995.

- Between 1995 and 1998, primary school attendance among school-age females increased 10 percentage points, from 63% to 73%. During the same period, primary school attendance among school-age males increased 6 percentage points, from 71% to 77%.

Primary Gross Attendance Ratio (GAR)

1 in 5 children attending primary school was outside of the official age range (as reflected in the difference between net and gross attendance ratios). From 1995 to 1998, the percentage of students outside the official school age range (either younger than 7 or older than 12) changed little.

- Students over or under the official primary school age range made up 19% of the primary school population in 1998 ($[GAR\ 93 - NAR\ 75] / GAR\ 93$) and 21% in 1995 ($[GAR\ 85 - NAR\ 67] / GAR\ 85$).

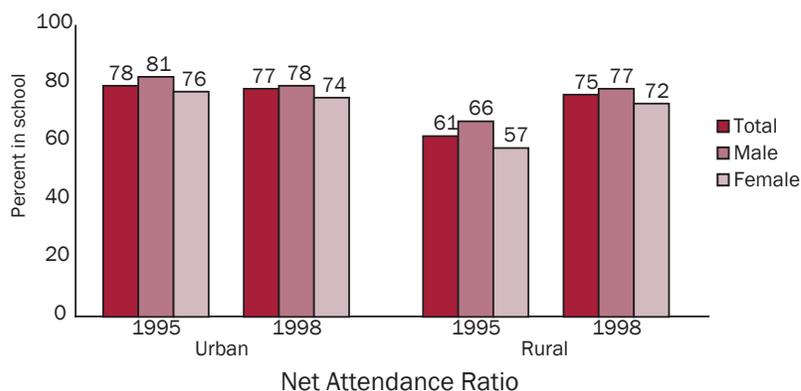
In both 1995 and 1998, among youth of all ages, males were more likely than females to attend primary school.

- In 1998, the gross attendance ratio (GAR) among males was 97, compared with 90 among females.

Primary School Net Attendance Ratio (NAR) by Urban/Rural: 1995 and 1998

In 1998, children age 7-12 in urban and rural areas were almost equally likely to attend primary school. This urban-rural parity was an improvement from 1995, when children in urban areas were more likely than children in rural areas to attend primary school.

- In 1998, 77% of children age 7-12 in urban areas attended primary school, compared to 75% in rural areas. This 2 percentage-point difference was a substantial change from 1995 (17 percentage points).



Source: GDHS 1995 and 1998

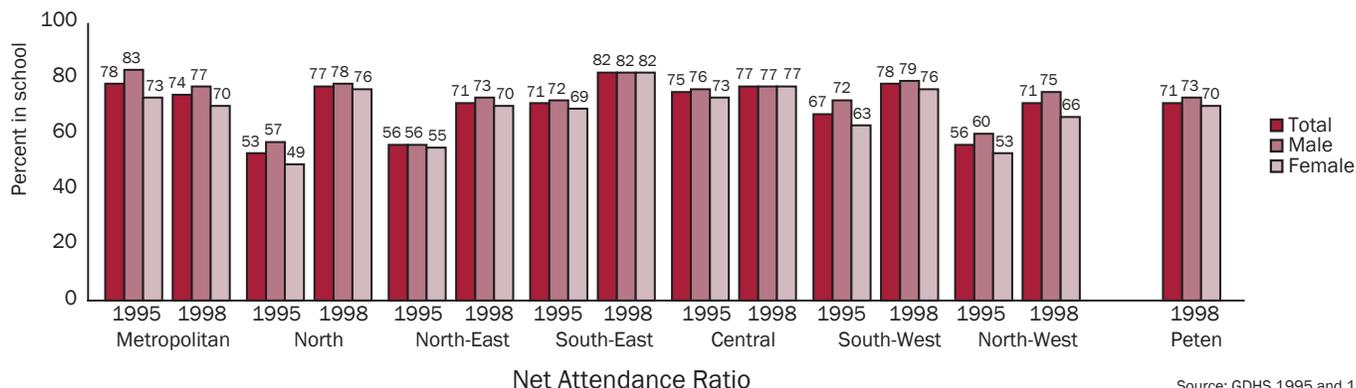
Primary School Net Attendance Ratio (NAR) by Region: 1995 and 1998²

Between 1995 and 1998, the NAR increased in all regions except the Metropolitan region, which includes the capital city. In 1998, the rate of primary school attendance among school-age children was highest in the South-East region.

- In 1998, the highest NAR was in the South-East region (82%) while the lowest NAR was in the North-East, North-West, and Peten regions (71% for each).
- From 1995 to 1998, the rate of primary school attendance among school-age children increased 24 percentage points in the North region (from 53% to 77%).

In 1998, the percentage of school-age children attending primary school was somewhat higher for males than for females in the majority of regions.

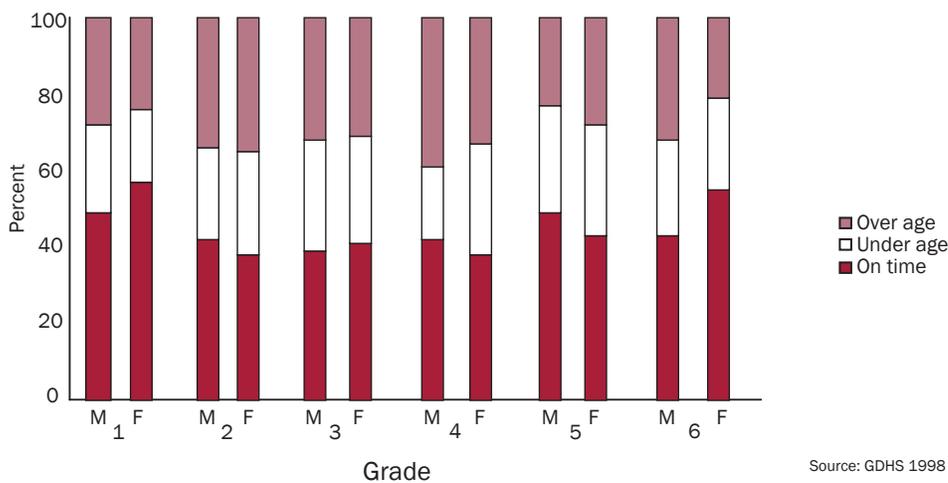
- The percentage point gap in primary school attendance was widest in the North-West region, with 75% of males and 66% of females attending.



Source: GDHS 1995 and 1998

² The Guatemala DHS EdData Education Profile provides the primary school net attendance ratio (NAR) by region for each of Guatemala's 8 regions. The 1998 Guatemala DHS was designed to provide estimates of education indicators for all 8 regions. The 1995 Guatemala DHS did not provide individual estimates for Peten.

Over-Age, Under-Age, and On-time Students in Primary School: 1998



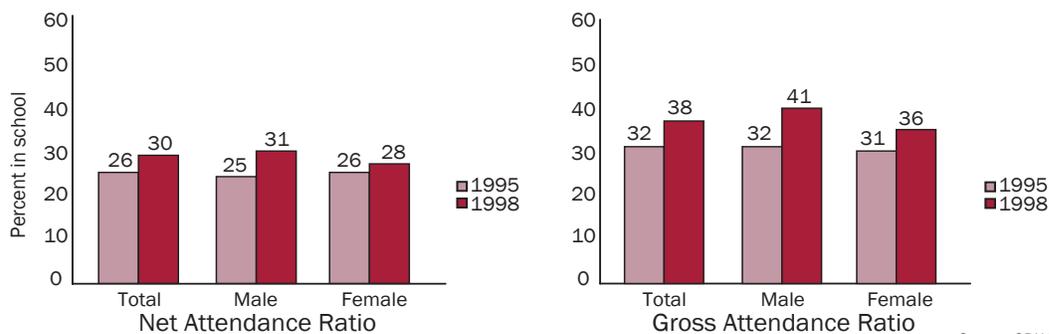
In 1998, 29% of male and 24% of female students in grade 1 were over age for the grade attended. In grade 6, the final grade of primary school, 31% of male and 21% of female students were over age.

- In contrast to 1998, there was little difference in 1995 in the likelihood of male and female students being over age for the grade attended (data for 1995 not shown).

Source: GDHS 1998

Students are considered to be over age if they are two or more years older, and under age if they are one or more years younger, than the official age for their grade. Students are considered to be on time if they are of the official age, or are one year older than the official age for their grade. Since the official age of entry to grade 1 is age 7 in Guatemala, a grade 1 student who is age 7 or 8 is considered to be on time, a student age 9 or older is over age, and a student age 6 or younger is under age. This indicator—under age, on time, or over age for grade—differs from the percentage of primary school students outside the primary school age range (see page 2) in that the proportion of students over age, on time, and under age is calculated for each primary school grade, rather than for primary school overall.

Secondary School Attendance Ratios: 1995 and 1998



Source: GDHS 1995 and 1998

The net attendance ratio (NAR) is the percentage of the official secondary school-age population (age 13-18 in Guatemala) that attends secondary school. The gross attendance ratio (GAR) is the total number of students attending secondary school—regardless of age—expressed as a percentage of the official secondary school-age population.

Secondary Net Attendance Ratio (NAR)

From 1995 to 1998, there was a slight increase in the percentage of youth age 13-18 attending secondary school.

- In 1998, 30% of secondary school-age youth attended secondary school, compared with 26% in 1995.
- At both points in time, male and female youth age 13-18 were almost equally likely to attend secondary school.

Secondary Gross Attendance Ratio (GAR)

Among students of all ages (gross attendance), rates of secondary attendance increased slightly from 32 in 1995 to 38 in 1998. There was a small gender disparity in both 1995 and 1998.

- In 1998, the GAR among males was 41, compared with 36 among females.

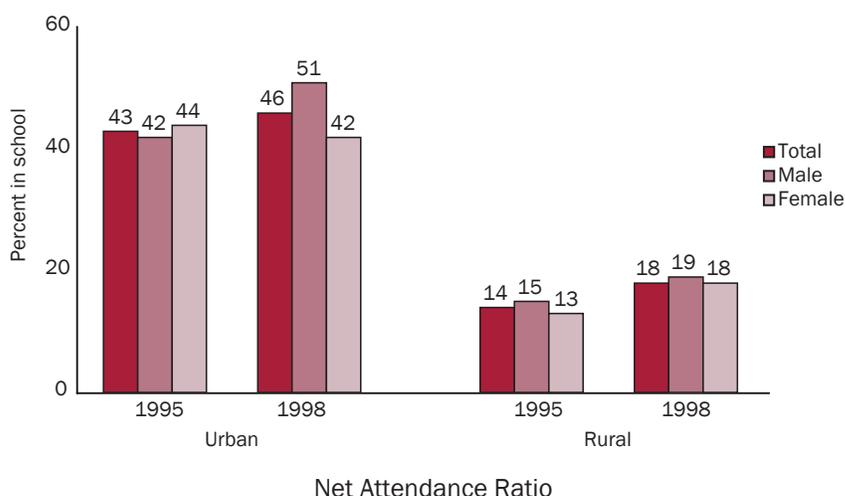
Secondary School Net Attendance Ratio (NAR) by Urban/Rural: 1995 and 1998

In 1998 and 1995, youth age 13-18 in urban areas were found to be much more likely than those in rural areas to attend secondary school.

- In 1998, 46% of urban youth age 13-18 attended secondary school, compared to 18% in rural areas.

Between 1995 and 1998, in urban and rural areas, the secondary NAR changed little.

- From 1995 to 1998, rates of secondary attendance among school-age youth increased from 43% to 46% in urban areas and from 14% to 18% in rural areas.



Source: GDHS 1995 and 1998

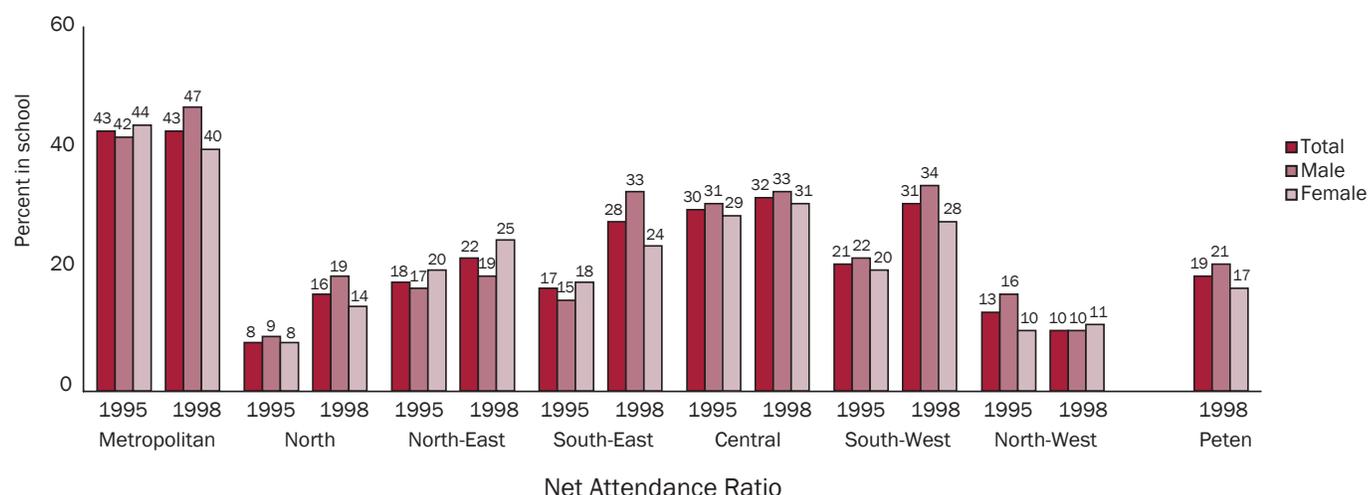
Secondary School Net Attendance Ratio (NAR) by Region: 1995 and 1998³

In 1995 and 1998, secondary school net attendance ratios ranged widely by region, with the highest rates of attendance in the Metropolitan region.

- In 1998, the secondary school net attendance ratio ranged from 10% in the North-West region to 43% in the Metropolitan region.
- Between 1995 and 1998, in the North region, the NAR doubled (from 8% to 16%).

In 1998, the percentage of school-age children attending secondary school was slightly higher for males than females in five out of eight regions.

- In 1998, the Metropolitan, North, South-East, South-West, and Peten regions, male youth age 13-18 were more likely than female youth to attend secondary school.
- In the North-East region, female youth were more likely than male youth to attend secondary school.



Source: GDHS 1995 and 1998

³ The Guatemala DHS EdData Education Profile provides the secondary school net attendance ratio (NAR) by region for each of Guatemala's 8 regions. The 1998 Guatemala DHS was designed to provide estimates of education indicators for all 8 regions. The 1995 Guatemala DHS did not provide individual estimates for Peten.

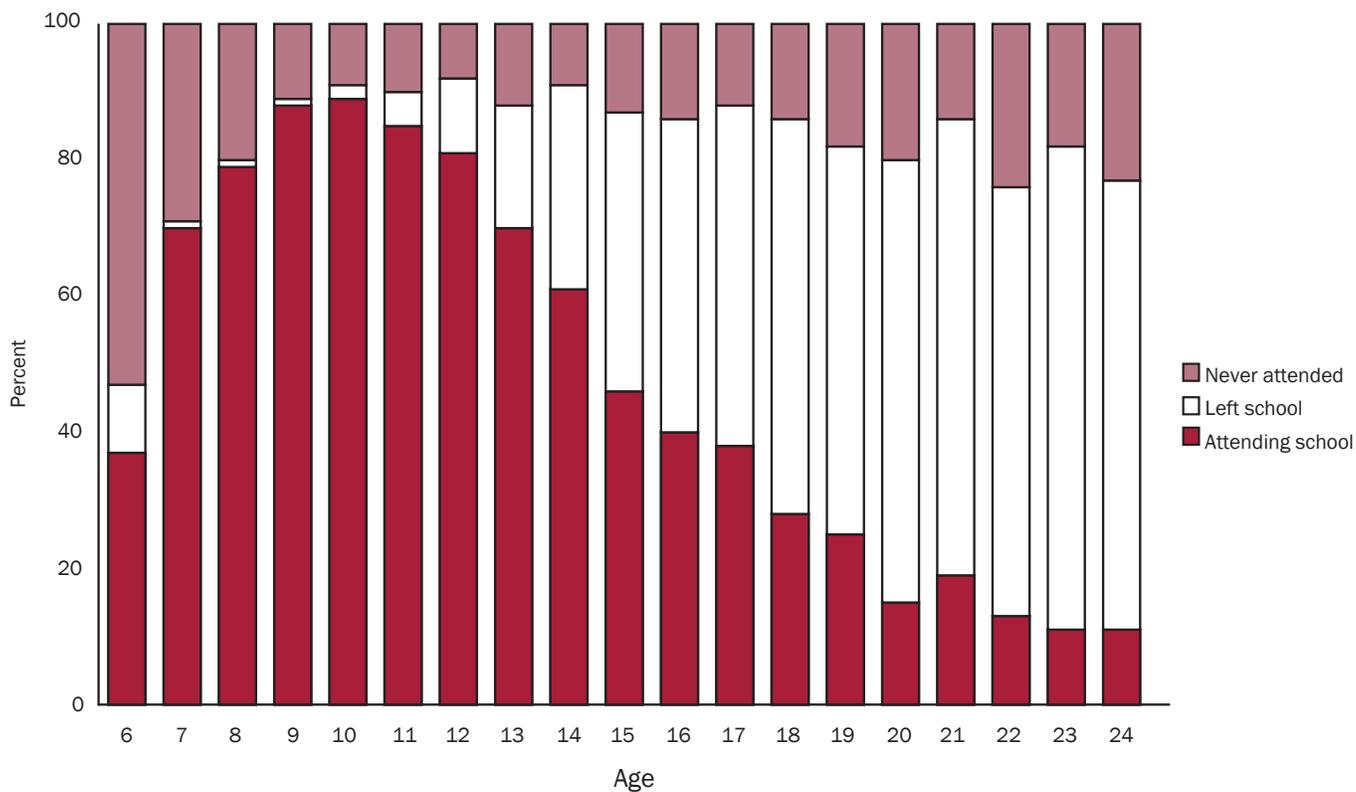
Schooling Status of Youth Age 6-24: 1998

In general, between 1995 and 1998, the percentage of youth attending school at the pre-primary, primary, secondary or post-secondary levels increased at each age from 6 to 24 (data from 1995 not shown).

- In 1998, the peak age of attendance was 10, with 89% of children age 10 attending school; the peak age range was 8-12.

The percentage of youth age 6-24 who had never attended school decreased between 1995 and 1998.

- In 1998, 26% of 7-year-olds had never attended school, compared to 42% in 1995.
- Between 1995 and 1998, the percentage of 17-year-olds who had never attended school decreased from 13% to 9%.



Source: GDHS 1998

Age-Specific Attendance Rate by Sex: 1995 and 1998

In 1998, at most ages from 6 to 24, the percentage of male youth attending school at any level was higher than it was for female youth.

- Attendance peaked at age 9 for males (92%) and at age 10 for females (87%).
- The largest gender gap in attendance was at age 14, with male attendance at 69% and female attendance at 54%.

From 1995 to 1998, the age-specific attendance rate increased for females and males at most ages between 6 and 24.

- Between 1995 and 1998, the percentage of 7-year-olds attending school increased from 46% to 68% for females and from 56% to 73% for males.
- During the same period, the percentage of children age 10 attending school increased from 72% to 87% for females and from 80% to 90% for males.
- In 1998, attendance rates remained low among older youth, with attendance rates declining around age 13 for females and age 14 for males.

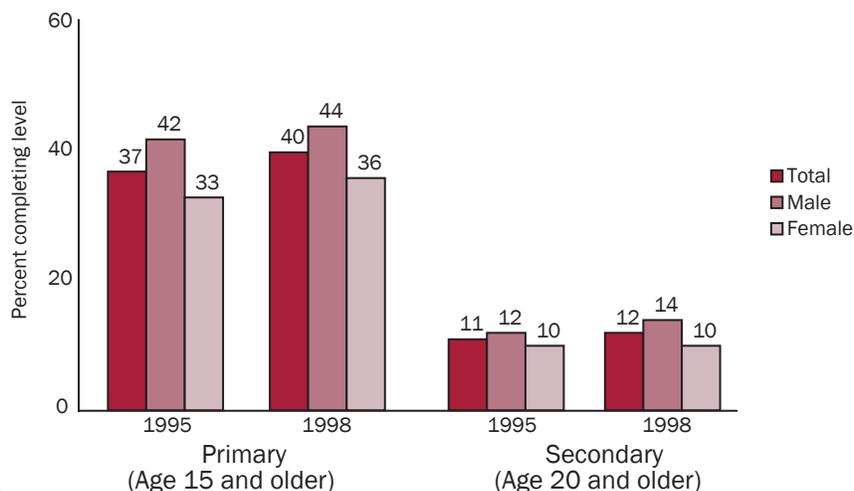


Source: GDHS 1995 and 1998

Adult Primary and Secondary School Completion Rates: 1995 and 1998

Between 1995 and 1998, the percentage of the population age 15 and older that had completed primary school increased slightly. In spite of the increase, men remained more likely than women to have completed the primary level.

- In 1998, 40% of the population 15 and older had completed primary school, compared with 37% in 1995. In 1998, 44% of men and 36% of women had completed primary school.



Source: GDHS 1995 and 1998

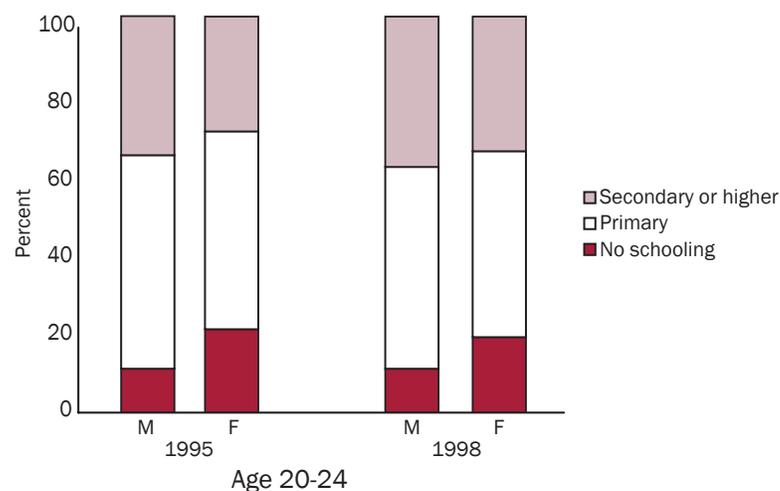
Secondary school completion rates were low among adults in both 1995 and 1998.

- In 1998, 12% of the population age 20 and older had completed secondary school, nearly unchanged from 1995 (11%).
- In 1998, 14% of men and 10% of women had completed the secondary level.

Adult Educational Attainment: 1995 and 1998

Between 1995 and 1998, educational attainment changed little for adults age 20-24.

- In both years, 12% of men age 20-24 had never attended school.
- In 1998, 19% of women age 20-24 had never attended school, compared with 21% in 1995.



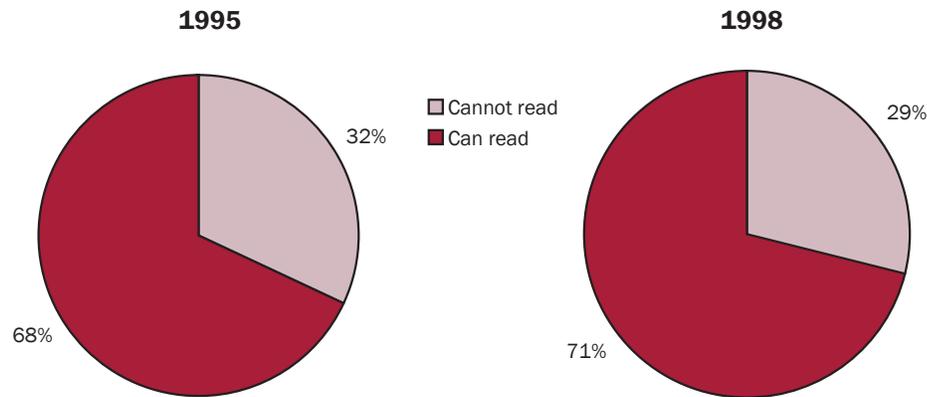
Source: GDHS 1995 and 1998

Over the years, educational attainment has increased among both men and women.

- Among women age 20-24 in 1998, 81% had attended primary school or higher, compared with 34% of women age 65 and older (data not shown for all age groups).
- Among men age 20-24, 88% had attended primary school or higher, compared with 42% of men age 65 and older.

Literacy Among Women Age 15-49: 1995 and 1998⁴

Between 1995 and 1998, literacy among women age 15-49 increased slightly from 68% to 71%.⁵



Source: GDHS 1995 and 1998

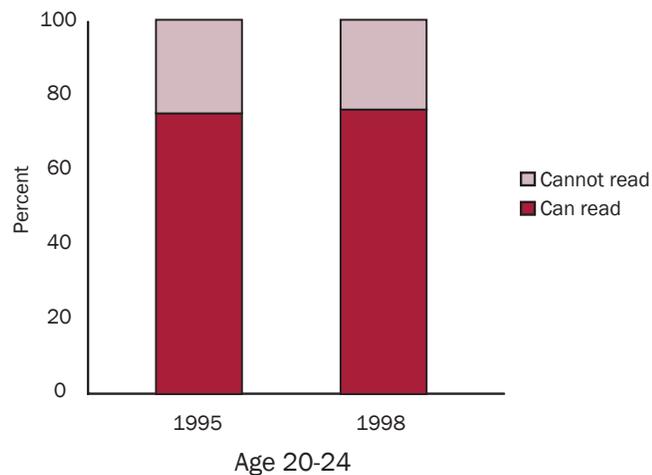
⁴ In the 1995 and 1998 surveys, data were collected on women's literacy only.

⁵ In both surveys, among women who never attended school and those who attended primary school, literacy was self-reported. Women who attended secondary school or higher were assumed to be literate. As a consequence, the percentage literate includes both those who attended secondary school or higher, and those who reported themselves to be literate.

Women's Literacy by Age: 1995 and 1998

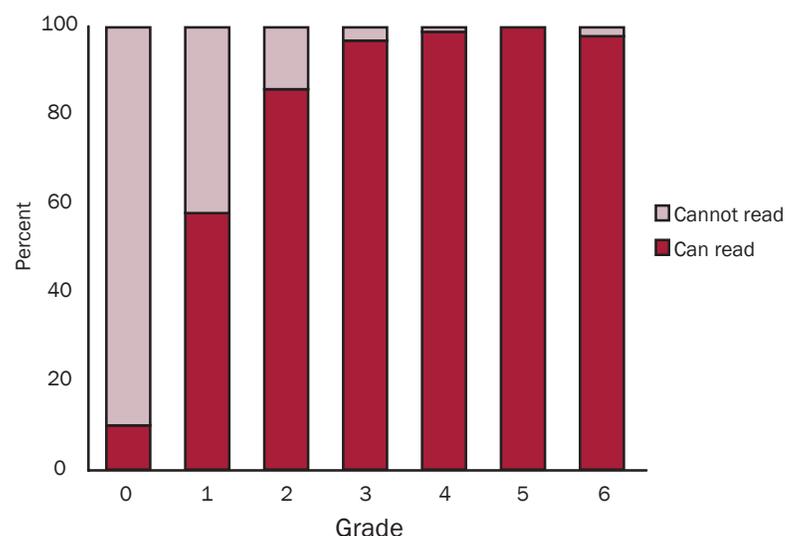
Women's literacy has been increasing slowly over the past 30 years.

- The literacy rate for women age 20-24 changed little from 1995 to 1998 (75% in 1995 and 76% in 1998). However, by comparison, in 1998, the literacy rate among women age 45-49 was just 56% (data not shown for all age groups).



Source: GDHS 1995 and 1998

Women's Literacy by Years of Primary School Completed: 1998



In 1995 and 1998, nearly all women (99%) who completed grade 4 could read (data from 1995 not shown).

Source: GDHS 1998

Main Reason for Leaving School Among Women Age 15-24, by Highest Level of Schooling Attended: 1998

Women age 15-24 who no longer attended school, were asked the main reason they had left school. The most common reason women gave for leaving primary school was that they did not like school (40%).

- Other common reasons for leaving primary school include the inability to pay school fees (14%) and the need to earn money (14%).

Women cited the need to earn money as the most common reason they left secondary school or higher (22%).

- Other common reasons for leaving secondary school or higher were having graduated or had enough school, and marriage (both 19%).

	Left during primary %	Left during secondary or higher %	Total %
Got pregnant	1	3	1
Got married	4	19	8
Needed to take care of children	3	3	3
Family needed help	12	3	10
Could not pay for schooling	14	6	12
Needed to earn money	14	22	16
Graduated/Had enough schooling	1	23	6
Failed exams	3	19	5
Did not like school	40	10	33
School not accessible	5	2	5
Other/Don't know	5	13	7

Source: GDHS 1998

Appendix: Indicator Specifications

The methods used to calculate the indicators presented in the education profiles are described below.

Net Attendance Ratio (NAR)

Primary level:

$$\frac{\text{number of students of primary school age attending primary school}}{\text{number of people of primary school age in the population}}$$

Secondary level:

$$\frac{\text{number of students of secondary school age attending secondary school}}{\text{number of people of secondary school age in the population}}$$

The Net Attendance Ratio (NAR) is the percentage of children in the target age range for the specified level of schooling attending that level of schooling, and is calculated separately for primary and secondary school. A primary NAR of 95% would indicate that nearly all of the children of primary school age attend primary school. A primary NAR of only 38%, on the other hand, would indicate that a majority, or 62%, of the children of primary school age do not attend primary school. By definition, the NAR cannot exceed 100%.

Gross Attendance Ratio (GAR)

Primary level:

$$\frac{\text{number of students attending primary school, regardless of age}}{\text{number of people of primary school age in the population}}$$

Secondary level:

$$\frac{\text{number of students attending secondary school, regardless of age}}{\text{number of people of secondary school age in the population}}$$

The Gross Attendance Ratio (GAR) for a given school level is the total number of students attending at that level, divided by the population of the official age range for that school level. The GAR is calculated separately for primary and secondary school. Unlike the NAR, the GAR can exceed 100.

Both a GAR greater than 100 and a GAR greater than the NAR indicate the presence in the classroom of children who are either older or younger than the official age range for the school level. The magnitude of difference between the NAR and GAR indicates the extent of over-age/under-age attendance. For instance, if the primary NAR is 35% and the GAR is 65, then 54% (35/65) of the primary school students are of primary school age, while 46% are either older or younger than the official age range. In some countries, where there is a substantial difference between the GAR and the NAR, the number and proportion of over-age and/or under-age students burdens the school system, absorbing resources that might otherwise be spent on children in the official age range for the level.

Primary School Under Age, On Time, and Over Age

Students in each grade of primary school are either under age, on time, or over age for the grade attended. Students are under age for the grade if they are younger than the official target age for the grade. Students are on time if they are at the official age for the grade, or are one year older than the official age. Students are over age if they are two or more years older than the official age for the grade. For example, if the official entry age for grade 1 is 6, a student age 5 or younger is under age, a student age 6-7 is on time, and a student age 8 or older is over age.

The percentage of students on time for the grade attended is calculated as follows:

$$\frac{\text{number of grade X students who are at the target entry age for the grade or one year older}}{\text{total number of students attending grade X}}$$

Schooling Status of Youth Age 6-24

For each age, from age 6-24, the percentage attending school:

$$\frac{\text{number of people age 6 attending school, at any level}}{\text{number of people age 6 in the population}}$$

For each age, from age 6-24, the percentage who have left school:

$$\frac{\text{number of people age 6 who used to attend school, but have dropped out}}{\text{number of people age 6 in the population}}$$

For each age, from age 6-24, the percentage who have never attended school:

$$\frac{\text{number of people age 6 who have never attended school}}{\text{number of people age 6 in the population}}$$

Schooling status indicates the percentage of children and youth, by age, who attend school (at any level), have dropped out of school, or who have never attended school. Added together, these percentages total 100% for each age.

Age-Specific Attendance Rate (ASAR)

For each age, from age 6-24:

$$\frac{\text{number of people age 6 attending school, at any level}}{\text{number of people age 6 in the population}}$$

The ASAR indicates the percentage of a given age cohort attending school—regardless of the level attended (primary, secondary, or higher). The ASAR cannot exceed 100%, and the closer it is to 100%, the higher the participation of that age group in the population.

Adult Primary and Secondary School Completion Rates

Primary

$$\frac{\text{number of people age 15 or older who have completed the last grade of primary (or higher)}}{\text{number of people age 15 or older in the population}}$$

Secondary

$$\frac{\text{number of people age 20 or older who have completed the last grade of secondary (or higher)}}{\text{number of people age 20 or older in the population}}$$

The completion rates presented here are indicators of the level of primary or secondary school completion among those who are beyond primary or secondary school age. Those in the numerator have either completed the specified level of schooling or attended school at a higher level. In other words, the percentage of adults who have completed primary school includes those who have attended secondary school or a higher level of schooling. Note that the calculation of this indicator differs from the calculation of the Primary and Secondary Completion Rates.

Adult Educational Attainment by Level of Schooling Attended

For each level of attainment:

$$\frac{\text{number of people age 20 or older who never attended school}}{\text{number of people in the population age 20 or older}}$$

These indicators present the percentage of the adult population age 20 or older that has never attended school, attended primary school, or attended secondary school or higher. Results are presented in five-year age ranges, and for age 65 or older. Within each age range, the percentages, added together, total 100%. This indicator is useful in tracking changes in attainment by age group, gender, and other sub-groups.

Adult Literacy

Women (and in many countries, also men) age 15-49¹ who never attended school and those who left school before reaching secondary school were asked to assess their literacy or to demonstrate literacy. If respondents were asked to report on their literacy, the question was: “Can you read and understand a letter or newspaper easily, with difficulty, or not at all?” People who said they can read easily or with difficulty were grouped together as literate. If literacy was tested, which is the case with most recent surveys, respondents were asked to read (in a language in which they were likely to be literate) a short simple statement about everyday life. If the respondent could read part or all of the sentence, or had attended secondary school or higher, the respondent was classified as literate.

¹ The age range for men is often different from that of women, and is most commonly age 15-54 or 15-59.

Contact Information

Information about DHS EdData may be obtained from several sources, including:

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Additional information about DHS EdData and these country education profiles may be obtained by writing to: DHS EdData, ORC Macro, 11785 Beltsville Drive, Suite 300, Calverton, MD 20705 (Telephone: 301-572-0200; Fax: 301-572-0983; Email: reports@orcmacro.com; Website: <http://www.dhseddata.com>).

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