

GIRLS IN MINING AND QUARRYING IN GHANA



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CHAPTER 1

1.1. Introduction

The extractive sector, including mining, is the mainstay of many African economies and has been prime target for reforms under these countries' structural adjustment programmes. Some countries in Africa, particularly Sub-Saharan Africa, rely on the primary extractive sector as a basis for economic development. This is because the continent is richly endowed with natural resources especially mineral resources. These include:

- 75% of global cobalt and platinum reserves
- 50% of diamond
- 47% of the world's phosphate reserves
- 45% of chromate
- 30% of the world's reserve of gold
- 26% of bauxite
- 14% of copper
- 12% of Uranium and manganese
- 6.8% iron-ore reserves

Targeting increased investments in the mining sector, many African countries have revised or developed mining codes deregulating the mining sector and providing generous incentive packages to investors in the sector. These changes have divested the state of its control and direct investment in the mining sector (TWN, 2001).

The renewed boom in Africa has equally boosted the small-scale mining sector which is in direct competition with large scale multinational companies for prospective grounds. Many countries have enacted laws to legalise the activities of artisanal miners which remained largely outlawed in the 1980s. However the sector continues to grow and contributes to a significant supply of specific minerals in some countries. In Zimbabwe the small-scale miners amount to some 200,000 and are belied to be responsible for the entire diamond production in the country and some 2% of the country's gold output. The sector similarly contributes to mineral supply in Tanzania, Sierra Leone, Burkina Faso, the Republic of Congo, the Democratic Republic of Congo etc. Small-scale mining is characterised by a lack of prospective grounds for their operations as more international large-scale mining companies enter the continent, giving rise to clashes between the two in many countries. In addition, the environmentally unfriendly operations of some small-scale miners have led to a plethora of environmental degradation issues in many mining communities.

In Ghana, mineral exports have a long history of importance in the economy and export trade. The main minerals include gold, diamond, manganese, bauxite and aluminium. Mining, particularly gold mining by indigenous people started around the 4th century. Large-scale mining started around the 15th century. Small-scale mining has traditionally played a significant role in the economy of the Ghana. Small-scale miners were the only miners of gold and diamond in the traditional economy until 1933, when colonial authorities through legislation made their operations illegal. Gold mining has since remained a significant economic activity in many parts of the country. Mining generates foreign exchange earnings, provides substantial government revenue, creates direct and indirect employment and also provides social and economic infrastructure such as roads, schools and clinics for community development. Data from the Minerals Commission (2002) suggests that over the last decade, the mining sector has been a significant contributor to both formal and informal employment in the country. Up to 1995, the sector accounted for 20 per cent of formal sector employment with large-scale mining companies employing about 20,000 people, and the small-scale artisanal mining sector accounting for more than three times that number.

Over the last two decades the mining sector has been one of the key targets of policy reforms in the country. As a result of the reforms, the twenty years since 1986 have seen tremendous

growth in corporate mining activity across Ghana especially in the gold sub-sector (TWN, 2005). The gold sub-sector has correlatively attracted the bulk of the total foreign direct investment (FDI) inflows into the country since the reforms were instituted in 1983. This growth has been attributed largely to Ghana's adoption of one of the most liberal mining regulatory regimes in mineral endowed developing countries (TWN, 2005).

The most publicised benefits of the renewed mining boom include the following:

- Mining is the leading earner of foreign exchange in the country
- Provides substantial government revenue
- Generates direct and indirect employment
- Provides social infrastructure for community development in mining

From 1983 to date, various pieces of legislation have either been promulgated or revised in order to facilitate mining sector development. The most fundamental changes included:

- Promulgation of the Minerals and Mining Law, 1986, PNDCL 153.
- Establishment of the Minerals Commission, 1986, PNDCL 154.
- The Minerals (Royalties) Regulations, L.I. 1349, 1987.
- Additional Profit Tax Law PNDCL 122, 1987.
- Promulgation of Small-Scale Mining Law in 1989, PDCL 218.
- The Precious Marketing Corporation Law, 198.9 (PNDCL 219).
- Establishment of Precious Minerals Marketing Corporation, 1989.
- Establishment of Environmental Protection Agency in 1994.
- Drawing up of mining environmental guidelines in 1994.
- The Minerals and Mining (Amendment) Act 1994.
- Review of mining environmental guidelines in 1999.
- Divestiture of state-owned mines from 1992 to 1999.

Despite the many pieces of legislation, the absence of a national policy does not provide a framework for a collective vision interlinked with other sectors in the overall national development effort. For example, efforts are growing around the world to better understand child labour and its effects on the welfare of children, with special focus on the peculiar case of girls.

Local communities at the fringes of mines have suffered and continue to suffer various degrees of adverse impact of mining operations. Some communities have suffered militaristic attacks, others have had their water sources polluted, their land destroyed, and many of them continue to suffer low and inadequate compensation packages. Concerns have also been expressed about inadequate housing, youth unemployment, family disorganisation, school dropouts, prostitution and drug abuse associated with the mining boom. In most cases these impacts affect people of different age groups and gender differently.

The ILO has indicated that the prevalence of children in mining is growing. The Organisation's background document for the World Day Against Child Labour was on eliminating Child Labour in Mining and Quarrying (12th June 2005). The grounds for eliminating child labour in mining and quarrying includes:

- Child labour in mining and quarrying is in virtually all cases a Worst Form of Child labour because of the extent and severity of the hazards and the risks of death, injury and disease. There is no justification -poverty included- for children to work in this sector. It is literally back breaking work. It is relatively straightforward, therefore for governments to legislate to include mining and quarrying activities on their legally-binding, national hazardous child labour lists thereby making them prohibited activities for children.
- The estimated size of child labour population in mining and quarrying of 1 million is relatively small in global terms. This means it is an achievable goal.

- There is ever strong government support for elimination of child labour in mining and quarrying. Some 13 governments will, for example, be directly pledging their support for WDAFL
- There is strong industry-wide support from both employers' organisations and trade unions in mining and quarrying for elimination of child labour in these sectors.
- There is strong support from Communities and Small-Scale Mining (CASM) this body is already involved in improving social and economic conditions, and in eliminating child labour, in small-scale mining.
- There is strong child and parental support for elimination. IPEC experience shows that where children are given viable options they wish to attend school and/or receive skills and training. Parents equally, given viable options, want their children to be properly educated and taught skills.

Due to the sub-sectors' remoteness, informal character and mobility, the number of children involved in mining and quarrying activities is difficult to measure. However, the ILO estimates that nearly 1 million children under the age of 5 to 17 years of age work in the mines and quarries.

Children in mining have become a focus of attention as its links to many of the worst forms of child labour on the African continent has become obvious. Children are in mining for several reasons – family disintegration through poverty or HIV/AIDS as well as war and conflict; traditional expectations of children as income earners; negligence and premature independence from parental control.

IPEC-ILO has undertaken a number of quite detailed studies into child labour in Ghana, as part of multi-nation studies.

Simply child labour can be defined as any active work for money where the worker violates ILO Minimum Age Convention No. 138, 1973, which pegs the minimum working age at 15 years and above. The ILO Worst Forms of Child Labour Convention No. 182, 1999, is set to abolish WFCL under age 18 years. In addition, the ILO is strengthened by the UN Convention on the Rights of the Child (CRC) and the Optional Protocols to the CRC (2000).

In Ghana a formative study is necessary to provide decision makers, practitioners and activists with a sound basis for policies and programmes aimed at eliminating child labour in this sector, especially the multi-prong exploitation of girls. In addition, such an exercise will support consciousness-raising about the links between poverty, poor enforcement of laws and children labour. This study attempts to provide such responses.

1.2 Rationale for study

The main purpose of the study was to address the following issues:

- The forms of hazards girls in mining and quarrying are exposed to.
- Whether girls in mining and quarrying are particularly vulnerable to sexual exploitation and are at a higher risk of contracting STIs, STDs and HIV/AIDS.
- Whether international conventions that place injunctions of governments to halt all forms of child labour are operational in mining environments.
- A better understanding of the problem based on empirical work is a pre-condition for identifying the best interventions to eliminate it.

1.2.1 Aims and Objectives of Study

The study is essentially aimed at generating new insights into girls in mining and further promotes the objectives of the time bound programmes for the elimination of the worst forms of child labour under IPEC-ILO. The specific objectives are:

- To determine the socio-economic characteristics of girls and boys in formal and informal systems of mining and quarrying.
- To study the differential roles of girls and boys in formal and informal systems of mining and quarrying.
- To appraise the work environment in which children work.
- To study how children are recruited and trained to work in mining and quarrying.
- To study the perception and expectations of children in the sector concerning their present and future.
- To find out why children, especially girls, work in mining and quarrying.
- To ascertain the responses of duty-bearers to the phenomenon of girls in mining.

1.3 Research Design

The study was conducted in two phases. Phase one was an exploratory study involving the research team undertaking case studies of girls (and some boys) involved directly in mining or in mining-related activities. The findings from this phase were used to design a more structured study using statistically drawn samples.

1.3.1 Sampling Techniques

Given the exploratory nature of the study, the case study approach was used to collect basic information about the situation of the respondents. The case study approach allowed the investigation to proceed without rigorous sampling methods. Casual and informal interviews were conducted and the results combined into a report with diverse personal observations of behaviour, work habits and general conditions of living of our respondents. To identify our respondents a snowball methodology was employed. We selected our first respondents in a random manner and sought information from them on how to locate other respondents.

1.3.2 Data Collection Instruments

In order to discern some patterns in the case histories, some specific information was collected in the areas of:

- Time use
- Work risks
- Environmental risks
- In/out dynamics
- Trends.

Conversations with respondents were recorded both in field notebooks and on tape. Diaries entries of events were made.

1.3.3 Data Analyses

Transcription of taped material was undertaken as a complement to written information and questionnaires were analysed with SPSS.

1.3.4 Sample

The study identified young female residents of Akwatia (a diamond mining town in the Eastern Region of Ghana) and Tarkwa (where gold is the predominant mineral mined),

a total of 165 girls were interviewed. Of this, 73.3% came from Tarkwa whilst 26.7% were from Akwatia. Given the limitation of time, the team focused on girls only.

1.4 Sources of information

Interviews were held at the places of work and residence of girls. Our understanding is that the choice of young girls is based on the assumption that, age and gender to some extent reflected life-cycle stages and would influence the kinds of information that people had to share about their livelihoods.

CHAPTER 2

2.1 Research Findings

Girls work in a wide range of activities related to the whole production line of small scale mining and quarrying. It covers such basic tasks as cooking and cleaning to extraction of ore underground and surface, its transport and separation and its subsequent metal production. Details of these are given in this chapter

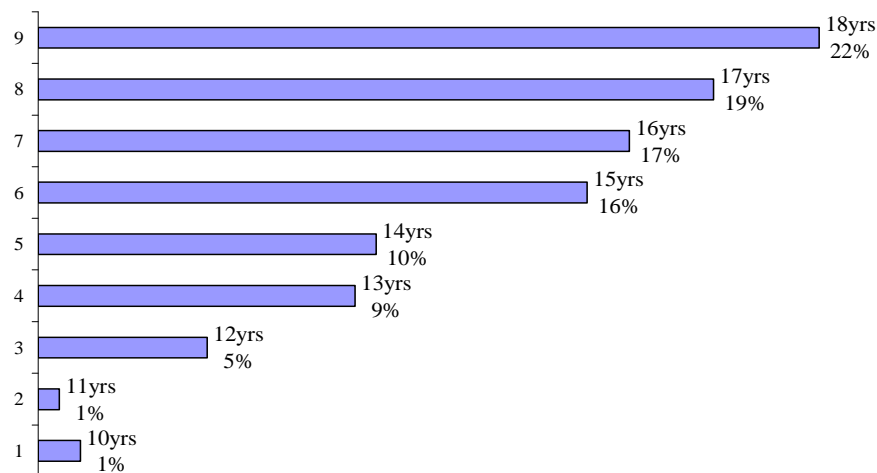
2.2 Background of Respondents

This section indicates the socio-economic background of our respondents

2.2.1 Age of Respondents

The ages of the respondents ranged from 10 years to 18 years. Figure 2.1 indicates that the respondents between the ages of 15 to 18 formed the highest proportion (74 %) of children interviewed both in Akwatia and Tarkwa..

Figure 2.1. Age of respondents



2.2.2 Education and Training

A little over half (52.7%) of the respondents are still in school and about 38.2 % left school for reasons, discussed below. Only, 5.45% have never attended school (Table 2.1).

Table 2.1: School attendance of respondents

Attendance	Frequency	% of total
Left School	63	38.2
Never Attended	9	5.4
Still Attending	87	52.7
Non-response	6	3.6
Total	165	100.0

For those still in school only 54.0% are able to attend school daily, 22.9 manage four days a week and 12.7% do three days a week. Eight percent attend school only two days a week.

Table 2.2: School Attendance by Respondents

Attendance	Frequency	% of total
Everyday	47	54.0
Four Times Per Week	20	22.9
Three Times Per Week	11	12.7
Twice per week	7	8.1
Non-response	2	2.3
Total	87	100.0

For the majority (62%) of those who left school before completion, the main reason is the need to earn a living. Other reasons for early exit include, lack of interest, (20%), start a business on their own (22%) illness (6%). Asked whether they would prefer to return to school, majority (58.7%) cited fees as a barrier to their return. They do not earn enough to enable them return to school and meet other livelihood needs.

2.3 Housing and Living Conditions

Housing conditions can be a measure of the quality of life of household members, including children. Hence the study collected information on the type of housing facilities that the household lived in. Majority of respondents (82.0%) lived in mud houses (Figure 2.3).

Figure 2.4. Material used to build house

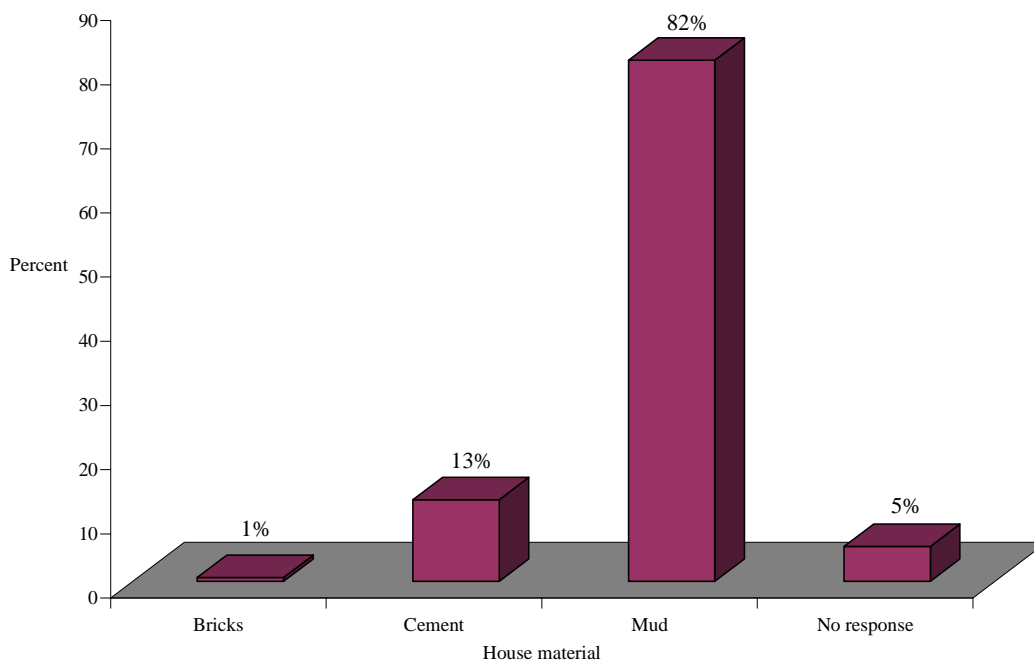


Table 2.5 indicates that majority of the respondents lived in homes belonging to relatives. The number of rooms varied from a single room to houses with more than five rooms (Table 2.6).

Table 2.5: Ownership of house facilities available

Type of Ownership	Frequency	Percent
Leased	24	14.55
Other	5	3.03
Privately Owned	133	80.61
No response	3	1.82
Total	165	100

Table 2.6: Number of rooms in house

Number	Frequency	% of total
One Room	34	20.6
Two Rooms	38	23.0
Three Rooms	30	18.2
Four rooms	21	12.7
Five rooms	13	7.9
More than five rooms	22	13.3
No response	7	4.2
Total	165	100.0

The study also showed that about 43.0% of the respondents had electricity and water supply in their homes (Table 2.7).

Table 2.7: Household facilities

	Frequency	% of total
Electricity	19	11.5
Electricity And Telephone	1	0.6
Electricity And Water Supply	71	43.0
None	19	11.5
Other	3	1.8
Water Supply	41	24.8
No response	11	6.7
Total	165	100.0

CHAPTER 3

3.1 Occupational profile

Small-scale mining is a major source of income for the people of Akwatia and Tarkwa. Men, women and children are involved in the different stages of extracting and processing. Most of these methods are unsafe and outdated. Some are full time small scale miners and others are casual workers. We found that 63.6 % of the girls in our sample are temporary/ part time workers or “by day” workers; 15.2% are self-employed, 9.1% are unpaid family workers and only 6.7% are regular paid workers (Table 3.1). It means in essence that most of the girls in mining are actually working for others. Those who are self employed inherited pits from relations or bought them. These are girls who have been in mining for more than 5 years. They forfeited part of their earnings over this period to acquire the over-mined pits.

Table 3.1: Status of employment of Girls

	Frequency	% of total
Self Employment/Pit Owner	25	15.2
Unpaid Family Worker	15	9.0
Wage Employee-Casual/Temporary/Part-time Worker	105	63.6
Wage Employee-Full Time/Regular Paid Worker	11	6.7
Non-response	3	1.8
Other	6	3.6
Total	165	100.0

The decision to work was taken mostly by the girls themselves. As much as (61.8%) took their own decision to work whilst 25.4% said they were influenced by their parents or guardians. Other persons who influenced the choice of work are listed in Table 3.2.

Table 3.2: Persons influencing respondents' decision to work

	Frequency	% of total
Employer	2	1.2
Friends	9	5.4
Myself	102	61.8
Other	1	0.6
Parents/Guardians	42	25.4
Relatives	6	3.6
Non-response	3	1.8
Total	165	100.0

Whilst the reasons for working in the mines are diverse, prominent amongst them are the need to supplement family income and to become economically independent (Table 3.3). Most girls appear to have been driven into mining by poverty.

Table 3.3: Main reasons for working

	Frequency	% of total
Earn Money To Establish Own Business	7	4.2
Help Pay Family Debts	3	1.8
Other	12	7.3
Supplement Family Income	90	54.5
Supplement Family Income And Earn Money To Establish Own Business	9	5.4
Supplement Family Income And To Pay School Fees	1	0.6
Supplement Family Income, No Other Job Opportunities And Earn Money To Establish Own Business	13	7.9
There Is No Other Job Opportunities	8	4.8
To Be Economically Independent	15	9.1
To Be With Friends Who Are Also Working	7	4.2
Total	165	100.0

In less than 15% of the cases, the pit is owned by the family or a member of the extended family. Girl miners do not usually have any direct contact with the pit owners. A general sharing arrangement is that 50 percent of the proceeds go to the land owner, 40 percent to the men who do the actual excavation of the ore and 10 percent for those who headload to a wash site and pan. Majority of girls in our sample are involved in headloading and fetching water for panning.

Table 3.4: Ownership of Land/Mine/Pit

	Frequency	% of total
Family-Owned	10	6.1
Landowner	124	75.1
Other	12	7.3
Relatives	9	5.4
Non-response	10	6.1
Total	165	100.0



Picture 1: A typical pit at Akwatia

Table 3.5 Length of time working

	Frequency	% of total
Under 6 months	54	32.7
6-12 months	39	23.6
Over 1 year	60	36.4
Non-response	12	7.3
Total	165	100.0

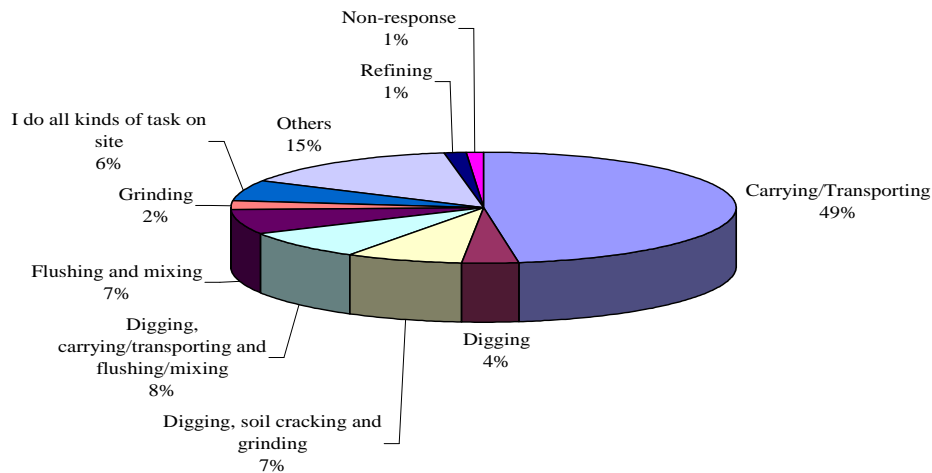
3.2 Nature and Conditions of Work

At both study areas we found girls involved in the following activities:

- Digging
- Carrying and transporting mud and stones on their heads to washing and sieving sites.
- Soil cracking and grinding,
- Flushing/panning
- Mixing
- Refining.

The proportions are given in Figure 3.1 below.

Figure 3.1 Tasks performed by respondents



Other girls carried “pure water” for sale to adult workers in the mines. Some girls did a combination of works. Most did the same type of work as adults although their loads were comparatively lighter. The highest percentage (41.8%) worked 1-5 hours, followed by 34.5 percent who worked 6-10 hours with 18.2 % working for above 10 hours.

Table 3.6: Normal working hours per day

	Frequency	% of total
1hr - 5hrs	69	41.8
6hr - 10hrs	57	34.5
Above 10hrs	30	18.2
Non-response	9	5.4
Total	165	100.0

The number of days they worked also varied. The highest proportion of girls, 40%, worked six days in a week. Most of the girls work under varying physical and climatic conditions. They also work long hours, barely having time to rest and play. For those still attending school, they claim the long hours exert adverse effects on their school work.

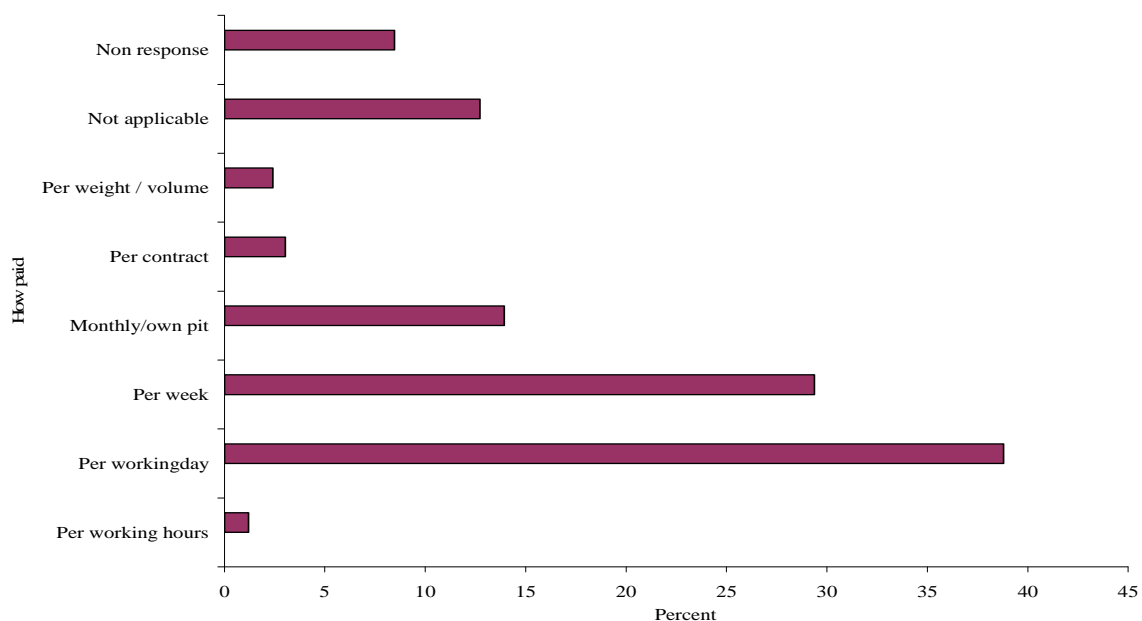
Table 3.7: Number of days in a week respondents' work

	Frequency	% of total
One Day	18	10.9
Two Days	29	17.6
Three Days	4	2.4
Four Days	6	3.6
Five Days	21	12.7
Six Days	66	40.0
Seven Days	5	3.0
Non-response	16	9.7
Total	165	100.0

3.3 Pay/Remuneration

The mode of payment varied. Payments came from the owner(s) of the land they were mining, the buyers of the diamonds or gold, or the other adult workers.

Figure 3.2 Remuneration received by children



Almost 40 per cent of girls received 20,000 cedis or less per month whilst 18.2 per cent got between 21,000 and 40,000 cedis. Only 3.6 per cent earned above 200,000 whilst 13.3 per cent receive no cash payment for the work they do (Table 3.8).

Table 3.8: Amount Earned per Month (in Cedis)

	Frequency	% of total
20,000 or less	64	38.8
Between 21,000-40,000	30	18.2
Between 41,000-60,000	3	1.8
Between 81,000-100,000	2	1.2
Between 101,000-120,000	2	1.2
Above 200,000	6	3.6
Non Payment	22	13.3
Non-response	36	21.8
Total	165	100.0

Table 3.9 shows how monies earned are spent. The responses show that a little over 20.0% of girls give all the monies they earn to their parents as a contribution to the family income and 27 % save. The rest either use the money to meet their educational and leisure needs or use the money for other purposes.

Table 3.9: How monies earned are spent

	Frequency	Percent
Give It All To Parents	17	10.3
Give Part Of It To Parents	10	6.1
Give Part Of It To Parents And Save	4	2.4
Give Part Of It To Parents, Pay For School Fees And Materials	5	3.0
Leisure	2	1.2
Other	32	19.5
Pay For School Fees, Materials And Save The Rest	22	13.3
Save	45	27.3
Non Applicable	20	12.1
Non-response	8	4.8
Total	165	100.0

3.4 Occupational Hazard and sickness whilst working

Many of the injuries and mining-related health problems can result in permanent disability. Girls are exposed to risks of accidents or of contracting serious diseases. Girls working in mining are exposed to various hazards and sicknesses related to their work (Table 3.10). The girls normally work under the direct sunshine and are thus exposed to high temperatures. Physical pains and exhaustion are the regular ailments suffered by girls at the end of each working day. Over 50% per get very tired after a day's work and close to 32% complain about bodily pains. Other work related illnesses and injury include abdominal pains, cuts, general body pains and cough.

Table 3.11: How children felt after working

	Frequency	%of total
General Body Pains	52	31.5
Nothing	11	6.7
Tiredness	84	50.9
Tiredness And General Body Pains	9	5.4
Non-response	9	5.5
Total	165	100.0

Picture 2: Sieves for separating diamonds-containing stones from ordinary stones



The experiences of the respondents differed in Akwatia and Tarkwa because in gold mining, children are exposed to mercury often used in an indiscriminate way in the amalgamation process to separate the gold from the ore. Extracting both minerals however involves various physical processes, creating noise and dust. Since there was no medical assessment, it was impossible to assess the impact of mercury on the health of the girls. The measurement of total dust concentrations and noise levels were also beyond the scope of the study. But anecdotal evidence collected from the girls interviewed suggests that pneumonia and other respiratory tract infections are common in Tarkwa. Girls admit visiting the hospital frequently for treatment of chest problems.

Other work related hazards are harassment from security personnel and cuts from implements.

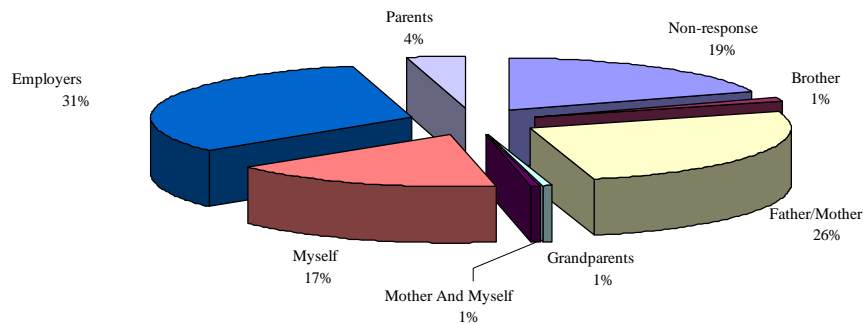
Table 3.13: Other work related hazards faced by respondents

	Frequency	Percent
Being Chased By Security	1	0.61
Cuts From Implements etc	15	9.09
None	105	63.64
Other Accidents	23	13.94
Non-response	21	12.73

3.5 Medical check up and knowledge of health dangers

Respondents rarely sought medical attention. Almost 57% of girls avoided seeking medical attention due to the high cost of treatment. For those who seek medical help only 17 per cent pay for the services. Only 31 per cent of employers pick up the medical bills of sick girls. The rest depend on relations to foot their medical bills.

Figure 3.4. Person paying for medical expenses



3.6 Abuses Suffered

The findings show that harassment is not a common occurrence in the mining environment. Only about a fifth suffer from one form of abuse or another. Less than 10 per cent suffer sexual harassment and only 7 per cent are either beaten or insulted.

Table 3.15: Types of harassment from colleague and superiors

Types of Abuse	Frequency	% of total
Beatings	7	4.2
Insults	4	2.4
Not Abused	134	81.2
Sexual Harassment	16	9.7
Non-response	4	2.4
Total	165	100.0

This reveals that discrimination on the basis of gender is not a common practice in artisanal mining in Ghana. But it points to disruption in girls' educational advancement and in exploitative relations between girls and their employers or even in some cases, their parents or guardians. Working in inclement weather conditions and working long hours pose health hazards to the girls. Even though it was not established conclusively that girls are exposed to chemical hazards, working with chemicals such as mercury is bound to put girls at serious long-term health risks. Working in dusty environment and using dirty and poisoned ground or flowing water to treat ores also puts the girls at risk. A number of suggestions are made in the next section about how to help the girls in the mining setting.

CHAPTER 4

Ideally, children, especially girls, should not be involved in any mining-related activities. But preventing children from engaging in mining activities is a huge policy challenge given that most of them have been driven into mining by extreme poverty. A long term intervention involves pursuing vigorous poverty reduction programmes that would improve the earning capabilities of parents and guardians of girls who may be disposed to entering into mining. In the medium term, incentives that can help redeploy girls working in mining into other non-hazardous and exploitative work will need to be introduced. Special incentives and support packages that will meet the direct and indirect costs of education will have to be provided for girls working under these conditions.

Among the immediate needs of girls in mining are special medical services. Periodic medical examinations are recommended. This will help in the early detection of excessive exposure to mercury and to determine early signs of poisoning. It is also proposed that urine analyses are carried out on a regular basis, with special attention to individual levels of mercury contamination and to trends in the larger population.

This study associates with earlier suggestions made for a similar study in Mali which notes that the poor work environment adds to the already heavy load that children bear -- the high prevalence of respiratory and gastro-intestinal illnesses, frequent muscle and joint pain, enlarged lymph glands, restrictive lung function and elevated liver function test results – and which point to childrens' vulnerability to a range of illnesses, including TB.

The law prohibits children from engaging in mining activities and therefore no provision has been made for systematic reporting of accidents and illnesses. Since children are not usually covered by existing health services, communities have to explore ways of providing primary care to such children.

The scope of this study was limited by inadequate resources. An expanded and continuous data collection system is required in order to get a better insight into the real health implications of this activity.