

Final Report

Social Analysis of Ghana's Artisanal and Small-scale Mining Sector



DECEMBER 2016



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EXECUTIVE SUMMARY

Most of Ghana's Artisanal and Small scale Mining (ASM) activity occurs in the diamonds and gold sectors, though there is also ASM activity in other low-value and/or industrial and construction mineral sectors, like clay, limestone, and salt. In recent years, gold from ASM is estimated to have provided employment to over 1 million people (Hilson, 2013) and contributed to approximately 34% (1.4 million ounces) of the output of the entire gold sector, which accounts for 28.3% of government revenues, 6% of national GDP, and is a major source of foreign exchange earnings (MLNR, 2012).

In general, ASM has the potential to be associated with a wide range of environmental and social challenges given the nature of the work and the conditions of poverty, which often result in the people turning to ASM in the first place (IIED, 2013; Hilson & Hilson, 2015; UNEP, 2012; UNECA, 2002; AMDC, 2014).

The geographical scope for the literature review extends to all of Ghana and from the international situations. For the field research, however, the scope as specified focused on two areas, one in the southern or central belt, and another in the northern belt. The Japa (Gyapa) area in the Wassa Amenfi East District of the Western Region and Talensi District in the Upper East region were selected for the study based on certain characteristics that are common with regard to ASM activities.

The focus of the study was on women, children and migrant miners in the ASM value chains and the impact of small-scale mining on women and children in local communities (not involved in mining value chain).

The methodology for the field research was provided by with inputs and guidance received from the Technical Team, consisting of representatives from UNDP, UNICEF, ILO and IOM. Justifications at the technical meeting helped with the selection of the locations where issues pertaining to the respective representative organizations considered. A mixture of approved qualitative and quantitative survey instruments was applied. This approach was based on current and evolving methodologies for social assessment and scoping studies among other related fields. The quantitative aspects covered secondary data and bio-data of the respondents.

The study therefore categorised the target respondents into three: children, women and migrant miners. A total of 360 respondents participated in the study. They were made up of 120 children, 120 women and 120 migrant miners (male and female). The distribution for each category was equal for both the Wassa Amenfi East and Talensi study districts. Sixty respondents were interviewed for each of the categories in each district. The data generated were analysed using the SPSS programme.

Children

Findings were discussed based on each category; that is children, women and migrants. It became apparently sustained that though some of the child miners entered into the field at the age of six, most of them enter between the ages of 11 and 15. Some school going children in mining have been in it for as long as 10 years. Again, mothers were found to have influenced their children into mining as they are also in the industry. For the children some work for no pay as in the case where they work together with their mothers or caretakers who sent them to the mining communities. Wages are low, some receiving less than one hundred cedis (GH¢100.00) for work done in a month. Some children are into mining as a result of poverty and the families' inability to cater for them. It was found that 28.3% to 30% of child miners in Wassa and Talensi areas took care of themselves in school as their families were not able to support them financially. Downward impact on children in mining is that they do not attend school regularly, cannot combine school and learning effectively, and sustain injuries at site. In some instances at the Japa sites, some children are at times deprived of gold ore they get from abandoned sites by elderly operators who seize the ore and process and sell for themselves.

Migrants

Migrant miners in the Wassa area were mostly from the Western, Central and Ashanti regions while those in the Talensi came from wider geographic scope including the, Northern, Western, Volta and Central regions and some foreign nationals including those from Burkina Faso. They have been in these communities from periods ranging from one month to 18 years. This indicates that the migrant miners have been there for longer periods and continue to grow. It is found among the migrant miners that close relations play a significant role in bringing other members. They include spouses (10%), siblings (18.3%), and 20% through their parents. More than half (53.3%) of migrants came to the locations to make money for their upkeep, that of their families and relieve themselves from indebtedness. One other factor driving them is low skills possessed and unavailability of jobs that match their skills as indicated by 47% of them.

Women

Out of the women interviewed at Wassa, 78.3% are migrants while 21.7% are natives and also born in the community. On the other hand in Talensi, 23.3% are migrants and 76.7% indigenes, indicating a reverse trend as regards who are involved. They are all however in their economic ages ranging from 18-35 years. Over 60.7% have been in the field for over two years. They mostly have low levels of education, face employment difficulties and do mining with the aim of sustaining themselves and their families. They undertake a number of activities at the site either directly in mining or an economic venture at the sites of operation.

1.0 INTRODUCTION AND BACKGROUND

1.1 Background

Most of Ghana's ASM activity occurs in the diamonds and gold sectors, though there is also ASM activity in other low-value and/or industrial and construction mineral sectors, like clay, limestone, and salt. In recent years, gold from ASM is estimated to have provided employment to over 1 million people (Hilson, 2013) and contributed to approximately 34% (1.4 million ounces) of the output of the entire gold sector, which accounts for 28.3% of government revenues, 6% of national GDP, and is a major source of foreign exchange earnings (MLNR, 2012).

In the context of its policy framework, Ghana has demarcated areas for ASM activity and also put in place mechanisms to encourage formalisation. However, the proportion of illegal and unregistered/informal activity (known as 'galamsey') is estimated to have grown in scope and scale, although it is of course difficult to provide accurate estimates. Amongst others, Hilson and Hilson (2015) point to some of the drivers of growing levels of informality as well as illegality (including involvement of non-Ghanaians, which is prohibited by law).

In general, ASM has the potential to be associated with a wide range of environmental and social challenges given the nature of the work and the conditions of poverty, which often result in the people turning to ASM in the first place (IIED, 2013; Hilson and Hilson, 2015; UNEP, 2012; UNECA, 2002; AMDC, 2014). The miners tend to lack access to basic infrastructure such as housing, sanitation and health facilities, and have to face various challenges, including securing legal recognition of land rights and access to credit and technical information and services. Given the extensive use of mercury and cyanide, pollution of water bodies and miners' health are challenges, as are deforestation and land degradation. As far as the organisation of the supply chains are concerned, IIED (2013, p.9) points out that the "complex trading chains make miners prone to exploitation by middlemen and the opacity of the mineral trade makes it susceptible to being a funding mechanism for armed groups, criminal networks, corrupt governments, and illegal trade." Further, "women and children are often involved directly in the mining or in supporting roles. It can be a family activity where children work after school to pay for school fees; however, the worst forms of child labour have been found in the sector, and marginalisation of women is common." The illegal sub-sector sees even more of such challenges, which is compounded by its furtive nature, making it difficult to monitor as well as to provide support and technical services to it.

The environmental and social problems caused by ASM are present across all of Ghana and impact the lives of those directly involved in mining and those living in communities near mining sites. Of particular note are three vulnerable groups – women, children and migrants – which, all other things being equal, are likely to be systematically burdened with the risks and problems brought about by ASM.

The approach to be taken, which is in keeping with the AMV and related guidebook is not to deter ASM or the involvement of women in it, for example, but to ensure that it can be socially

and environmentally sustainable. Despite the negative externalities, ASM remains one of the most accessible sources of income for a huge segment of the Ghanaian rural population. Thus, the question is not about whether ASM should exist, but about how we can transform ASM into a sector that supports sustainable livelihoods without exposing vulnerable groups to additional hazards.

1.2 Objectives of the Assignment

- To inform the CMV process so that Ghana's mining policy/legal framework better protects and empowers vulnerable populations
- Contribute to a common position across relevant UN Agencies on strategic priorities in the area of extractives/mining for human development
- Enable UN agencies to design new evidence-based projects and initiatives focusing on protection and empowerment of vulnerable populations in ASM

1.3 Scope of Services

The geographical scope for the literature review extends to all of Ghana and from the international situations. For the field research, however, the scope as specified focus on two areas, one in the southern or central belt, and another in the northern belt (defined as Northern, Upper East and Upper West regions). This deliberate focus on the north of Ghana is crucial because for mining it has always been researched less. It is also crucial because mining is rapidly expanding in the north without the same support structure (government and civil society) that exists in the south, which entails our analysis and consequent interventions which will help pre-empt a deteriorating situation in the north.

1.4 The Thematic Scope of the Analysis

For the areas that were selected the SRC Field Teams carefully conducted the survey tools to elicit relevant information that provided in-depth data to understand the issues. The broad issues were put under two categories: a) women, children and migrant workers in ASM value chains, b) impact of small-scale mining on women and children in local communities (not involved in mining value chain).

1.4.1 Women, children and migrant workers in ASM value chains

Areas for detailed study were:

- Roles, risks and challenges of women, children and migrant workers directly involved in ASM, both legal and illegal
 - *Women in extraction, haulage, processing and risks associated at each of the stages and their ability to cope with the situations and activities. The study will also look at sectors they are largely and actively involved, the challenges and coping ability.*
 - *Children who are at the sites working on their own or with their parents/caretakers, the stages of activities they are involved in various extractive activities including precious and non-precious minerals and risks associated/encountered*
 - *Migrant workers gender and age spectrum and their origins, their acceptability in the host community, risks encountered*

- *Categories of these groups found in the legal and illegal sectors.*
- Opportunities for women and migrants to benefit from mining
 - *Working conditions and arrangements*
 - *Proceeds and payments/wages received*
 - *Hours engaged on daily basis*
- Drivers and patterns behind migration and migrant exploitation.
 - *In this area a cursory look will be taken at the 'push and pull factors' of the artisanal mining sector*
- Risk profiles for trafficked adults and children
 - *Attention will be paid to identified situations or cases involving trafficked adults and children*
- Women, children and migrant workers' involvement (ranging from individual to SME) in servicing mining sites and other livelihoods enabled by mining
 - *In-depth analysis will include initial rationale for involvement in the sector to find out if they initially entered the area as service providers or changed activities as a result of the prevailing circumstances.*
- Link between household dynamics (including care duties and decision-making power) and working in mining
 - *Here profiles of respondents will be noted with respect to care duties and decision-making power) and working in mining.*
- Impact on children's performance and attendance in school
 - *In the regions that will be selected for the study few districts where known ASM populations are high contacts will be made with District Educational Directorates of the Ghana Education Service (GES) for records on enrolment, attendance and performance in general.*

1.4.2 *Impact of small-scale mining on women and children in local communities (not involved in mining value chain)*

Under this the following were considered:

- Correlation between sex work, sexual abuse and exploitation, drug use, STDS and HIV, and reproductive health (including teenage pregnancy) around mining sites
 - Information pertaining to these parameters were obtained from the respective institutions including Health, Police, Department of Social Welfare and other relevant institution.
- Impact of environmental degradation on communities, which includes health impacts and impact on care duties
 - Institutions including the EPA, Water Resources Commission's Basin Offices, Water providers (GWCL, CWSA) Health service providers among others
- Changes in social structure and level of cohesion within communities due to mining, including the role of migrants
 - Relevant tool(s) to elicit information pertaining to this will be sought from community leadership, Unit Committees, and other key informants.

1.4.3 *Priority areas for the field research*

As specified by the Client the scope of the field research did not cover all of the thematic areas stated above. Following the literature review, the scope for the field research were reduced to address the following research gaps and questions:

Children:

- Community Child Protection Committees - do they exist, are they working as planned? How does law enforcement deal with child labour?
- Drivers and motives behind child labour. Pushed by families, or convenient source of income? Lack of other opportunities?
- Look at social backgrounds of children in mining. Orphans or with family, level of schooling - how does all this affect the drivers? What patterns can we find?
- What are the links between mining and prevalence of abuse, sexual exploitation, also commercially? Are these things one-off, or systematic?
- Are there any cases of children being trafficked?

Women:

- Link between mining and abuse/exploitation, also sexually. Same as above - to what extent is this systematic?
- Link between mining, the environment and care duties (e.g. polluted water bodies means women walking further for water). But what other links might there be?

Migrants:

- What are the main migration patterns/trends? What are the demographics of the migrants (sex, ages, tribe/nationality, and social background)?
- What are the types of exploitation of migrants found? What are the main risks for migrants?
- Are there any cases of adults being trafficked?

2.0 LITERATURE REVIEW

2.1 Small-Scale Artisanal Gold Mining in Ghana

Small-scale gold mining almost wherever it exists is characterized by a lack of long-term mine planning and use of rudimentary techniques (Hinton et al., 2003). People, inclusive of women, involved in the activity operate under dangerous, labour-intensive, highly disorganized and insecure conditions (Dinye and Erdiaw-Kwasie, 2012).

In Ghana, small-scale referred to locally as “galamsey” (gather and sell), has been on the increase since the early 1980s. Vestiges of alluvial gold extraction and winning activities existed as far back as the sixth century. There is a wealth of evidence indicating that precious metals recovered from the region’s artisanal activities attracted Arab traders to certain areas of the country as early as the 7th and 8th centuries AD (Botchway, 1995).

Small-Scale artisanal gold mining in the Upper East region for instance, dates back to the early 1930’s, when some exploratory activities were conducted by a German venture around Nangodi in the then Bolgatanga District and now the Nabdam District. Subsistence farming remained the economic mainstay of the local communities. The inhabitants of Talensis and Nabdams were not enthused about gold mining, whether legal or illegal, until the latter part of 1994. In 1994/1995, there was a severe drought in the Upper East region, which brought about serious socio-economic setbacks. The people perceived a looming sense of famine. This resulted in a heightened search for alternative means of survival. Artisanal small-scale gold mining and stone quarrying became the immediate economic activity. The activities of gold mining and stone quarrying, therefore, became common in the region and in the now Talensi and Nabdam Districts in particular (Mort, 2010).

Although strenuous efforts have been made to regularize small-scale mining in the country in the past two decades, in order to improve conditions, most sites are still unregistered and illegal (Minerals Commission). They tend to be set up on private land, sometimes encroaching on concessions of legitimate mining firms. Galamsey not only involves surface mining, but also underground mining in abandoned shafts, exposing those involved to additional deadly hazards – flooding, cave in and toxic fumes (ILO, 2003).

Small-scale gold mining plays a very remarkable role towards poverty reduction in most countries especially on the African continent. The sector is prolific in the provision of employment for a large proportion of the unemployed populace. In this respect, participants driven by the allure of riches in small-scale gold mining, consider the sector as an opportunity to relieve the strains of poverty (Dinye and Erdiaw-Kwasie, 2012).

According to the Centre for Social Policy Studies (2006), small-scale mining has traditionally played a significant role in the economy of 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. Since enactment of the Small-Scale Mining Law, PNDC Law 218, there has been a significant increase in the production of gold in the country (Akabzaa and Darimani 2001). According to the Minerals Commission, between 2000 and 2007, Ghana’s artisanal small-scale gold mining economy, produced over two million ounces of gold annually (Hilson, 2009). Akabzaa and Darimani (2001) suggest that the small-scale mining sector as a whole is an important player in the country’s mining sector. Tsikata (1997) notes that surface

mining, is the most predominant mining operation in Ghana, which takes about 75% of the mining activities in the country.

The government eventually regularized small-scale mining activities through the passage of the Small-Scale Mining Law, now the Minerals and Mining Act, 2006 (Act, 703). Under the Small-Scale Mining Law of 1989, PNDC Law 218, the Department of the Minerals Commission was responsible for registering and supervising small-scale miners in the country. The project has so far registered about 600 co-operative and individual small-scale miners. The government has also established the Precious Minerals Marketing Corporation as the sole governmental agency for the purchase of the produce of small-scale miners.

2.2 Child Labour and Artisanal Small-Scale Mining

Sometimes migration to mining camps is explained as the result of trafficking. One such example is the relocation of boys aged 6-18 years from Benin to Nigeria, where they work in quarries outside Abeokuta. While outsiders label the people with whom the children travel as 'traffickers/employers' because they recruit, accommodate and employ the children and make a profit, the boys consider such persons as their bosses.

2.2.1 Context and overview of child labour

The International Labour Organization reports that child labour still remains a pervasive problem throughout the world today, especially in developing countries with more than 168 million children involved in child labour (ILO, 2013). About 85.6 million children are engaged in hazardous work. Children in hazardous labour are reported to constitute almost half of those in child labour (50.8 per cent) and about one-third of children in employment (32.3 per cent). Recent figures from the ILO (2013) show that globally, the Asian-Pacific region continues to have the largest number of child workers (77.7 million), followed by sub-Saharan Africa (59.0 million) and Latin America and the Caribbean (12.5 million) but, in relative terms sub Saharan African ranks highest as having one in five children engaged in child labour.

Figures from ILO (2013) indicates that about 18.5 million of the children in child labour were within the age category of 5 to 11, while 19.3 million constituted teenagers, that is, 12 to 14 years old the bulk (47.5 million) of the children fell within the adolescent age group of 15 to 17 years old.

Child labour in mining has attracted concerns among the international community, national governments and the civil society (ILO, 2005). The Global Report on Artisanal and Small-Scale Mining (ASM) indicates that worldwide, child employment in ASM has become a serious issue (Hilson, 2009). Africa and Asia, together, account for over 90% of the total child employment (ILO, 2013).

Bass (2004) observed that unlike in Asia, where child labour is essentially an urban 'problem', in sub-Saharan Africa, it is most prevalent in rural areas, where over 70% of the population resides. He further notes that the highest incidence of child labour is found in sub-Saharan Africa, where one in every three children between the ages of 5 and 14 is economically active (cited in Hilson, 2008b). The ILO (2013) confirms that child labour is mostly prevalent in rural areas, where the capacity to enforce minimum age requirements for schooling and work is problematic and lacking. Recent child labour data on Ghana collaborates this finding. For example, the findings

indicate that at the locality level, the proportion of children engaged in child labour was higher in rural (77.5%) than urban (73.8%) areas. A higher proportion of children in rural areas (51.2%) were engaged in hazardous forms of child labour compared to those in urban areas (46.0%), with the rural forest reporting the highest proportion of children in hazardous work (54.9%). With respect to urban areas, Accra (GAMA) recorded the least proportion (26.5%) of children who were engaged in hazardous forms of child labour (GSS, 2014).

Child labour takes different forms in different African countries with children working in various sectors including mining and quarrying, commercial agriculture, domestic work, transport, hawking, trafficking of illicit drugs, prostitution, just to mention but a few. These children often become victims of abuse and exploitation by the people who employ them (ILO, 2005).

In Ghana, the most current data on child labour come from the Ghana Statistical Service's (GSS) sixth round of the Ghana Living Standards Survey (GLSS6, 2014). The findings show that 28.5% of the children participated in economic activity, of which males constituted 29.2% and females, 27.7%. The proportion of children in economic activity was higher (39.0%) in rural areas than urban (16.8%). Rural Savannah (44.3%) had the highest proportion of children engaged in economic activity while the GAMA recorded the lowest (6.1%). With respect to age, the findings clearly show that the proportion of children engaged in economic activity was higher (43.7%) for the older age group (15-17 years) than for children 5-7 years (10.0%). For example, at the regional level, more than four out of every ten children in the Brong Ahafo (41.7%), Upper East (44.5%) and Upper West (45.1%) recorded children 5-17 years engaged in economic activity compared to the other regions. Greater Accra region recorded the lowest proportion (6.9%) of children in economic activity (GSS, 2014: 40).

With regard to child labour, the results show that 21.8% of persons 5-17 years were engaged in child labour. The proportion of male children in child labour was slightly higher (22.7%) than females (20.8%). The proportion of rural children engaged in child labour (30.2%) was about two and a half times the proportion in urban areas (12.4%). The rural savannah (34.6%) had the highest proportion of children in child labour compared to the other ecological zones. Among the age groups, the children aged 12-14 years recorded the highest level of child labour (26.9%). However, per the child labour concept, all children in the younger age group (5-7 years and 8-11 years) who participated in economic activity also engaged in child labour (GSS, 2014).

On the worst forms of child labour, the data again shows that 14.2% (1,231,286) of children 5-17 years were engaged in hazardous forms of child labour. The proportion of males engaged in hazardous forms of child labour (15.4%) is higher than females (12.9%). Again, one-fifth (20.0%) of children in rural areas were engaged in hazardous forms of child labour compared to 7.7% in urban areas. The rural forest (21.3%) zone recorded the highest proportion of children engaged in hazardous forms of child labour. The results data further shows regional variations in the proportion of children who engaged in child labour. With the exception of Greater Accra (5.2%) and Central (8.9%) regions, the proportion of children who engaged in child labour in the other regions ranged from 20.5% in the Western region to 33.5% in the Upper West Region.

In 2009, Ghana developed a National Plan to Eliminate the Worst Forms of Child Labour in the country by 2015. The priority focus areas in the plan include:

- Enforcement of laws;
- Broad-based sensitisation and mobilisation to promote attitudinal and behavioural change;

- Protection of children and their rights;
- Pursuit of universal basic education and generalisation of post-basic education;
- Withdrawal of children below the age of 15 from child labour and the protection of working
- Children aged 15 and above from exploitation and hazardous work;
- Establishment of standard procedures and protocols for dealing with cases of child abuse and exploitation;
- Development of institutional capacities at all levels of government and within civil society to
- Ensure the effective application of established procedures and protocols; and
- Extension of social protection measures to provide safety nets for the most vulnerable households and children.

There is currently no cited study in Ghana that has conducted an audit of the national plan to know what is on the ground, what has worked well, what did not work well particularly in artisanal small-scale mining. In respect of child labour in small-scale mining, it will be interesting to find out whether the Community Child Protection Committees as envisaged in the plan are in place and whether they are operating in Mining Communities of Ghana? The national plan also envisioned law enforcement and the extension of social protection measures. The literature is quite replete with information on lack of law enforcement in rural communities. It will be important for this study to understand the perspectives of communities, parents, law enforcement agencies as well as institutions such as the District Assembly and community child protection committees mandated to protect children, why there is no law-enforcement?

2.2.2 The Role of Child Workers in the ASM sector

UNICEF (2012: 3) describes a typical child worker in Artisanal Small-Scale Gold Mining as “a boy or a girl above ten years of age who, depending on social and cultural practices, is involved in digging, crushing, grinding and washing ore or in support services and petty trade.” Similarly ILO (2005) note that children perform all sorts of low-skilled tasks, including building trenches, carrying loads of gold ore on their heads to washing sites (done largely by girls), washing the ore (done largely by boys), amalgamating the gold using mercury, and selling the product. The 2002 global report on artisanal small-scale mining reinforces the findings of ILO (2005) when it reveals that: Children start washing gold from 3 years on; from 6 years on they can be seen breaking rocks with hammers or washing ore. Children as young as 9 can be observed underground, and at 12 boys are widespread working underground in many countries and do the same work than adults (MMSD, 2002:24).

According to Schipper and de Haan (2015) the use of children in artisanal gold mining is widespread. They pointed out that the ILO and the US Department of Labour have determined that this worst form of child labour occurs in 26 countries across Africa, Asia and South America. The most frequently used estimation is that around one million children work in gold mining worldwide. However, the actual number is probably much higher, and the ILO expects the figure is increasing, in sync with the ongoing growth of artisanal gold mining (Schipper and de Haan, 2015).

Reports from the ILO (2005) indicate that small-scale mine operators principally engage children between ages 10 and 18 years old who are paid minimal daily wages. These children perform all sorts of low-skilled tasks, including digging trenches, carrying loads of gold ore on their heads to

washing sites (done largely by girls), washing the ore (done largely by boys), amalgamating the gold using mercury, and selling the product (ILO, 2003; ILO, 2005 & Hilson, 2008).

The Human Right Watch Report (2011) estimates that between 20,000 and 40,000 children work in Mali's artisanal gold mining sector. The report asserts that many of them start working as young as six years old and that these children are subjected to some of the worst forms of child labour, leading to injury, exposure to toxic chemicals, and even death. The report further allege that children dig shafts more underground, pull up, carry and crush the ore, and pan it for gold. Thus, owing to hazardous occupation many children complain of headaches, pain in, necks, arms, or backs, and risk long-term spinal injury from carrying heavy weights and from enduring repetitive motion. Children often sustain injuries from falling rocks and sharp tools, and at many occasions have even fallen into the shafts being grievously injured. In addition, they risk grave injuries while working in unstable shafts that sometimes collapse.

Again, ILO (2001) study of children in mining found that many children under age 5 accompany their mothers and siblings to the work areas because there is no other adult relative to care for them and that there are no child-care centre in these communities (ILO/IPEC 2001:81). Likewise, the ILO (2007) study of girls in mining in Ghana, Niger, Peru and the United Republic of Tanzania, found that girls as young as nine years old were engaged by their mothers in the preparation of food and drink for sale in the mining sites. While the majority of children working in mining are boys, girls mine gold too or do other jobs on mining sites, such as selling food or other items. They face the additional risk of sexual harassment, sexual exploitation, and rape (Human Rights Watch, 2015).

The ILO also contends "mining and quarrying are, in virtually all cases, a Worst Form of Child Labour (WFCL) because of the extent and severity of the hazards and risks of injury and disease. There is no justification-poverty included for children to work in this sector. It is literally back-breaking" (ILO, 2004:1).

So far, the literature describes the roles children are engaged in artisanal small-scale mining sometimes under the supervision of parents (mothers). However, the literature is short in telling us why children as young as 9 or 12 years are undertaking these roles in Mining. Therefore the perspectives of children and or available on the roles of children in ASM will useful.

The Minister for Gender, Children and Social Protection of Ghana in May 2015, led a delegation to present the country's report before the Committee on the Rights of the Child. The Minister at that platform acknowledged Child Labour, especially in the mining sector, as a challenge the country needs to deal with, notwithstanding some efforts being made. Research (Human Rights Watch, 2015, GSS, 2014, & 2003; ILO, 2013; UNICEF, 2012; Hilson 2009, 2008, Hinton, 2007) suggests that children are involved in artisanal small scale Gold Mining in parts of Ghana. The Ghana Living Standards Survey Round 6 puts the percentage of children working in mining and quarrying at 0.3% of all working children, which in absolute terms, translate into 7,428 children working in mining and quarrying (GSS, 2014:28). The ILO (2013) also, estimates that over 100,000 children are found in gold mining and quarrying in various parts of Ghana including Western, Ashanti, Eastern, Brong Ahafo, Northern and the Upper East Region of Ghana. Earlier, the Ghana Child Labour Survey (2003: 63) reported about 10,574 children to be involved in mining and quarrying activities in Accra (5,552), Upper East 3,173) Western, Ashanti and the Upper West regions had 370 estimated children each. The published results of the Ghana Living Standards Survey Round 6, most children work in agriculture (77.2%), an increase from 2003

figure of 62.5%). Children are reported to be working in other sectors including: manufacturing (3.8%), construction (0.7%), wholesale and retail (12.4%) and accommodation and food service activities (3.2%).

So far, these studies have done a good job of giving estimates of the number of children involved in artisanal small-scale mining. But none of these studies have given the social backgrounds of children in small-scale gold mining in Ghana. It will therefore be interesting for this study to fill this yawning gap of understanding the categories or kinds of children involved in small-scale gold mining activities in the country. By social backgrounds, it will be interesting to find out if these children in artisanal small-scale mining are: full orphans, half orphans, children of single-parenthood, divorced children, drop outs from school, children who have never enrolled in school or are they children who combine school with mining? An attempt to understand the social backgrounds of children and the dynamics involved are important, especially, in the design of intervention strategies for small-scale mining communities. The legitimate research question to ask then is, what are the social backgrounds of children involved in small-scale gold mining activities in Ghana? Again, the literature again talks about non-enforcement of the laws in small scale mining communities. For example, the Human Rights Watch (2015) note that Ghana's child labour inspections are not systematic, and government institutions dealing with child labour and protection are inadequate. However, the literature does not offer reasons why laws frowning on child labour particularly in artisanal mining are not enforced. It will therefore be interesting to find out through this study why law enforcement of child labour in small-scale mining communities is difficult and what mandated institutions are doing in that regard.

2.2.3 Risks and Challenges Faced by Children in ASM value chains

Artisanal and small-scale gold mining in Ghana as alleged by Human Rights Watch (2015) is poorly regulated. They claim that the majority of mines operate without mining licenses, which are costly and difficult to obtain. To the extent that these claims are true, portends risks and challenges. The ILO (2005: 9) reports that "mining is one of the three most dangerous occupations to work in along with agriculture and construction." The study further notes that child labourers in mining are at risk of being killed, severely injured, or stand to suffer serious work-related health problems. The study asserts that many of the injuries and health problems may result in permanent disability and that health problems may not become apparent until the child worker is an adult. The study explains that because the bodies and minds of children are growing and developing, child labourers often have an even greater risk of being injured or falling ill than adult workers.

An exploratory study conducted by Afrikids (2008) in the mining areas in Talensi-Nabdam found that some of the associated health risks include tuberculosis, mercury poisoning and serious injury and death (AFRIKIDS, 2008). Studies again by the ILO (2004) reinforces that "working in mining poses extreme health risks and hazards for children who may be torn from their habitual living environment and forced to live under extreme conditions in mining camps" (as cited in Hilson 2008:5). Subsequently, the 2007 ILO study on girls in mining similarly reveal that "girls are at risk of serious injury and accidents related to hauling heavy loads and panning-even more so for the girls involved in the amalgamation stage, as the mercury constitutes a great health risk if it comes into contact with the skin or is inhaled" (ILO, 2007:4).

According to the CSPA (2006:5) study, girls working in mining are exposed to various hazards and sicknesses related to their work. The study asserts that 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. Respondents rarely sought medical attention; almost 57 % of girls avoided seeking medical attention due to the high cost of treatment. The study explains that harassment is a common occurrence in the mining environment and that girls generally suffered abuses.

According to the ILO (1999) and Quiroga (2000) silicosis and pneumoconiosis generated from inhalation of crystalline silica, dust emitted from blasting or breaking and crushing rocks, are the most frequently reported respiratory effects. They assert that in mining areas of the Bolivian Altiplano, the low life expectancy (48 years compared to a national average of 63 years) has been mainly attributed to silicosis and, in Ghana, silicosis has been documented in children as young as 14 (as cited in Hinton 2005:50). These findings are documented in other countries and not in Ghana.

Again, a study by Hinton (2005) confirms that a number of hazards exist in both surface and underground ASM operations. The study underscores the fact that, although chemical dangers in particular, are associated with mercury and cyanide misuse, most occupational hazards result from poor physical conditions. The study reports that in "1997 alone, 37 of 53 mining-related deaths in Zimbabwe mines were attributed to ground failure, shaft collapses and machinery accidents and in Chinese small coal mines, at least 6000 miners died annually" (Hinton 2002:11).

Again, Hinton et al., (2004) asserts that, one of the most potent health risks in small-scale mining is exposure to mercury, which is used in processing of gold. Indeed, the associated health risks regarding children's involvement in small-scale mining is another dimension that has not been thoroughly researched in the Talensi-Nabdam district, that this study is interested in investigating.

In a similar vein, Stopford (1979, cited in Hinton, 2005) reports that exposure to acute levels of mercury vapour can produce dysfunction of the kidneys and urinary tract, vomiting, and, in the most severe cases, death. Countless studies have demonstrated that gold miners, particularly those involved in amalgam burning, are at a high risk of mercury poisoning. Boese-O'Reilly (2004, cited in Hinton, 2005:48) reports that in the Mount Diwata region of the Philippines, 73.5% of mine workers exhibited signs of mercury intoxication. Also, in Dumasi, Ghana, Bernaudat (2003; reported in Hinton 2005) reports that more than 50% of miners and 25% of non-miners are considered heavily intoxicated with mercury. More also, Boese-O'Reilly et al. (2004) notes that in Tatelu, Indonesia, using a standardized test, the frequency of dysdiadochokinesia, which is the decreased ability to do rapid alternating movements, is about 35% in children working as miners, compared to about 22% in non-mining children from the ASM community and 10% in children from a control community (Boese-O'Reilly *et al.*, 2004).

Even though there is documentary evidence (Donkor, Nartey, Bonzongo & Adotey 2006; Hinton, Veiga & Beinhoff, 2003) that mercury is used in small-scale gold mining, we do not what is being done on the ground to stop the use of mercury. It will therefore be important for this study to collect information in this regard. This is against the backdrop of Human Rights Watch (2015) observation that the Government of Ghana is doing far too little to protect its citizens from the toxic chemical of mercury. In fact, Human Rights Watch proposal to government is that it should promptly start introducing mercury-free gold processing techniques, and ratify the Minamata Convention and put its requirements into effect.

It is again reported that intensive digging activity has major health and safety implications. Children also face safety and health risks from pulling and carrying heavy loads, inhaling hazardous dust and particles, and using dangerous tools and crushing equipment. According to the ILO, (1999 cited in Hinton, 2005) the inhalation of fine mineral particles can result in the accumulation of scar tissue in the lungs. As this occurs, lung capacity decreases and the victims slowly suffocate. In some cases, the presence of foreign material in the lungs can result in cancer. HIV/AIDS too has become a major concern due to widespread prostitution in mining areas (Bodenhoefer, 2004; Duffy, 2007, cited in Hilson 2008).

From the above findings, it will be interesting for this study to find out from available health institutions within the catchment area of the study areas, the ailments reported by children involved in artisanal small-scale mining.

2.2.4 Impacts of child labour on children's performance and school attendance

Some studies have also been done to understand the impacts of child labour and children's performance and school attendance. According to ILO's (2002) global estimates on child labour, close to half of all working children are also enrolled in school. The study of CSPS (2006), clearly points out that more than half (53%) of children as of the time of the study were still in school while working in the mines. The implication is that most girls in mining combined school with work. Those who combined school with work in the mines indicated that the long hours adversely affected their schoolwork. The effect is that children working in mining do not benefit fully from school. IPEC asserts that children working in small-scale mining are not only exposed to immediate risk but they are also jeopardizing their long-term development; both physical and socio-economic. Indeed, IPEC (2006) underscores that mining activity also has harmful effects on the children's possibilities of educational development. They explain that children are often tired, ill and malnourished. They also emphasize the point that the children have little time to devote to schoolwork.

Similarly, ILO (2005:17) in a study on eliminating child labour in mining and quarrying explain that children from small-scale mining and quarrying districts often suffer from high school dropouts because of the work children undertake. The study found that families face dilemmas between their children's earning versus learning. The study found that children are often sent to work because their contribution is perceived to be essential for the family survival. Moreover, it was found in the Tanzanian mining community that girls frequently drop out of school due to pregnancy, early marriage, domestic work responsibilities, or job offers. In the Ghanaian study, only 53 per cent of girls questioned were in school and of those who did attend, the majority did not attend daily. The main reason given for this poor attendance was the need to make a living in the face of poverty. Other explanations were lack of interest, illness and the desire to start a business (ILO, 2007:10). Because of all these factors, families have few expectations with regard to the benefits of local schools, even when they dream that their children may be able to study a profession or trade and change to a different line of work.

Again, as Hilson (2008: 5) reports, "many of the children now found working in ASM camps in sub-Saharan Africa do not attend school, and engage in arduous and low-paying activities." An IPEC (2006) study drawing on new data from Brazil, Kenya, Lebanon, Sri Lanka and Turkey indicates that some differences exist between working and non-working children in terms of educational inputs (for example, regular attendance, tardiness or tiredness). This new study further asserts that children who are in school are to a large extent shielded against the

potential negative effects of work that is not hazardous by nature, whether economic activity or domestic chores (IPEC, 2006).

Heady (2003:4) found that child work in Ghana has relatively little effect on school attendance but Ray (2002) found otherwise. Heady for instance argues quite strongly that school attendance, as a measure of learning achievement is not ideal for estimating the harm that child work causes. However, Ray (2002), for example, concluded in his study on child labour and education in rural Ghana that improved school attendance rates led to a reduction in child labour. The implication is child labour reduces school attendance which has a cascading effect on education.

School dropout has also been noted as a widespread problem in mining areas in Ghana (CSPS, 2006, Mort, 2010). As most of the children involved in school dropout come from poor homes, they initially start mining part time to help pay school fees with the consent of their parents. Many end up abandoning school altogether as the attraction of making money, even very little, is stronger than their perception of any long-term benefits of continued schooling. Given the relatively short life spans of most small-scale mining sites, these children will eventually find themselves unemployed and without skills for finding other jobs.

2.3 Women in ASM

Statistics show that presence of women in the artisanal and small-scale sector is high with 4% of the 600 concession holders being women and about 22% of the legal artisanal and small scale miners as well as 50% of the galamsey population. Seven out of the 551 licensed gold buyers (1.3%), 75% of the small-scale salt mining workforce and 80% of stone quarry workers are women (Minerals Commission Ghana, 2014).

2.3.1 Roles of Women in ASM value chain

Women have always played key roles in different stages of the operation. In Ghana, although women under-take the same labour as men in the gold industry, it has been noted that female participation in ASM can be either direct (i.e. primary engagement in mining operations) or indirect (i.e. servicing the mine sites) (Gunson and Jian, 2001). Heemskerk (2003, p. 63) provides a detailed description of the roles that women play in the sector: Women are panners, cooks, mining operators, nightclub entertainers, sex workers, and merchants, among other professions. While some women work marginal jobs, others are powerful managers of multiple mining teams. Women occupy a distinctly marginal role in the management of small-scale mining operations worldwide. They are rarely identified as miners in their own right and only sporadically attain the same decision-making positions as their male counterparts, including concession owners, mine operators, dealers and buying agents and equipment owners (Labonne, 1996; Susapu and Crispin, 2001; Hinton et al., 2004). Although women provide up to 50% of total workforce in the sector, they do not receive equal financial reward as men (Dreschler, 2001; Chakravorty, 2001). One reason for low payment to female small-scale miners could be seen in the “unskilled” nature of the work they perform. One task that is chiefly carried out by women is loading and transporting material. At the same time, women almost never work underground (Chakravorty, 2001; Gunson and Jian, 2001; Hinton et al., 2004). Women are also engaged in panning, sluicing and separation of gold.

Some studies done in Ghana, classified the role of women in ASM into direct and indirect. Women's direct participation includes carrying of ore and water, washing, sieving, sorting and panning. Less commonly, women are concession owners, mine operators, dealers and buying agents and equipment owners. The direct involvement of women in ASM depends on whether activities are legal and a cooperative is present (Minerals Commission, 2013; Hinton *et al.*, 2003).

As exemplified in the Akoon mining cooperative, due to risks such as falling rocks and high temperatures, associated with underground mining, women were not directly engaged in mining but carried gold ore and water, and pounded ore rather than dug for it. Women's indirect participation involves bookkeepers, security guards, cooks or nannies. The nannies take care of children brought to the site by some women miners (Akabzaa & Darimani, 2001). In their study Dinye and Erdiaw-Kwasie (2012) found that most of the women (91.4%) were involved in carrying the ore for processing. Those involved in crushing and grinding accounted for 3.7% whilst those sieving and washing constituted 4.9%.

From research done in Ghana, women tend to hold the lowest paying and more precarious jobs in mining, have less access to formal training, have less access to credit, and systematically face sexual abuse and harassment, which in turn exposes them to a range of serious risks, such as the contraction of STDs and HIV (Yakovleva, 2007; Hinton, 2003). In addition, women's health is disproportionately harmed more than men's as a result of lower levels of education, less access to protective equipment, and less access to information about safe working practices. Women suffer injuries and body pains in the form of cuts, sprains and fractures from falling (Dinye & Erdiaw-Kwasie, 2012).

The mining sector is mostly permeated with gender-based differences in the allocation of tasks and responsibilities as well as access to resources and land. This has an impact on how the benefits of mining are distributed, who's involved in making decisions and how mining activities affect women. The literacy dichotomy between men and women result in women receiving less income than their male counterparts in most small-scale mining companies (Akabzaa and Darimani, 2001). This position is corroborated by Dinye and Erdiaw-Kwasie (2012) who found that 33.3% of the women interviewed had no formal education meaning they could neither read nor write. Such women are deprived of being involved in other mining activities that are more profitable but require higher level of skills.

One issue that has been particularly overlooked is the role of women, especially in illegal operations. The expanding ASM sector creates innumerable opportunities for thousands of impoverished women to find non-farm employment. According to Hilson (2001) some 15% of the legalised segment of Ghanaian ASM sector is female, as well as 50% of the "galamsey" population. However, the roles they play, their struggles and needs have been largely overlooked in both policymaking and research circles. Acquisition of knowledge about female participation in the small-scale mining is a key to facilitating regularisation of the ASM sector.

The characteristics of the mining region such as location, mineral mined as well as the scale and stage of an operation do provide an insight into the gender roles in artisanal small-scale mining communities. For instance, in a review of gender issues in Ecuador (World Bank, 2000), one of the most interesting determinants of the roles and responsibilities of women involves the type of commodity mined. In the extraction of high value products, such as gold, men take control of the mine site. Women tend to participate in greater numbers in the ones with low value

commodities, as observed in Nigeria (salt), South Africa (kaolinite) and Brazil (sand and gravel). Again, women's participation in small-scale mining generally increases with the decreasing scale of the operation. This may also be related to disparities in education and training in small-scale mining techniques. Typically, women's direct participation decreases with increased scale of operation and prevalence of mechanization. Nonetheless, the roles that women play in most sectors of the economy especially the small-scale gold mining sub-sector cannot be overlooked. As suggested by Noeleen Heyzer (1995) (Minerals Commission, 2013; the involvement of women in ASM is twofold; direct or indirect. Women's direct participation includes carrying of ore and water, washing, sieving, sorting and panning. Less commonly, women are concession owners, mine operators, dealers and buying agents and equipment owners. The direct involvement of women in ASM depends on whether activities are legal and a cooperative is present Hinton et al., 2003). As exemplified in the Akoon mining cooperative, due to risks such as falling rocks and high temperatures, associated with underground mining, women were not directly engaged in mining but carried gold ore and water, and pounded ore rather than dug for it. Women's indirect participation involves bookkeepers, security guards, cooks or nannies. The nannies take care of children brought to the site by some women miners (Akabzaa and Darimani, 2001).

The mines act of 1952 that protects women from being engaged in underground gold mining really contributes to safeguarding their health status. Nevertheless, there are other risks associated with the work they do. In some cases, women pound rocks and carry the ore and water for wages that are 60% lower than those of men involved in ore digging and washing (Akabzaa and Darimani, 2001). These tasks are usually preferred by site owners to be executed by women at the expense of their male counterparts due to less energy and experience required in performing them. Women within the small-scale mining sector are highly susceptible to poverty as they tend to underpaid. There is a need to put in place pragmatic measures to adequately reward these women for their labour to promote decent living standards among them. The mining industry in most communities is dominated by a male culture of systemic sexual harassment and bullying by men. Women feel that they work harder than their male colleagues in most small-scale gold communities in the world (The industry and the Federal Government, 2001). In Ghana, although women under-take the same labour as men in the gold industry, inequities exist in the pay. Some women resort to a sex trade for additional money or gold to ensure family survival (USAID, 2000). This exposes women to sexually transmitted infections, which negatively affect their output at work (Wente, 2002). There is, therefore, the need to explore other healthier livelihood activities that can earn women enough income.

The percentage of women workers in the salt and quarrying industries is much higher than that in precious mineral mining. This can be attributed to taboos and misunderstandings regarding the „spirits“ associated with precious minerals and their interaction with women. For example, initially, women were not allowed on small-scale gold and diamond mining concessions. According to Addei and Amankwah (2011) most precious mineral mining activities take place along water bodies and a woman in her menses is not allowed to go to the mining sites as it is postulated that river gods see such women as unclean. These taboos apply to the mining of precious minerals in all parts of Ghana but not construction and industrial minerals. The involvement of women in ASM is twofold; direct or indirect. Women's direct participation includes carrying of ore and water, washing, sieving, sorting and panning. Less commonly, women are concession owners, mine operators, dealers and buying agents and equipment owners. The direct involvement of women in ASM depends on whether activities are legal and a cooperative is present (Minerals Commission, 2013; Hinton et al., 2003). As exemplified in the

Akoon mining cooperative, due to risks such as falling rocks and high temperatures, associated with underground mining, women were not directly engaged in mining but carried gold ore and water, and pounded ore rather than dug for it. Women's indirect participation involves bookkeepers, security guards, cooks or nannies. The nannies take care of children brought to the site by some women miners (Akabzaa and Darimani, 2001). The seemingly low number of female involvement in ASM has been due mainly to taboos that sought to protect women as the weaker sex and misunderstandings regarding the „spirits“ associated with the minerals and their interaction with women (Addei and Amankwah, 2011). In addition, proverbial sayings such as 'women sell garden eggs and not gunpowder' and 'when a woman buys a gun, she keeps it in the room of a man' have sought to keep female participation at a low level in a venture which is generally seen as a man's job. These have discouraged women professionals and entrepreneurs from going into ASM and mining related professions in general. The very daring women who became trailblazers in ASM were referred to as 'witches'. In Ghana, the first female mining engineer graduated in 1996 and the first female underground worker was employed in 2002.

Revenues derived from it can increase local purchasing power and have the potential to catalyse small-scale mine development and foster local economic multipliers. For example, discussions with the Women's Coordinator of the Ghana National Association of Small-scale Miners (GNASSM) (Perscom, 2014) indicate that many women miners invest their income in other activities such as trading and estates development. Yakovleva (2006) arrived at similar conclusions in her studies around Ntronang and Noyem in the Birim South District of Ghana. According to Amina Tahiru, the Women's Coordinator of the GNASSM, women contribute to economic growth of the communities in which they operate. It is on record that some women concession owners donate books to school children, recruit trained teachers from city centres to teach in the communities, pay teachers' salaries and provide food for school children in the communities where they operate. The men involved in mining do not pursue such ventures as perhaps, they do not have motherly instincts (Perscom, 2014).

Compared with the time when the ASM sector was legalised in 1989, women in mining have a stronger presence. Even within the Ghana National Association of Small-scale Miners, there is a Women's Coordinator who oversees the activities of women in mining and seeks their interest. Despite its positive impacts, the rural women engaged in the activity who are generally not property owners, especially at the initial stages, have challenges raising capital for the activity. Due to their inability to raise collateral in the form of buildings and other landed property, financial agencies may normally ask such women to bring their husbands to the negotiating table. In the case where the woman is not married or the husband is not interested in the venture, the woman may have to seek help from other sources. Women who are involved in ASM also have to make time to perform domestic duties such as cooking and taking care of children, thus placing extra burdens on them.

2.3.2 *Risks and Challenges faced by women in ASM value chain*

Studies by Dinye and Erdiaw-Kwasie (2012) and Kwavelove (2007). WACAM (2007), suggest that several problems affect women's effective participation in the ASM sector. Key among them are insecurity, inhalation of hazardous chemicals and substances, low income and unfavourable regulatory and legal frameworks. The dominant problems faced by the women are those of injuries and body pains. These injuries are in the form of cuts, sprains and fractures from falling. The women sometimes use their bare hands to fetch sand and as a result suffer cuts from sharp and other materials buried in the accumulated sand. The use of bare foot or sometimes

bathroom slippers by the women at the processing site are not conducive for movement at the site and these makes them fall most of the time and get injured. Workers at the processing stage, most of whom are women are faced with the problem of being exposed to toxic chemicals as well as mechanical accidents from the grinding equipment. The women indicated this issue arises from lack of safety clothing, wellington boots, nose caps and hand-gloves to protect them whilst at work. The men in the small-scale mining activities are better endowed than their female counterparts in terms of literacy level and physical strength and are therefore paid better than their female counterparts. The low daily income of the women in the small-scale mining activity can hardly support them in satisfying their basic needs of which food is the major component. This tends to have negative effects on the outputs of such women at the site. They resort to other income generating activities such as petty trading to supplement.

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. This however, does not discount the fact that exposure to mercury does have adverse effects on girls. Similar studies done in Niger, Peru and Philippines found that acute poisoning occurs from mercury inhalation in poorly ventilated areas in burning off mercury from the amalgam. 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.

Another area where the mining companies have failed to address is the extent to which gold mining activities affect livelihoods in general and women in particular. In most cases, attempts to address the effects of corporate gold mining activities on livelihoods have mostly been skewed in favour of men in that men own the land. They also epitomize power and authority in most societies and most often monetary compensation for families that lose their land and other property to gold mining are paid to men on behalf of the extended family members. The problem is that women seem to be affected most when gold mining companies deprive the community of their livelihood. Aside the compensation for physical property which gold mining activities destroy, other social, natural, human and financial assets that mining activities destroy are ignored in compensation schemes. Most of these assets have much more relevance for women. This is because women are responsible for the collection of foodstuffs, many non-timber forest products as well as the fetching of water. In addition, there are many women in agriculture, which implies that their livelihoods depend on tilling the land.

On the contrary, regarding benefits, a recent study by Dinye and Erdiaw-Kwasie (2012), noted that small-scale gold mining enterprises within the Tarkwa-Nsuaem Municipality have contributed significantly to the reduction of poverty among the inhabitants. In terms of the provision of certain social amenities, the improvement of the surface condition of the road network leading to Teberebe and Bankyim, and other settlements within the municipality enhances accessibility to basic services in the municipality such as hospitals, schools, markets, police and banking services.

In 2007, the various small-scale mining firms within the municipality pooled resources together and conducted joint educational campaigns in collaboration with Plan Parenthood Association of Ghana (PPAG) to raise awareness on the fight against HIV/AIDS. The effort to promote public

awareness on HIV/AIDS by the small-scale mining enterprise is a good mechanism towards the eradication of the epidemic. As stated by Mikkelsen (2005), ignorance and deprivation are major elements of poverty and as such there is the need to fight against them in any geographical area.

2.4 Migrant Workers in ASM

According to Hilson (2002), the history of migration in the mining industry in Ghana dates back to over a century when many ethnic communities that existed mainly as tribes and/or kingdoms used gold not only as a medium of exchange to trade various goods and services but also an embodiment of the power, wealth, and influence of various tribal groups or states. He further noted that the way in which many such settlements in sub-Saharan Africa initially become established can best be understood if framed against the background of the gold rush that occurred over 150 years ago in the South-western United States (Hilson, 2010). He cited similar 'rush-type' events have taken place across sub-Saharan Africa in recent years. For example, 'the discovery of numerous gold deposits south of Lake Victoria in the mid-1970s attracted local people into mining as a fast way of getting rich' (Dreschler, 2001, p. 65).

The mass retrenchment of mainly semi- and non-skilled workforces that followed in various sectors of the economy in general and LSM entities in particular appears to have fuelled increased ASM activity in various parts of the country (Banchirigah, 2006; Hilson and Potter, 2005). Many migrants, both national and trans-national, streamed into the ASM sector, which became highly visible in terms of scale of activity, number of people involved, sites of operation and socio-economic importance to the miners, local communities and the country. At the same time, the environmental repercussions of ASM activities became more apparent not only in the public domain but also in many discourses on mining and its relation- ship to development.

In examining the Population Dynamics and Health Hazards of Small-scale Mining Activity in the Bolgatanga and Talensi-Nabdam Districts of the Upper East Region of Ghana, Agyemang (2010) reported that people attribute the increasing population growth in the study area to the recent small-scale mining activity in both districts. These migrants were reported to have recently come from other communities in the north, from southern Ghana and other neighbouring countries like Togo, Burkina Faso and Nigeria to engage directly or indirectly in the small-scale mining that disregard the fragility of the ecosystem (Agyemang, 2010).

Since 2003, the Birim North District has also experienced a mass migration of people who began working as galamsey in the district, particularly in Nyafoman and Noyem, where, according to local estimates, there are some 10,000 galamsey workers, the majority of whom migrated from various areas of Ghana, as well as from neighbouring countries.

Movement of artisanal miners from one location to another is not always as a result of rush for money but a necessity driven by poverty. The systems of operations that exist make it so. That is, the financiers of, and concession/ghetto holders, pull the miners and it is seen as source of employment rather than a rush. Also, familiarity with the work is in large part, the reason why so many of Akwatia's residents have moved to adjacent artisanal gold mining communities such as Kobriso in the Eastern region of Ghana, for jobs, and it is seen as a 'lateral move'.

Despite the numerous scholarly and policy studies undertaken over the years on the mining sector in the sub- region in general and Ghana in particular (e.g., Akabzaa, 2000; Aryee, 2001;

Aubynn, 2006; Gibb, 2006; Aryee et al., 2003; MacDonald, 2006; Yelapaala and Ali, 2005; Tschakert and Singha, 2007), certain aspects such as migration and community dynamics have not received much attention and, hence, continue to be poorly understood (Nyame et. al, 2009).

Children become workers in mining sites as they work alongside a parent or relative, and this represents the most common way through which children enter work in quarries and mining sites; 70 to 80 per cent of children begin by working with a parent, grandparent or sibling [23, 30] When there is no compelling circumstance with the situation (like attending school), the children become full-time or part-time workers. Some Children who relocate to mining camps may work and live with a relative.

While the literature often explains these two types of migration in terms of fostering, little attention has been paid to the way in which relocation to mining camps comes about. It is important to examine the extent to which children live with relatives and children's participation in such decisions.

Three categories of people are involved in the recruitment of boys in Benin; older migrants established in Nigeria since the 1970s, 'second generation' migrants who have grown up in Nigeria but maintain bonds with relatives. In Kono District, Sierra Leone, 30 per cent of the children aged 5-9 years did not live with their parents in 2006 and this proportion rose to 44 per cent for children aged 10-13 years and 66 per cent for children aged 14-17 years. However, nine out of ten children lived with relatives. From the Sierra Leone situation, it appears that once the children get into mining, they stay in, while new and younger ones join the sites.

It is evident that the major motivation for women to join galamsey is a lack of productive employment. Landlessness, undeveloped local markets, an inability to physically access wider markets and a lack of financial credit, push the poorer women inhabiting rural areas to enter low-skilled, less productive jobs in illegal small-scale mining, where they become further marginalised and impoverished. A policy for gender mainstreaming in ASM and especially the promotion of female participation at all levels in the sector is needed, which would tackle issues of education and training, health risks, lack of mobility of rural women and growing informality (N. Yakovleva / Resources Policy 32 (2007) 29–41).

Many studies thus explore the need to introduce alternative livelihood programmes to women and migrant miners at their current location but such programmes are not likely to be accepted by the miners. In finding a synergy to this, it is appropriate to establish where a particular group of migrant miners moved from and identify the sort of interventions needed to be introduced. However, the difficulty is that the migrant artisanal miners follow a 'boom pull' factor. When they get information about booming gold production they relocate ostensibly to benefit from such situations. This is common as many operating sites become abandoned and the miners' population in those areas dwindles. The issue then is "how are proposed interventions going to succeed while those the programmes are designed for continue to move out". Monitoring and evaluation will become difficult and measuring of impacts of interventions will be difficult.

One key impact on migrant miners, especially women is delayed schooling for their children. The very young ones are carried to operational sites where there are no care facilities. If even the children are already enrolled in a school, the migrating mining mother relocates with the children, causing a pause in children's education.

Migration is a central feature of the ASM sector. Whilst in certain locations, it is largely the indigenous population that is involved in ASM (e.g. long-established and mature mining areas), it is very common to have a mixture of indigenous and migrant workers at sites (Walsh, 2003). It is the very nature of ASM that induces migration to begin with – both internally and internationally (Heemskerk, 2000 and 2002). Whether a large influx of population takes place rapidly, seasonally or over a longer time frame largely depends on the type of mineral being mined and the nature of the deposit, the time at which an area is discovered, its location, and estimated value. Construction minerals are, however, an exception, as they are often mined on the outskirts of big towns and as such do not attract large influxes of people (Drechsler, 2001).

2.5 Opportunities and Benefits

Hilson (2001) argue strongly that ASM activities in Talensi-Nabdam contribute significantly to employing thousands of locals working more as temporary labourers, either as ‘loco boys’ earning a fixed wage for carrying sacks of ore and gravel, or as diggers who have ore-sharing arrangements in place with the respective concession holder. He further notes from records maintained by the Minerals Commission district office in Bolgatanga that the mines have attracted a host of southerners, who have added to the complexities of the sector’s labour dynamics: operations feature hundreds of people working an array of different skilled and semi-skilled jobs — as ‘chiselers’, drivers, machine repairmen, blastmen, drillers, shaft ‘timberers’ and drillers. Migratory southerners, with their considerable mining experience, mainly occupy skilled positions. This discourse feeds into the global employment gap that has renewed discussions on how jobs are defined and created. Artisanal mining has grown from 10 million in 1999 (ILO, 1999) to potentially upwards of 20-30 million (IIED, 2013). This increase provides a rich policy ground for promoting a good job agenda. So gaps far are that there is no policy focus on creating jobs in small-scale mining in the Ghana? Certainly the outcome of study should aim at producing that focus in Ghana. There has also not been any attempt to make available the necessary knowledge and technological resources available to increase gold productivity especially in ASM. Further, in the available literature there is no discussion on social protection and fair labour standards at the work environment of small-scale miners.

There is no denying the fact closely linked to the job agenda is artisanal mining's added value as part of rural livelihood diversification strategies - where it is one avenue of income generation. Small-scale mining has been acknowledged as providing a livelihood for approximately 13 million workers and their families worldwide, particularly in countries such as Bolivia, Brazil, Burkina Faso, China, Colombia, the Democratic Republic of the Congo, Ecuador, India, Indonesia, Madagascar, Tanzania, Thailand and including Ghana. Indeed, research (Hilson, 2001, 2010) is showing that artisanal mining is assisting rural households to build more dynamic and resilient livelihood strategies portfolios by, for instance, ‘dovetailing’ artisanal mining and farming economies. The gap remains at addressing the question of linkages - how is small-scale mining linked with other aspects of local economies in the country? Is there any attempt to promote integrated rural development strategy as a way of capturing the benefits of artisanal mining?

There is the imperative need to understand the type of artisanal small-scale mining activities taking place in the intended study communities. Artisanal small-scale mining has been categorized as: permanent ASM, seasonal ASM, poverty-driven and gold rush mining. Understanding the types is important in developing recommendations and interventions.

2.6 Impact of small-scale mining on Women, Children and Local communities not involved in mining value chain

There is a wide range of ways in which women not involved in mining are adversely affected by mining activities. For example, as women are traditionally tasked with household and care duties, any negative effects on natural resources, such as the contamination of water sources by hazardous chemicals used in mining, can affect women disproportionately more (Oxfam, 2014a). Such findings are well documented in other countries, but not in Ghana, with the exception of an increased prevalence of drug use and sex work by women in mining communities (Yakovleva, 2007).

A study by the Wassa Association of Communities Affected by Mining - WACAM (2006) on the effects of mining on gender found that that an overwhelming 80% of monetary compensation paid to households was received by men. Women the study found only received compensation only when the property they lost was inherited from their matrilineal family. Men are therefore the recipients of compensation for properties jointly owned by husbands and wives. The study therefore found mining companies as having failed to address an important element of gold mining activities having an effect on livelihoods in general and women in particular.

The WACAM (2006) study found women are affected most when gold mining companies deprive the communities of their livelihood. The study's findings further indicate that aside the compensation for physical property which gold mining activities destroy, other social, natural, human and financial assets that mining activities destroy are ignored in compensation schemes. The Study's findings conclusively point out the assets that are of more relevance for women are what are ignored.

Lei Sen et al. (2006) study on the role of ASM on China's economy, found ASM hazards to be many and varied. They included that: poor ground conditions leading to underground tunnel failure, methane or coal dust explosions from coal mines, flooding, machinery accidents, poor lighting and ventilation, explosive accidents, and electrocution. In addition, ASM has been associated with a host of negative social impacts, especially in the boomtowns that arise from big mineral finds in remote locations. These include challenges such as prostitution, substance abuse, and gambling. Women are often disproportionately affected by these factors as reported by Hinton that "some communities are completely marginalized and operate in a state of virtual lawlessness, with rampant drug and alcohol abuse, gambling, child prostitution and diseases, while other communities, although generally poverty stricken, maintain a greater level of organization and sense of community" (Hinton, 2003:4).

The expansion of small-scale mining and the increase in migrant labour to ASM areas has been associated with an increase in prostitution, often involving girls as young as 12 years old. This has inevitably led to increase teenage pregnancies, single parenting, and sexually transmitted diseases, particularly HIV/AIDS (CSPS, 2006, Hinton, 2003). Yet again, small-scale and even large-scale miners are often migrant workers who live without their families and within disrupted social contexts. This situation can encourage a high prevalence of HIV/AIDS and other communicable diseases in and around mining communities. Indeed, several mines in southern Africa report infection rates of more than 30% among their workforces, well above national averages. Work-related injuries and widespread increase in infectious diseases (for example, HIV/AIDS), alcoholism, and consequent gender issues exist as there is generally lack of health

care and education facilities for small-scale miners in the context of an unregulated environment do have effects on health.

There is also environmental and the resulting health risks for miners, their families, and surrounding communities, particularly from water pollution and the risk of losing property and income where mining rights are not regulated or protected (Akabzaa & Dramani, 2001). They also report of invasion of lands of indigenous by migrant miners which has the cascading risk of developing severe cultural conflicts between migrant miners and indigenous populations.

3.0 METHODOLOGY FOR PERFORMING THE ASSIGNMENT

The methodology for the field research was provided by with inputs and guidance received from the Technical Team, consisting of representatives from UNDP, UNICEF, ILO and IOM. Justifications at the technical meeting helped with the selection of the locations where issues pertaining to the respective representative organizations considered. Though there was a large spectrum of issues, much attention was paid to: a) **women, children and migrant workers in ASM value chains** and b) **the impact of small-scale mining on women and children in local communities (not involved in mining value chain)**. Issues that are found in the field but not related to the current scope were flagged for future consideration.

To respond appropriately to the assignment, the study employed both quantitative (structured questionnaires) and qualitative tools (diverse range of participatory tools, including focus groups discussions, meetings, transect walk with direct observations, and key informant interviews) in the data gathering processes. This approach was based on current and evolving methodologies for social assessment and scoping studies among other related fields. The quantitative aspects covered secondary data and bio-data of the respondents.

The field research was conducted using the following methods:

- Field transect walk and observation
- Focus group discussions
- Key informant interviews
- Stakeholder engagements
- Socio-economic household survey
- Selection of ASM sites

3.1 Field transect walk and observation

Transects walks offered an opportunity for direct observation, allowing the research team get a feel for the research site. A transect walk was aimed at mapping the key features of different land use zones in a community. The likely outcome of the transect walk was to produce a diagram or a map.

Observations were made of the different players at the mining site, miners, mineral buyers, vendors of food and other provisions, other service providers, proportions of men, women, and children etc.

Inspection of the operation, including the following:

- Location of mining site and its proximity to water sources, dwellings, crop field roads, etc.
- Type of digging and mining methods
- Processing methods
- Equipment used
- Disposal of waste
- On-site dwellings
- Observation of impacts on the immediate environment (water bodies, forests, crop fields, etc.)
- Gender relationships
- Presence of child labour

3.2 Community/ Site Profile

Profiles of sites/communities hosting ASM activities selected were prepared. This was undertaken using the results of the census and socio-economic surveys as well as focus group discussions and key informant interviews. This comprehensive community/site profiles involved the collection of the following information among others: origin of ASM operators, population at sites/locations using the group of persons forming a team with all the needed personnel and skills referred to as “gangs” for the assessment, gender disaggregation and roles, economic and commercial activities, size of sites operated on, particular mining activities undertaken, access to mining support services and the providers, location of common property resources including school, health, water and sanitation, road and transportation networks.

3.3 Focus group discussions

By means of interview guide, the Research Team conducted focus group discussions which were held with the following groups of people in ASM value chain:

- Women,
- Children, and
- Migrant workers.

For effective discussion and contributions by the focus group participants, group sizes of between 5 and 10 were adopted.

The following data collection tools were employed to collect relevant information from the focus group participants:

- *Daily activity clock*: To understand child labour and gender division of labour;
- *Seasonal calendar*: To understand how roles change cyclically throughout the year; and
- *Access, control, and ownership mapping*: To understand who usually uses or is free to work with the resource; who usually makes decisions regarding how and when the resource is used; and whom the resource belongs to.

3.4 Key Informant interviews

The Research Team also conducted interviews with other knowledgeable community members who were not participants of the focus group discussions but fall within the categories of the focus groups. The rationale for this was to solicit their independent views on issues discussed by the various groups; because such meetings tend to be influenced by opinions expressed earlier by some participants. Such key informants included the following:

- Traditional Authorities/Opinion Leaders
- The District Police Directorate
- Commission of Human Rights and Administrative Justice (CHRAJ)
- ASM operators – Concession holders/owners, Financiers, Gang Leaders, other categories of operators
- Land owners

3.5 Stakeholder engagement

In order to achieve the objective of social assessment, stakeholder analysis was made to determine:

1. Primary or direct stakeholders – those who, because of power, authority, responsibilities or claims over the resources, were central to the mining initiative. As the outcome of any action will affect them directly, their participation was critical. Some primary stakeholders included local community-level groups, private sector interests, and local and national government agencies. This category also included powerful individuals or groups who controlled policies, laws or funding resources, and who have the capacity to influence outcomes. Failure to involve primary stakeholders at the start could lead to subsequent difficulties in achieving conservation outcomes.

2. Secondary or indirect stakeholders – those with indirect interest in the outcome. They were consumers, donors, national government officials and private enterprises. Secondary stakeholders may be needed to be periodically involved, but need not be involved in all aspects of the initiative.

3. Opposition stakeholders – those who have the capacity to affect outcomes adversely through the resources and influence the command. It was crucial to engage them in open dialogue.

4. Marginalized stakeholders – such as women, indigenous peoples, and other impoverished or disenfranchised groups. They may be primary, secondary or opposition stakeholders, but they lack the recognition or capacity to participate in collaboration efforts on an equal basis. Particular effort must always be made to ensure their participation.

The following were identified as key stakeholders to be engaged in order to get their inputs:

- UNDP
- The Minerals Commission
- Environmental Protection Agency (EPA)
- Metropolitan, Municipal and District Assemblies (MMDAs)
- Traditional Authorities
- Water Resources Commission
- Ghana Chamber of Mines & Mining Companies
- ASM Operators – licensed and unlicensed
- MLNR (Task Force of ASM)

3.6 Household socio-economic survey

A structured questionnaire was administered to a sample of households in selected ASM communities. Due to time constraints it was not possible to interview the entire population. The respondent for this questionnaire were either head of households or any available adult (male or female) of the household who was knowledgeable about household matters.

The questionnaire covered issues relating to ASM including the following:

- Biographic information
- Role and responsibility of men, women, children and migrants
- Asset and resources
- Power and decision making
- Needs, priorities and perspectives
- Social and cultural context

The sample design for the survey conformed to standard survey processes as applied by the Ghana Statistical Service (GSS). The unit of analysis for this survey was an operational site or location. This in effect ensured that there were sufficient respondents' units available for meaningful analysis and inferences. Since study was to close on fewer priorities for deep survey, large numbers of samples were not necessary.

3.7 Consultants/Enumerator Training

SRC used seasoned and experienced consultants for the field survey. Cultural values of the study domain were respected.

3.8 Field Survey/ Administration of survey Instrument

This was undertaken by 2 teams of 3 Consultants each (2 Team Leaders and 4 Assistants). Activities included recording of ASM operational locations/sites with GPS equipment, drawing up samples from the sites, administering survey instruments and quality assurance by supervising Team leaders.

3.9 Locations/Target communities selected and rationale.

The sample design for the survey conformed to standard survey processes as applied by the Ghana Statistical Service (GSS) considering the *Sampling Frame and Sampling Units*. The sample universe comprised of the population of ASM operations in Ghana as the scope of services indicated a nationwide survey of ASM activities. The unit of analysis for this survey were the two operational sites or locations selected (see Table 3.1). This in effect ensured that there were sufficient respondents' units available for meaningful analysis and inferences.

Table 3.1: Indicative ASM communities

Region	ASM District	ASM site/community
Northern Zone		
Upper East	Talensi	Gbani/Yale
Southern Zone		
Western	Wassa Amenfi East	Wassa Japa

The consultant together with the project technical team selected Upper East and Western Regions. The specific locations are Gbane/Yale in the Talensi District and Wassa Akropong in the Amenfi East District of the Western region. These locations respectively fall within the Bolgatanga and Asankragwa Mining Districts under Minerals Commission. For Gbane/Yale area, the location is characterised by smaller makeshift settlements mainly for mining. The locations

include World Bank, which is part of Obuasi, Kejetia, Tarkwa, and Accra Town. The rationale is that these smaller locations find various forms of artisanal small gold mining operations. There are registered small-scale entities, *galamsey* operations either in organised form with a number of groups or individuals. Also present are adult men and women and some children. In the Wassa Akropong area the operating sites have common characteristics as that of Gbane/Yale location. The choice of Wassa Akropong was weighted with the Consultants knowledge and further discussions with the District Officer of the Minerals Commission based in Asankragwa. The location of activities at Japa is however undertaken on daily basis by miners from the following communities: Akropong, Adesu, Dompase, Adiembra, Japa, Dadieso, Abreshia, Nananko, Ntwetwena and Nkonya.

3.10 Research Ethics and Protocols

There are important ethical issues, moral implications, and consequences that can arise during the assessment. A number of ethical guidelines exist for various project phases (design, implementation, data analysis, and results interpretation).

3.11 Adhering to Child Protection Principles

When conducting research with children and young people, the ethical issues that need to be addressed are similar to those outlined in most social and medical research guidelines. However, the way in which these ethical issues are tackled in practice can be very different (Greig et al, 2007; Tisdall et al, 2009).

SRC Consulting adopted the following measure to ensure that child protection principles were adhered to:

- Ensure participation in research is voluntary;
- Obtain fully informed consent for their participation. Where the issue of assent may be particularly difficult, we would recommend the use of active parental consent. If the project involves older children/young people the use of passive consent may be deemed appropriate. This means that our researchers will obtain consent from the relevant gatekeepers relevant to the study and involved in the child's life. Once consent has been sought and gained from parents and other relevant gatekeepers, the researchers will then obtain assent from the child/young person. Assent refers to a child/young person providing a signal that they are willing to participate in the project;
- Explicitly asking for interviewees consent to participate and clearly inform participants that they are completely free to participate or not.
- Not exclude any group from consideration; and
- Maintain participants' anonymity and confidentiality. Participants will be made to understand that any information they provide will be held in the strictest confidence.
- Reminding participants who are involved in multiple interviews or focus groups that they are free to withdraw from participating at any time. They may be asked to restate their consent periodically.
- The researchers will be made to understand that their role in responding to child abuse and forced labour to report or discuss all concerns as soon as possible with the appropriate authorities

3.12 Measures to maximise participation of women, children, migrant workers and other respondents

- Used purposive sampling and selection of willing ASM workers for interviewing
- The research team took the necessary steps to seek authorization from local authorities in order to gain access to research site.
- Interviews were conducted by knowledgeable professionals in local languages to enhance the response and accuracy rates.
- As such Field Assistants were recruited based on their level of understanding of the language spoken in the selected study area.
- We ensured that FGDs involving women was facilitated by female researchers, and male FGDs by male researchers.
- The consultants respected the cultural norms of participants
- We also ensured that sex-disaggregated data was collected and reported on.

4.0 FINDINGS OF THE SURVEY

This section presents the findings from the fieldwork undertaken in the selected project areas/communities from Talensi and Wassa Amenfi East districts of Upper East and Western regions respectively in February 2016. It is presented on category basis, that is; children in mining, women in mining and migrants in mining. (All references regarding this section are drawn from this field study and its subsequent data generated and analysed).

4.1 Children

4.1.1 Children Wassa Japa Area

4.1.2 Socio-Economic Characteristics

Age and status of children in gold mining

In total, the study in Wassa Japa involved 60 children made up of 39 (65%) males and 21 (35%) female. Their ages ranged between 11 and 17. Those between 11 and 14 were 21 (35%) whilst the remaining 65% of them were between 15 and 17. From the current survey it is seen that the range that has a lower percentage is those between the ages of 11-14. The ILO (2013) reported a trend in a different direction when it established that 12 to 14 year-olds formed the bulk of those in child labour from that bracket. This is also in line with the (GSS, 2014: 40), that the proportion of children engaged in economic activity was higher (43.7%) for the older age group (15-17 years) than for children 5-7 years (10.0%).

Age children started gold mining

From the survey, the youngest age at which some of the children entered mining was 6 years. It was found that those children that entered mining from age 6 to 10 formed 25%, 68.3% were from the ages of 11 to 15 and those who started mining from age 16 or more covered 6.7% of respondents.

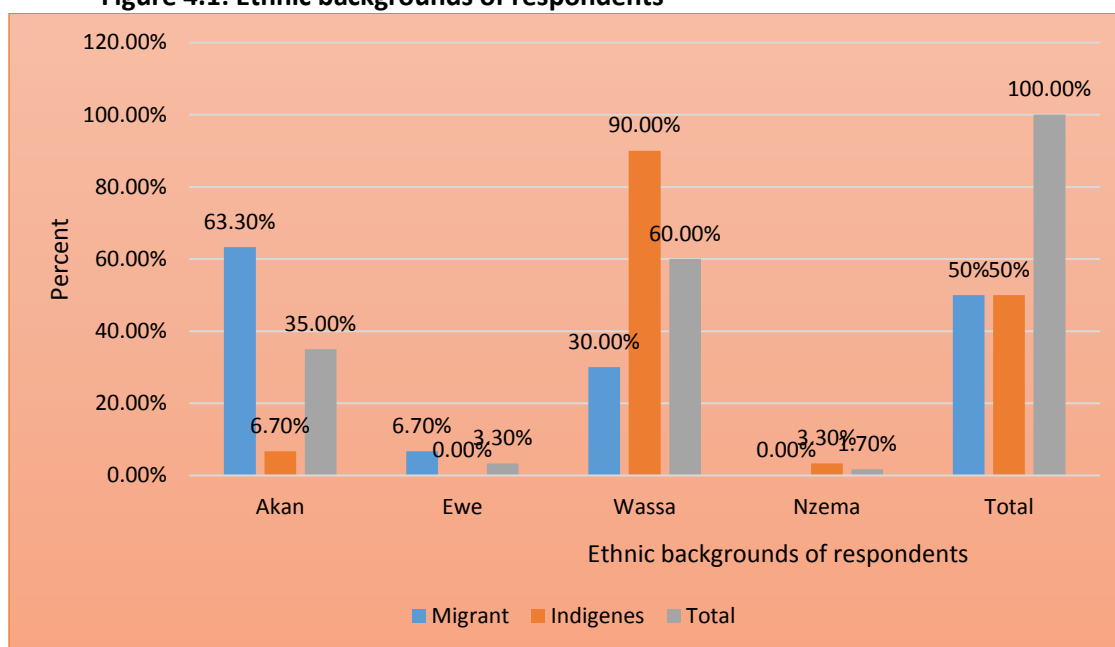


Plate 1: These children are not mining. They accompanied their mothers to site. They watch their mothers do it and they are in the learning process.

Migrant children in gold mining

There were equal number of migrants and indigenes (50% each). On the basis of ethnicity, it was found that 60% of the respondents are Wassa, indicating that 10% of the Wassa are migrants from other nearby communities. The rest are Akan (35%), Ewe 3.3% and Nzema 1.7%. It was found that the migrant child miners did not move from their hometowns to the mining area alone but follow their caretakers. In-depth analyses showed most of the miners are from the Western Region and the immediate bordering regions of Central and Ashanti. Those child miners from far distance forms 3.3% and happen to have come to the area from the Volta region. It was found that 5% of them were brought in by the people they are staying with and work as miners. The remaining 95% are residing in the area from childhood either as local inhabitants or their parents/caretakers are permanently staying in the community (either as indigenes or settlers). It is difficult to tell that they were trafficked, because they work to support themselves and not the caretakers.

Figure 4.1: Ethnic backgrounds of respondents



Level of education and years in gold mining

It was found from the study that 24.9% of the children are not in school as they engage in mining. For the duration that the children have been into mining, 1.5% had never been to school, 16.7% stopped schooling at the primary level while 6.7% stopped schooling at the JHS level. Those combining mining and schooling formed 75.1% and thus constituted majority of the child respondents. Of the number, 31.7% are in primary while 36.7% are in JHS. Another 6.7% have completed JHS and are in mining. For those children in school and mining, 5% were found to be staying on their own, 6.7% with their father, 20% with their mother, 10% with their relatives. The remaining 10% also lived with their colleagues who are also children.

Social background Characteristics of children

The survey showed that some children lived with their parents while others do not. In totality 43.3% lived with neither the mother or father or both. Reasons assigned to why they lived with people other than their parents were that they came to the mining location with their caretaker (5%). Of the 22 respondents who stay with individuals other than the parents, 3 are staying with their caretakers who brought them to the location, 4 have their parents divorced, 7 each have their parents dead and live elsewhere, one had parents separated and another came there to work with a friend. In all, 12 and 5 of the respondents had their fathers and mothers dead respectively. Seven of the children in mining have both parents deceased. The children who stay alone but are in school and mine as well attributed their plight to the fact that their parents are no longer together as partners, forcing them to cater for themselves through mining which is considered the easiest way of raising income.

One other revelation was that 26.7% of the children were that of single parents. It came up that 6.7% lived with their father while 20% were in the hands of the mothers. Of the children who have both parents alive, 31.7% are still married while 23.3% of the parents have divorced. The reasons assigned by those whose parents are no longer married included divorce, separation, partner deceased, polygamy, forcing the mothers involved to leave the location.

Parents' educational background

As regards the educational background of parents, 5% could not tell whether their fathers ever attended school, 65% said their fathers attended school while 30% indicated they did not. The levels achieved were; MSLC (Middle School Leaving Certificate) 8.3%, JHS 43.3%, primary 8.3% and SHS 1.7%. (It can be said that the fathers of the children have relatively low level of education)

On the side of mothers, 45% has some level of education at (35% at JHS and 10% at primary), 50% had never been to school while the remaining children could not tell the levels their mothers attained. (The remaining 5% of the children who could not tell whether their parents ever attended school or not or the level they reached happened to be those whose parents died at their tender ages. It was too sensitive or emotional to find out more on those few cases).

Siblings in mining

The number of siblings of the respondents ranged from minimum of zero to maximum of 20 (in one case). Those with up to 4 siblings constituted 43.3% while those with 5 to 9 formed 39.1%. The remaining 10.1% had 10 or more siblings. Of the children in mining, only 10% did not have a sibling also working in mining. It was found that 40% of them had a sister or brother involved in mining, 20% had 2 siblings involved, 6.7% had 3 siblings, 3.3% did mining with 4 other siblings involved.

Parents' occupation

Interestingly, 25% of the children indicated that their fathers were not employed in any activity. Major income earning activities of the fathers were: farmers 35%, galamsey operators 20%, cocoa merchants 5%, driver 5%, trader 5%, and 1.7% each work as barber, machine operator and palm wine tapper. On the side of their mothers, 23.4% said they had no work, 31.7% are farmers, 21.7% into galamsey mining, 15% are traders and 8.3% are food vendors.

Reasons for engaging in mining

Forty per cent of the respondents engaged in mining in order to support themselves while 35% did so to support their families as a means of raising money. Other influential determinants were quests to get money (16.7%) and influence by friends (5%). Inability to perform in school forced one of the respondents to engage fully in mining while another felt he was too old to start school and thus joined mining.

As to who encouraged the children into mining, 50% entered on their own. The most influential forces came from friends and mothers with 21.7% and 15.0% respectively. Others were influenced by their father or uncle (1.7% each). The 10% remaining respondents were influenced by their caretakers who either brought them to the location (5%) or came to the area themselves but are now staying with other people who take care of them (5%). It was difficult however, to establish that the children were trafficked. This is due to the fact that prior to relocating to the area, they were staying with and been taken care of by the caretakers.

The children were encouraged into mining by certain factors. It came up that 28.3% had to engage in mining to cater for themselves both at home and school while another 20% did so to raise money for their educational needs not provided from their caretakers or parents. It also revealed that 22.4% did so as a result of influence by other people including those who send them to the mining communities. 10% said they were encouraged by their mothers to do so with them. Some of the children purposely worked to support their parents fend for the rest of their family. One person still indicated that he went into mining to raise money as a common means to make money in the area.

From the above revelations quest for money to overcome certain problems and fix their needs ruled. Some even entered into mining to support family and themselves. Some of the children work to raise money to pay for the educational needs of their siblings while other raise money to cater for the medical expenses of their ailing parents. The crust is that of poverty at home. The ILO (2005:17) in a study on eliminating child labour in mining and quarrying found that children are often sent to work because their contribution is perceived to be essential for the family survival. This finding is supported by this study that in some instances, the children in mining raise capital for their mothers especially to start trading.

Types of Mining, Tasks and Conditions of Work***Tasks performed by children***

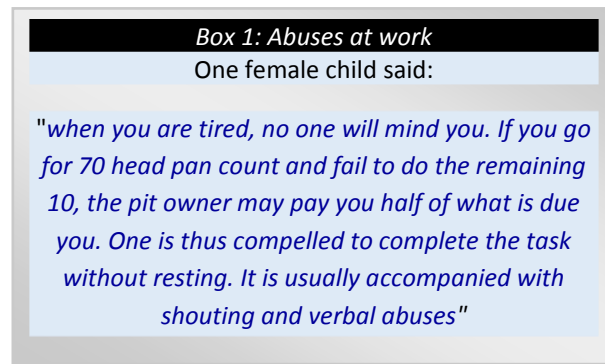
On the average more of the child miners work from the afternoon to the evening but in relative time intervals, 40% go to work in the morning sessions. Those who go to site to work in the afternoon constituted 21.6%, 5% worked in the evening while 16.7% said they worked all day. These were those who mostly worked during the weekends. Another 16.7% who go to site do not work for specific number of hours. These children mostly worked for themselves and would leave the site as and when they wish to leave.

Working hours of the day

It was established that the children in mining worked between one to 10 hours at site on days they work. Those who work for between 1-3 hours formed 28.3%, those working for 4-6 hours were 36.7%, and those who worked for 7-9 hours formed 31.7%. Only 3.3% worked for 10 hours and more.

It came up that majority of the children (68.4%) worked for themselves. Again, 15% were employees to other operators in the system while 8.3% worked for their own parents/relatives. The remaining 8.3% worked for other people including their care takers and friends who host them in the community they stay and work

To be able to raise enough money, they have to endure all day long at the site to attract the stipulated wage for the day. Those who cannot complete the day-long task stand the risk of receiving fewer wages. Normally, children who work for other operators as carriers for example, are given a fixed task to carry 80 head pans as one task to get GHC60.00. Failure to complete it will attract less than the amount. The carrier may have to use the whole day to complete the task. At the focus group discussions, many of the members expressed their dissatisfaction about how they are treated. At the Wassa Japa site meeting, one female carrier worker had this to say (see Box 1).



Generally speaking, 63.3% indicated that they have good relationship with their fellow workers or employees. On a positive note 26.7% said they have very good relationship with people they work with, 6.7% said it was acceptable while 3.3% said there was room for improvement.

As a result of the nature and duration of work, 68.3% said they often get too tired to do any work after mining while another 21.7% said they become too tired to read or study. One person indicated that he engaged in other jobs while the remaining 8.3% did not respond.

It was clear at the sites and was supported by the survey that 83.3% use no Personal Protective Equipment (PPE). It was only 8.3% that indicated the use of boots, 1.7% life jacket and 6.7% indicated others forms of protection.

Tools used are common as they perform same or related activities. Common set-ups and tools used include carrying basin/head pan, blankets/towels, sluicing board, shank, shovel, stop robber, pick-axe among others.

Protective Wear

The children in gold mining in the Wassa Japa area tend to use no protective clothing. The boys wore only shorts without shirts nor footwear when working. The girls however wore dresses or shorts and T-shirts but also without footwear. They explained that the dig-and-wash activities make them in constant touch with water. Wearing boots impede their movements as it gets soaked. Also none was found to be using nose masks. They explained that it takes no time to get dirty.

Mode of payment

Most of the respondents, as said by 83.3% received cash payments, 6.7% received payments in both cash and kind, and 3.3% received payment only in kind. Five per cent did not respond to the issue. For those who receive payment in kind, 6.7% received shelter/accommodation in return, 3.3% received educational support, and 1.7% received clothing.

Fifty per cent received payments on daily basis. These were mostly miners who work on their own as small group of peers. They sell their produce at the end of the day. Also, 41.7% received payments on weekly basis while 3.3% were paid on monthly basis. 5% of the child miners did not respond.

Payments received

The wages earned are based on routine activity assigned at the sites once one is committed to work there. The level of wages the child miners receive is linked to number of hours worked or tasks assigned and completed. On monthly basis 28.4% earned between GHC 20-200, 50% of the miners earned between GHC 201-400, 11.5% earned between GHC 401-600, 3.4% earned between GHC 601-1000 and 5% received GHC 1000 or more while 1.7% worked with the mother and received no pay. Those children who earned highest income are mostly those who are no longer in school and work on full time basis as miners.

The respondents showed that the amount earned was dependent on the season as indicated by 76.7% and attributed it to availability of water or not the while 21.7% said no. The payments were mostly received by the miners themselves (70%), mother (1.7%), foreman (1.7%) and others including their caretakers (26.7%). The children whose monies/payments are received by their caretakers receive care in terms of food, clothing and shelter in return. For those who combine school and mining, their fees and daily feeding are also paid by the recipients of their wages. The respondents used their monies in several ways. Popular among them included supporting their families especially their mothers, education of themselves and siblings, clothing, and personal upkeep among others.

Satisfaction in mining

Even though a number of children are into mining, 65% said they are not satisfied with the job as it affects their education and also it is a difficult field to work at their age. On the other hand, 26.7% said they are satisfied while 1.7% was very satisfied. Five per cent gave no response while 1.7% could not tell whether satisfied or not.

Risks

On whether they see mining work as risk, 70% said yes, 16.7% said no while the remaining 13.3% gave no response. The main reasons assigned by those who considered their work as difficult were that it is prone to accident (33.3%), contract upper respiratory infection (URI) (11.7%) and skin diseases (6.7%). Again 61.7% confirmed experiencing injury while working, 18.3% had not and the remaining 20% did not say whether they ever sustained injury or not. Among those who had injuries at work, 70% sustained bruises/cuts/wounds while 5% indicated it resulted in loss of body parts, 6.7% indicated that pits nearly collapsed on them. Sixty per cent claimed that they experienced illness while working at mining sites while 10% said they had not. Diseases experienced included skin rashes and sores, body aches and pains, eye problems and chest/respiratory infections.

The ILO (2005: 9) reports that “mining is one of the three most dangerous occupations to work in along with agriculture and construction.” The study added that child labourers in mining are at risk of being killed, severely injured, or stand to suffer serious work-related health problems. The study asserts that many of the injuries and health problems may result in permanent disability and that health problems may not become apparent until the child worker is an adult. Among the child miners, some had their fingers chopped off in the process, affirming the ILO 2005 report. The peak period for mining is during the rainy season and that is when the risk also increases. They do fall in the process of carrying load from pits. They slip and fall with their load and get injuries. At the same period, pits cave in. Some recounted incidents where adult workers died when topmost part of pits caved in on them.

Use of mercury

The use of mercury in processing was indicated by 56.7% while 41.7% did not. On risks associated with mercury in amalgamation of gold, only 10% indicated they are aware. The rest have no idea about the dangers.

Effects of dynamite blasting on Children

The use of explosives in mining was least done by the child miners in Wassa sites indicated by only 1.7% of the respondents. The use of dynamites for blasting rocks was applied by elderly operators. At such sites, the children who work there mainly carry the ore to the surface using head pans. They however do not know the type of explosive used as the elderly operators applied it. None of the respondents used equipment against inhalation of dust.

Combining mining and school

The survey showed that 61.7% of children engaged in mining in Japa area combine it with school. Again, 38.3% said the mining activity affect their regular attendance at school as they often abandon school and go for mining. (This situation was mostly with those that are paid on weekly basis. They have to complete a set of task within the week before they receive full payment for the period). It usually affected the number of times they go to school in a week. It came up that 6.7% of them attended school once in a week, 10% attended school twice in a week while 18.3% attended three times. Another 13.3% attended 4 four times. It was established that 18.3% also made all the 5 days to school. Those in this category normally did mining during the weekends or on holidays and during vacation. The end result was that 43.3% said the inability to go to school throughout the week affected their studies while 21.7% said it had no effect on their academic work. While some were sometimes late for school, others felt too tired that they do not go to school a day after mining.

While 8.3% indicated that their performance at school was excellent, 11.7% said it is very good, and 26.7% indicated good. Ten per cent considered their performance in school as average and 6.7% said they were poor in school.

Similarly, ILO (2005:17) in a study on eliminating child labour in mining and quarrying explain that children from small-scale mining and quarrying districts often suffer from high school dropouts because of the work children undertake. The study found that families face dilemmas between their children's earning versus learning. The child miners also indicated their awareness of the dangers and effect of mining on school attendance and performance. It was entirely difficult for some of them to stop the practice.

Box 2: Abuses at work

One male child said:

" I stay with my mother and siblings. My father has separated with my mother. My mother has been sick for the past two years and I do mining to cater for her medicals and my own schooling and that of my siblings. If I stop, who will take care of us? I cannot stop."

Abuse at mining sites

Abuses at mining sites were indicated by 35% of the children in mining. Abuses suffered include physical (6.7%), sexual (5%) and psychological/emotional (18.3%). The form of abuse suffered by the remaining 5% was to loss of ore won at site. Sometimes the child miners are considered to have trespassed into some areas. The claimant to such site takes the ore from the child miners. The abuses were inflicted by the co-workers especially the elderly as indicated by 33.3% of the respondents. Only 6.7% indicated that they report abuses to elderly persons also within the site. Indications were that those who report abuses to other people in the community risk not being accepted at the site to work again.

Sexually active

The survey chanced upon 8.3% minors who admitted being sexually active. Five per cent further said they have a single partner while 1.7% said they have two partners. It again came out that 3.3% have ever been forced to have sexual relation with someone else. Of these, 1.7% reported the incident but no action was taken. As a result of that sexual relationship the individual involved ended with pregnancy and sustained it. According to the females miners, once an incident of sexual advances or abuse are reported the individual(s) concerned are not likely to be employed at any site again.

4.2 Children -Talensi Area**Age and status of children in gold mining**

Children in Talensi participated in economic activities such as artisanal gold mining. The ages of children in gold mining ranged from 9 to 17 years. Of the 60 children sampled 5.0% of them were within the 5-9 age groups, while 28.3% fell within the 10-14 years age group. The largest proportion of the children was aged 15 to 17 years. The mean age of children in mining was 14.8 years. In terms of sex distribution, a little more than half (51.7%) of the children were males while 48.3% were females. A quarter of these children were migrants while three-quarters of them were indigenes.

Age children started gold mining

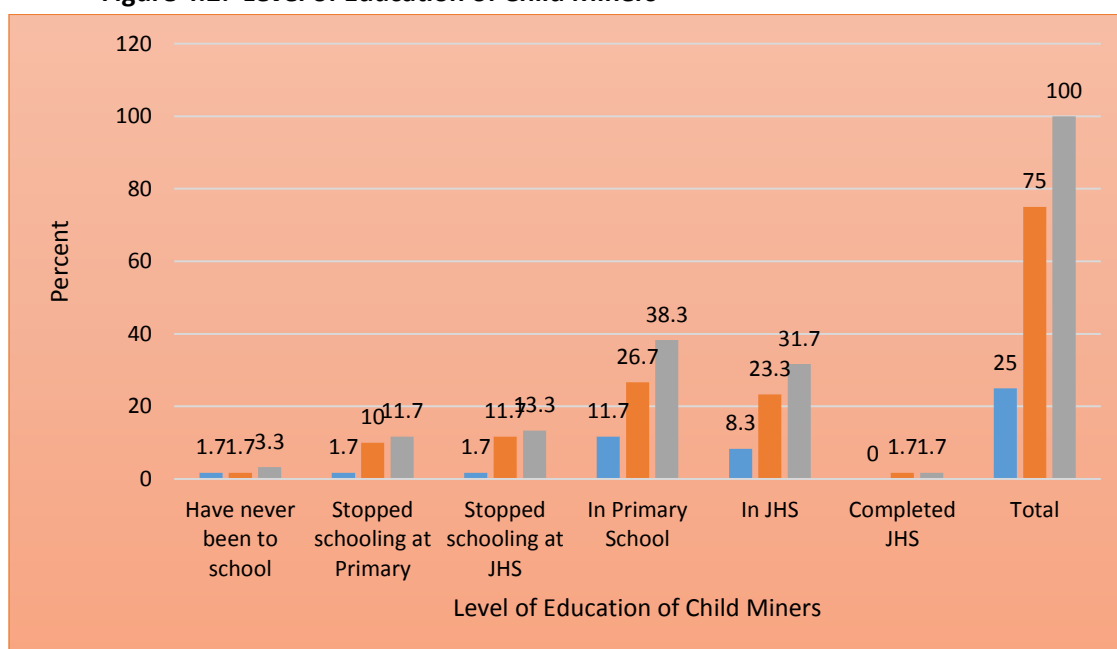
The largest proportion of children (33.3%) indicated that they started working at the age of 14 years while 16.7% started working at age 10. Only 1.7 and 3.3% of children started working at age 8 and 9 respectively. A little over a tenth (11.7%) of the children aged 15 years reported working at gold mines whereas those aged 12 (10.0%) and 13 (10.0%) constituted a tenth each. Children aged 16 years who started working at the gold mining sites constituted 5% while 17 year olds only constituted 1.7%.

Level of Education of Migrant children in gold mining

Findings from the survey data indicates that about 75% of children are natives of the communities in which small scale mining is undertaken while 25.0% are migrant children and/or individual child miners from other districts and regions. Migrant children who were in school constituted 20.0% while that of natives accounted for half (50.0%). Of the 3.3 percent who had never been to school, migrant children constituted 1.7%. With regard to children who stopped schooling at primary level, migrant children accounted for 1.7% out of the 11.7%. Additionally, of the 13.3 percent who stopped schooling at JHS level, about a tenth of them were indigenes while migrants constituted 1.7%.

During focus group discussion with children, they revealed that small-scale gold mining attract people from poor households either within the same district or either other districts and or regions to work in the mining communities. Comparatively, there are fewer migrant children compared to children who natives working at the mining sites

Figure 4.2: Level of Education of Child Miners



Level of education and years in gold mining

Altogether 28.3% of children in mining dropped out of school. Several reasons are given for the drop in school. About 13.3% of them cited lack of enough money to pay school fees, while 5.0% felt they were too old to go to school. Another 3.3% indicated they worked full time in mining with the same percentage (3.3%) citing studies being too difficult. Others (1.7%) were shy to return to school while some (1.7%) felt school interfered with their work in mining

Social background Characteristics of children

Previous research (CSPS, 2007) cites the participation of children particularly girls, in small-scale gold mining but little is known about the social background characteristics of these children. The findings of this study, indicate that four out of ten children (43.3%) in the artisanal small-scale gold mining lost their fathers while more than half (56.7%) had their fathers alive. Many more children (75.0%) had their mothers alive compared to a quarter (25.0%) of them who lost their mothers to death. Child miners who are orphans (lost both parents) constituted 15% of the

respondents in this category. while 53.3% are not. About 38.0% of children reported that their parents are divorced while half (50.0%) of them indicated that their parents were separated. Moreover, another third of children (30.0%) of children were single parents.

Children in gold mining and parental situations

A significant proportion (70.0%) of children in mining lived with their parents while 30.0 did not. Among those who did not live with their parents, the majority (13.3%) lived relatives. About 11.7% of them lived alone. Another 3.3 lived with friends while 1.7 lived with their ghetto¹master or site owner.

Parents' educational background

The results further indicate that 60.0% of children in mining, their father's never attended school while 40.0% did. The situation is worse for mothers where only 16.7% of children's mothers ever attended school. The highest level of education for both fathers and mothers of children engaged in mining was primary. On the average children in mining had 4.4 siblings with 1.8 of them working in mining as well.

Siblings in mining

The number of siblings respondents had working in the mining area ranged from zero to five. Respondents who did not have siblings working in the mining area constituted about 31.7% while those of them with at least a sibling each were 10.0%. Those who had siblings numbering 2 constituted about 28.3 % whereas those with three each accounted for 13.3%. In addition, respondents with up to 4 and 5 siblings constituted 10.0% and 6.7% respectively. The remaining 10.1% had 10 or more siblings.

Parents' occupation

The majority of fathers of children in mining were farmers (35.0%), followed by miners (31.7%). In the case of mothers, the majority of them were miners (43.3%) followed by petty trading (23.4%) and housewives (15.0%).

Reasons for engaging in mining

Children mining in Talensi cited a number of reasons accounting for their presence in small-scale gold mining. The highest proportion of them (30.0%) stated the need to earn money to support themselves because of poverty while 26.7% of children mentioned the need for them to work in order to support their mothers cater for them. Another major reason given was for them to get money to buy their school items (18.3%). Other reasons offered included the pressure from my colleagues also in mining (6.7%), I have lost my father (5.0%), I migrated with parents here (5.0%) and my parent's inability to pay school fees (5.0%).

The findings further reveal that about 50.0% of children said they were pushed into mining small-scale gold mining by family circumstances, while another 26.7% found it a convenient source of earning income. Another 23.3% of children mentioned the lack of opportunities in the area as reason for their presence in mining.

Small scale gold mining is the alternative source of livelihood for many children whose families cannot provide them a three square meal. Children go into small-scale mining in order to supple

¹Ghetto for the purpose of this study refers to a mining pit site that is owned by a miner and who employs a number of people to work in his pit.

their feeding from their families. Besides, to be able to procure their basic needs such as sandals, underwear, singlet, regular feeding, they resort to ASM.

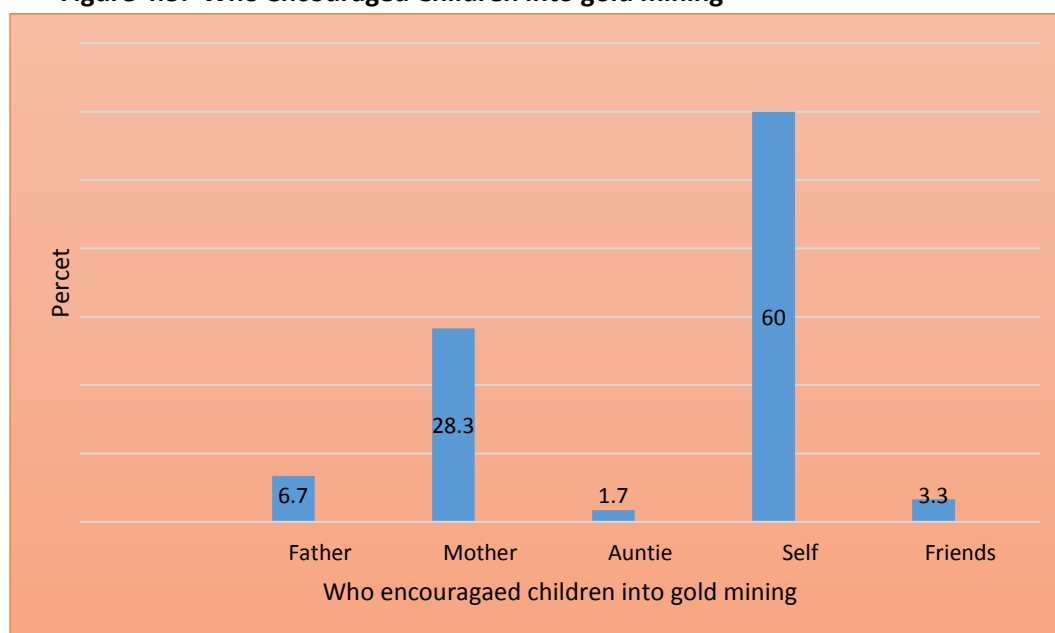
Further, the findings indicate quite clearly that a significant majority (60.0%) of children in Talensi started gold mining on their own. Nearly a third (28.3%) cited their mothers as having encouraged them to go into gold mining while less than a tenth (6.7%) of them mentioned their fathers. Friends constituted only 3.3% while aunties accounted for 1.7% of.

During the focus group session, a child said: Every one of us here goes to mine after school. We make money to support our parents particularly our mothers. Before I use to carry 'load' but during vacations, I become a *loccoboy*. Now, I can chisel and even drill. When I go down to work overnight, owner will give me some of the stones to go and grind and whatever I make, it is my money.

Another child shared that "Me I don't go down (referring to deep pit mining). My mother does not allow me to go and work for ghetto owners. I do *shanking* with my mother and sometimes with my colleagues."

Interactions with some key informants (Ghetto owners) revealed the reason(s) behind the predominance of male children in gold mining. The Chairman of Nongtaaba Mining Enterprise explained that "we lack lifts to bring the load from the deep ground pits to the surface; hence, the work load is manpower. We employ the male children to pull the load from the ghetto mines to the surface. He further cited that male children are strong and bold to carry out hard tasks in *ghetto* mines. Their bodies are small to go in and gather the blasted stones into sacks for the 'puller' to pool it to the surface.' Also the cost of paying children to go is cheaper if an adult has to do that work. The implication is that boys are more likely to be at risk of facing occupational.

Figure 4.3: Who encouraged Children into gold mining



Types of Mining, Tasks and Conditions of Work

The results show that there are basically three types of artisanal small-scale gold mining activities going on. They include underground or *ghetto pit* mining, surface mining, and alluvial mining. The majority (58.3%) of the children worked in surface mining, while a little over a quarter (26.7%) mined underground. Alluvial mining accounted for only (10.0%).

The findings further show that underground mining activity was exclusively a male dominant activity while alluvial mining was almost exclusively a female-based activity. Underground pit mining locally referred to as 'ghetto pit' mining involves deep excavation of dry pockets of land with gold deposits. In the dry excavation, pits are dug so deep until they strike ore. Adults mainly dig the pits. Pit owners are locally referred to as 'ghetto owners'. Children working with ghetto owners are called *locco* boys. As the study found ghetto mining to exclusively engage male children, the reason was that it required a lot of physical energy. Some of the activities carried out by *locco* boys include digging, chiselling, gathering of blasted rocks into sacks, hoeing, pulling load to the top of the "ghetto" and wheeling. The *locco* boys transport stones and sand in basins, donkey carts to crushing and washing sites. Ghetto mining is mostly undertaken in the dry season. During raining season, the ghettos are prone to accidents and they are sometimes filled with water.

Surface mining, involves basically digging dry or wetlands that has deposits of gold with pick axes and hoes. Now people use a machine that detects gold or minerals. Surface mining also involves both dry and wet land excavation. With surface mining, about 3 to 5 metres feet is dug for the gold ore. It is essentially seasonal, and depends to a large extent whether it is a raining or dry season. A lot of activity takes place during the raining season by which time water is readily and easily available for washing of gold ore as well digging most especially when the ground appears soft. Indeed, a good number of children canvassed, engage in surface mining on a daily basis mostly after school and during weekends. Children who do not go to school work in surface mining almost all day. This type of mining exposes the individual to work directly under the scorching sun. Surface mining is not as enervating as the ghetto mining which requires a lot of energy and strength. Alluvial gold mining, involves gold nugget and sediment extraction from rivers, streams with potential for gold deposits. Female children and adult women were mostly involved in this type of mining. Panning or locally referred to as '*shanking*' is the main form of gold extraction and does not require the use of mercury. This type of mining requires miners standing or crouching in river the beds and shallow water in a position that appears harmful to their posture and exposes them to sun and water borne ailments.

Tasks performed by Children

At all the mining sites, it was found that children in artisanal small-scale gold mining performed different tasks depending on the type of mining activities engaged in. In *ghetto* mining; children carried out ore extraction using pick axe, chisel and *mooya* (a drill), hauled ore on their backs, wheeled mud from the pits, controlled pumping machines that draw water from the pits, carted sand and stones to crushing and washing sites. Children sometimes participate in the amalgamation of gold using mercury and burnt the gold in coal pots and or gas stoves. In surface mining, children basically undertook digging for sediments, carried and transported mud and stones on their heads to washing and sieving sites, whereas other times, they carried the sand and stones on 'motto kings. With Alluvial mining, children carried out the following; panning, fetching of water and sand mixing, and processing

Interviews with children found that besides the mainstream activities that children were engaged in gold mining, other tasks and activities were equally carried out by children in the mining communities. The sale of food, 'pure water', iced kenkey, tea as well as taking care of younger siblings were predominant activities undertaken by female children in the mining communities. The CSPS (2007) and ILO (2007) findings, supports this study that girls carried 'pure water', for sale to adult workers in mining sites.

Protective Wear

The study enquired from children if they used protective wear in the process of mining gold and if any, what type of protective wear they used. The responses from the children showed that an overwhelming majority (76.7%) of them in artisanal small-scale gold mining in Talensi did not use any protective wear while mining gold especially surface and alluvial mining. Children explained that it was expensive to acquire protective wear. However, 11.7 used gloves, nose mask (6.7%) and boots (3.3%) when engaged in ghetto mining

After mining

About 43.3% intimated that after mining they often feel too tired to read books, 26.7% said, they often feel tired to do any work while 6.7% mentioned feeling too tired to play games. Others experienced (3.3%) body pains.

Working hours of the day

The hours of work is reflective in the concept of child labour as stipulated in the Children's Act (560). The Children's Act makes it clear that; children less than 13 years who work, children of all ages who work at night between the hours of 8.00 pm and 6 .00 am. It is exploitative when children work for long hours, as this not only endangers their health but also affects the school performance of children in school. The majority (55.0%) of children in mining revealed that they worked for themselves while another 38.3% sated that they worked for their parents. About 3.3% indicated that they worked for ghetto owners while 1.7 worked for relatives.

On average children reported working for five hours. But children between 15 and 17 years sometimes spent more than 8 hours working at night. Children, who worked at night, mostly worked in "ghetto mines". Girls also worked at night especially those of them that worked at drinking and tea spots as well as those that are involved in the sale of food. Some of these children reported closing 12:00 mid night.

About 43.3% intimated that after mining they often feel too tired to read books, 26.7% said, they often feel tired to do any work while 6.7% mentioned feeling too tired to play games. Others experienced (3.3%) body pains.

Payments received

The majority (70.0%) of children in mining received cash payment while 21.7% received a proportion of the ore. A significant proportion (36.7%) of children received their payment on a daily basis while about a third (31.7%) received pay only when they availed themselves to work. Another 11.7% received their payments weekly whereas 8.3 received their payment on a monthly basis.

Satisfaction in mining

The conditions of work prevailing at a work place to some extent determine the level of satisfaction of the worker. Inquiries were conducted to find out whether children working in

gold mining were content with the job they were doing. The results indicate that a little more than half (51.7%) expressed satisfaction while another 5.0% felt very satisfied. However, another 40.0% of children in gold mining expressed dissatisfaction. Reasons children gave for their dissatisfaction was in regard to the nature of the work, especially its tiresome and tedious nature. Others cited the dangers associated with gold mining. Some children recounted how their colleagues in the past were victims of cave-ins. Some of the children sincerely admitted that gold mining draws them away from school

Risks

Again, the data show clearly that children in mining suffered from serious injuries, many of which could result in permanent disability. The findings indicate that majority (93.0%) of children considered their work as risky. About 71.7% confirmed experiencing injuries while working in artisanal small-scale gold mining. These injuries largely (60.0%) related to cuts, bruises and wounds while working with implements such as pick axe, chisels, and hammers. Some children explained the high risk of near trapping as they went into ghettos to collect debris into sacks.

About 13.3% have suffered from skin diseases including sores and rashes while respiratory cough, chest pains and breathing problems account for 18.3%. Body aches/pains (38.3%) constitute the single most occurring ailment mentioned by children in gold mining.

Use of mercury

Results of the study again show that a significant proportion (76.7.0%) of children used mercury in the amalgamation and burning of gold. However, 23.3% of children interviewed stated that, they had never directly used mercury themselves even though there are times, amalgamation and burning is done in their presence. In ghetto and surface mining, the main means of attracting the gold is the use of mercury.

Effects of dynamite blasting on Children

Part of the major activities in ghetto mines is the use of dynamite to blast for gold in the underground pits and tunnels. However, the fumes of these dynamites are so poisonous that any person trapped in the pit or tunnel while blasting takes immediately can die upon breathing in the fumes. The study enquired about children's direct involvement in the use dynamite to blast for gold.

The results revealed that children were not directly involved in dynamite blasting for gold. However, it was found that children often went underground to gather the rocks after the dynamite blasting have taken place. Children explained that because of the bad illumination and the lack of sufficient air in the ghettos, fumes often remained several hours after blasting. They complained then that the small amounts of fumes blasted often made them feel weak and sick anytime they went underground to gather the rocks. Children expressed that they commonly experienced severe headaches that lasted them days.

Box 3: Abuses at work

A child at Obuasi said:

"I have told ghetto owner about these fumes, but anytime they blast, he still insist I should go down. He sometimes beats me and threatens to sack me from the ghetto when I complain"

Some of the explosives used by “ghetto owners” in blasting for gold include; ‘kagum’, ‘foot’, ‘cap’, ‘electric wire’, ‘mooya bar’ and rope among other locally used items.

Combining mining and school

The survey sought to find out whether children engaged in child labour in gold mining were also attending school. The findings indicate quite clearly that children combined school with mining. About 71.7% of children indicated that they attended school while 28.3 did not. The study further ascertained how regular children in small-scale mining communities attended school, especially the 71.7% of them who indicated that they were in school. About 46.7% stated that their work affected their regular attendance while a third (28.3%) stated otherwise. It is evident that a third of children in mining (30.%) said they attended school three times in a week, 18.3% mentioned attending school four times in a week while 28.3 attended school five times in a week. About 5.0% attended school 2 times in a week. From the results, it is clear that children in mining attend school irregularly and this has implications for academic performance and advancement

Of the 71.7% who attended school, two-thirds (61.7%) of children in mining admitted that working in gold mining affected their studies while 10.0% felt otherwise. They were asked to assess themselves academically with respect to the position obtained in the last term. About 33.3% placed themselves very good and good while 8.3 assessed themselves as average with 1.7 assessing himself/herself as poor.

Abuse at mining sites

The findings show that harassment occurs in the mining environment. About 40.0% of them confirmed suffering from abuse while working in the mining site while 58.3 stated otherwise. Physical abuse was the most common occurrence (26.7%) followed by emotional or psychological (10.0) and sexual (8.3%). Adult male miners, ghetto owners and parents were some of the category of people who abuse children at the mining locations. Abuses from these people were not necessarily gender related except when the abusers feel provoked by the children.

The children suffered several different forms of abuses. Children in mining were very exposed to the use of violent and insulting language. Fighting and physical assault in the form of slaps, whips with a chain and belts were routine occurrences children especially in ghetto mines received from adults. In other circumstances, disagreements among children either working together or for a pit owner was often settled through fighting sanctioned by adults. Indeed, one can draw the inference that jungle life, where might is right characterises and governs the life style in mining communities and or sites

Sexually active

The study sought the views of children on their sexual life while working at the various mining sites. More females (57.1%) than males (42.9%) confirmed that they were sexually active or engaged in heterosexual sex. About 43.3% of males stated they were not sexually active whereas 56.7% of females said same. In total of males who are sexually active, they constituted 43.1% while of the females were made up of 56.9%.

Other Stakeholders

Interviews were conducted with the Talensi district Assembly, the Department of Social Development, Department of Community Development and Afrikids, a child rights Non-

Governmental Organization. These interviews were conducted to learn from these institutions/stakeholders what worked well or what did not work well with respect to the implementation of the National Plan to Eliminate the Worst Forms of Child Labour in the country by 2015, particularly in artisanal small-scale mining.

The findings revealed that these institutions were unaware of the implementation of any such National Plan. Indeed, the Department for Social Development confirmed attending workshops leading to the eventual launch of the plan in 2009, but indicated that since then, funds have not been allocated to execute the plans at the district level. The child protection teams as envisaged in the plan are not in place on the ground.

However, the Talensi District in collaboration with Afrikids, implemented an ILO sponsored Time Bound Programme that identified and withdrew 150 child labourers in mining. This project put in a community child labour committee system that worked in identifying the children in the mines. This project was for a period of two years. It must be pointed out that the awareness created by the Time Bound Project contributed significantly to parents eventually disallowing their children to participate in mining. Had the National Plan been implemented, it would have built on the efforts already started. However, the vigour is gradually waning, no wonder, a number of children were found mining in the various locations.

The Talensi district identified the paucity of financial capacity to ensure that law enforcement agencies execute the requirements of eliminating child labour in the country as directed by the Children's Act. Also, the district further explained that at the mining sites, there is no Police presence to enforce law and order of which child labour is a part. The district on its own cannot afford except programmes such as the National Plan on the Elimination of Child Labour is followed through.

4.3 Migrants

4.3.1 Migrants in Wassa

Demographics/ background characteristics

The study of the migrants in mining in the Japa area of the Western region involved 60 miners made up of 28 males and 32 females. Their ages ranged from 18 to 60. It is distributed as follows: 35% were from the ages of 18-27, 58.3% were between the ages of 28-37, 3.3% from 38-47 and another 3.3% from 48-60.

The migrant miners found in the Wassa area come from different parts of Ghana. It was found that 27% of them were from other parts of the Western region who have converged there for mining purposes. Those from the other regions are Upper West 3.4%, Northern 5.2%, Brong Ahafo 1.7%, Upper East 23.5%, Central 13.5%, Ashanti 8.5%, Volta 3.4% and Eastern 13.6%. No migrant miner in the Wassa location came from outside Ghana.

Twenty per cent of them came to the current location through their parents or relatives, 10% through their spouses, 15% came to look for job opportunity, 13.3% came on their own, 18.3% were brought to the area by their siblings, and 23.4% came through the influence of friends. In effect it can be concluded largely that the migrant miners are introduced to mining locations by close family members or themselves.

These migrant miners have been in the area for varied periods, ranging from 6 months to over 16 years. The majority 76.6% have been living and working in the area for between 6 months and 5 years. Also, 16.6% have been there from 6-10 years, 5.1% for 11-15 years while 1.7% has been there for between 16-20 years. The survey revealed that 93.3% of the migrants are solely dependent on galamsey mining as means of livelihood. Few others constituting 1.7% each worked in the area as combining mining and masonry or as machine operator. The remaining 3.3% also worked by combining mining and farming.

It was established that 70% of the migrant miners have attended school before. Of the 70% the levels of education attained were MSLC 1.7%, primary 5%, JHS 30%, SHS 30% and tertiary 3.3%. Twenty-five per cent of those who never attended school attributed it to the fact that there were no helpers while 1.7% said there was no money in the family.

Living places of migrants

The migrants mostly lived in communities together with the local people as indicated by 63.3%. Also, 26.7% lived in thatch and mud houses, 3.3% stayed in kiosks or metal containers and 6.7% lived in tents. Materials they sleep on included cardboard (3.3%), benches (1.7%), straw mat (73.3%) and mattress (21.7%).

The migrant miners take their bath at different places. It included open space 18.3%, bathhouse (free) 70%, bathhouse (paid) 1.7%, other places 10%. As regards how many times they bath in a day, 3.3% did not respond, 5% said often, 10% bath once in a day while 81.7% took bath twice a day.

Marital status

Forty per cent of the respondents said they are married. From this group, 28.3% live with their spouses while 11.7% did not either because they spouse is living in hometown with children (1.7%) or divorced (3.3%). Of those who are not married 53.3% of them indicated that they have sexual partners while 11.7% said no. In addition, 20% of them claimed they have more than one partner.

Having children

The study showed that 56.7% of the respondents have children. Of these 35% live with their children at the communities they work.

Influence

Most of the migrants were influenced by the fact that one can make money working at the Japa area with the booming mining opportunities. Again, the migrants said they engaged in mining to raise money. On a scale of influence from 1-5 with 5 being the most influential factor, 16.7% said they were highly influenced by family circumstances to go into mining, 21.7% said they were influenced by family pressures, another 21.7% were somehow influenced while 30% said they were less influenced by family circumstances. It was observed that 98.3% found ASM as a convenient source of income. One other factor rated by 41.7% of the migrant miners was that there was lack of other job opportunities at the location they engage in mining. Poverty is also rated by 25% of the migrants as a factor that pushed them into mining.

Tasks

The key tasks undertaken by the miners at the site include digging, washing and carrying of load. The activities are clearly gender oriented though it overlaps in some situations. The men do the

digging and loading the ore bearing rocks sand while the women carry the load from the pit to the washing points. Some women do washing as well but are in few situations that it occurs. It is also done on very small scale. Smoking by the migrant miners were also investigated. It came up that 16.7% admitted smoking. The tasks are also time-assigned. At the crusher point, the work cycle is 24 hours. The workers run a shift of three batches with each batch doing eight hours.



Plate 2: Different tasks assigned at the sites: Woman supervisor tally as others carry

The women will have to complete their load of 80 head pans before the task is considered over.

Abuse/ harassments

Some of the women migrant workers admitted being sexually harassed as indicated by 13.3%. In addition, 16.7% reported to have suffered physical abuse. One respondent said she had contracted an STI. Harassment in pits and the sites is common. The women complained that sometimes the men propose to them whilst working. If one says no to such proposals, the one is not likely to be allowed to site to continue work the next day or week.

Generally, the survey showed that cordial working relations exist among the miners. While 88.3% described the working relations as good, 5% also said they are free with people they work with. However, 6.7% indicated poor or bad relationship with the natives.

Challenges faced

Challenges faced by the migrant miners included accommodation (6.7%), low payments with hard core tasks (26.5%), fluctuating working seasons (25.3%), bad treatment from natives (18.3%), high level illiteracy among workers at site (6.7%), work schedule very difficult (8.1%). Also 1.7% was concerned about foreigners taking over land for galamsey but 6.7% said they face no challenges.

Ownership of mining pits

Those owning mining pits were only 8.3% while the remaining 91.7% worked in pits owned by other people. Those who were capable of raising the needed money to acquire a mining pit were only 5%. None of the people interviewed owned a concession except that one person did not respond to the issue.

Opportunities

One opportunity for working in the area as identified by the migrants is trading said by 76.6% of the respondents. Fifteen per cent said there is opportunity for employment in gold related activities while 5% were of the view that the area offers opportunity for schooling. Other opportunities are social support system from the community and agriculture activities.

The migrant miners revealed that galamsey has been their main source of income indicated by 90% while 3.3% have made assets through it and 6.7% have used small scale mining as means that supported their education. Benefits talked about included raising income (83.3%), educate oneself (10%), employment (3.3%) and benefit from association (1.7%). One of the miners said there has not been any benefit from working at the site.

Payments

Ninety per cent received cash payment, 6.7% received partly cash and kind, 1.7% paid in kind and 1.7% said no payment at all. Those paid in kind receive it in the form of clothing, shelter, food payment of fees among others.

The miners have different payment schedules mostly on daily and weekly basis. It was found that 61.7% are paid on daily basis, 36.7% paid on weekly basis and 1.7% receives payment as collective ownership of profit.

On daily basis, wages earned ranged from GHC10.00 - 100.00. Incomes received by the miners in a week ranged from a minimum of GHC 70.00 - 250.00. Some did not however, disclose how much they earn from the business as presented in Table xx. Margin of earnings was dependent on the season as 96.7% said they earned more during the raining season when there is enough water for processing. Others also were of the opinion that the amount of gold processed was dependent on how mineral rich the soil is.

Table 4.1: Daily and Weekly Wages Earned working as ASM

Daily wage			Weekly wage		
Amount	Frequency	%	Amount	Frequency	%
10	6	10.0	70	3	5.0
12	7	11.7	100	9	15.0
15	7	11.7	150	7	11.7
20	11	18.3	180	3	5.0
25	3	5.0	200	1	1.7
30	7	11.7	240	1	1.7
100	1	1.7	250	2	3.3
Not disclosed	18	30.0	Not disclosed	34	56.7
Total	60	100.0	Total	60	100.0

Most of the migrants received their payments themselves as confirmed in the study by 96.7%, while the remaining 5.1% said it is their friends who receive their payments. When it comes to the use of earnings, 78.1% said they used it for their upkeep, 13.4% made savings towards setting up own business while 8.5% used it to settle debt they owe, pay for children's education and remit their relatives at their hometown.

Relationship to community

Thirty-five per cent said they had good relationship with the people of the mining community while 65% said the relationship was not good. On how the natives perceive the migrants, 35% said the perception about them is not too good while 56.7% said it was good. On the extreme, 8.3% was the natives perceived them negatively.

In resolving quarrels, 95% resorted to the chiefs/elders/opinion leaders while 3.3% relied on other opinion leaders and/or the police. The remaining 1.7% of the migrants said there had been no quarrels.

As regards being happy working in the community, 45% said yes, 53.3% said they are not happy while 1.7% remained silent to the issue. Reasons assigned for been happy were that they are able to raise income from ASM activities (43.5%), will be able to raise money to further their education (3.4%) and community is supportive (1.7%) to their stay and work environment. On the other hand, some were not happy because galamsey activities are too difficult as claimed by 41.3%.

4.4 Migrants - Talensi Area***Demographics/ background characteristics***

Of the total sample of 60 migrant miners sampled from the five mining sites in the Talensi district of the Upper East region. An overwhelming majority (88.3%) of the migrant miners were males while females constituted only about 11.7%. The ages of the respondents is distributed as follows: 73.1.7% aged 18-27, 26.3% were aged 28-37. About one-fifth (20.0%) of them are aged 38-47, while the 48-60 age group constituted about 21.7%. The mean age of migrants in mining was 36 years.

The findings in terms of regional representation indicate that nearly four out of ten migrants (38.3%) found at the mining sites hailed from the Upper East Region, while 13.3% came from the Northern Region. Eastern, Volta and Western regions accounted for 5.0% each of migrants surveyed. Central region and citizens of Burkina Faso accounted for 11.7% each of the respondents while the Upper West region recorded 6.7%. Ashanti had the least (3.3%) number of respondents sampled. With the exception of Greater Accra, and Brong Ahafo, all other regions were found at the mining sites in Talensi.

In terms of education, it was found that about 75% of migrants had formal education while another 25.0% had no formal education. Among those who attended school, about 5.0% completed tertiary level of education, while a one-fifth (20.0%) of them received attained Senior High School level of education. About 16.7% completed Junior High School while 6.7% completed Middle School. A quarter (25.0%) of migrants stopped at the primary level.

Living places of migrants

The findings indicate that the majority (63.3%) of migrants lived in self locally constructed mud houses roofed with aluminium zinc while about a third (31.7%) lived in mud houses roofed with thatch. Those who lived in hut buildings constituted (3.3%) while 1.7% lived in improvised homes.

Marital status

With regard to marriage, 63.3% of migrants indicated that they were married, while another 35.0% were not married. Only 1.7 stated her status as being widowed. Of the 63.3% migrants who are married, about a third (30%) of them live with their wives/spouses at the mining sites while 31.7% of them did not. Generally, migrants in the mining communities spent a period of one month to nineteen years and above. The results revealed 48.0% lived covering a period of one month to three years. Another 13.3% covered a period of four to six years while those lived between seven and nine years constituted 3.3%. A similar percentage (3.3%) spent thirteen and nineteen years. Nearly a tenth (8.3%) lived between ten and twelve years while another 6.7% indicated spending 16 and 18 years. About 16.7% of migrants indicated spending nineteen years and more years at the mining sites. Cumulatively, it is quite clear that migrants have spent a considerable amount of time at the mining site.

Having children

About two-thirds (63.3%) of migrant miners indicated having children while a little over a third of them (36.7%) did not have children. Of the migrant miners who had children, about 26.7% of migrants lived with their children at the mining sites while another 36.7% of them do not live with their children at the mining sites.

Influence

The driving factor for migrant's presence in artisanal small-scale gold mining is to earn money. More than half (53.3%) of migrants cited this reason for being in mining. About 16.7% of migrants stated jobless situations as driving them into mining while another 16.7% identified mining as a source of livelihood. Poverty accounted for 5.0% of the factors driving migrants into artisanal gold mining. Another 6.7% stated mining sites as constituting a good markets for business (6.7%) thus, informing their decisions to go into mining.

During the focus group sessions respondents further revealed retrenchment from public work as accounting for the presence of migrants. One respondent explained, "I am here because I lost my job in the 1989 government retrenchment. As a family head I have to come and see if I can make money to continue to support my family." Other respondents highlighted mining as an alternative source of income, a means to avoiding crime, not wanting to idle, is the only source of easy employment in the region, lack of job, only alternative of employment in the dry season, poverty driven, to raise money and support siblings education and to raise money and start own business. Another respondent was of the view that she tried other forms of business ventures and was unsuccessful and so has decided to go into surface mining as a source of income generating income. A significant proportion of other respondents explained that gold mining has enabled them to fend for their family needs such food supply, payment of children school fees, solving personal problems and raised decent rooms for habitation. Others also enumerated that, gold mining has elevated social status, enhanced their financial independence, able to support parents living, and operates commercial transport and a major source of employment for him. A typical migrant farmer established he made money from gold mining and further went into farming of livestock thus expanding his sources of income for a living.

Tasks

The survey gathered from migrant miners the activities they undertake while in the mining area. An overwhelming majority of the respondents identified mentioned undertaking gold mining as their main tasks. They for example, carry sand for washing, dig for stones from the pit for the owner, crash stones, operate crushing stone machine, and operate their own ghettos. Migrants

from Burkina Faso are mainly males, who act as gold buyers, sell clothing, motor bikes, and are also sponsors² of ghetto pits. It was also realized that migrants from southern Ghana are mainly gold buyers, sponsors, they operate drinking spots particularly, 'akpeteshie' bars, while male migrants from the northern regions in addition to digging for gold, operate meat selling joints. Female migrants from the Upper East region were operate chop bars, drinking spots.

Smoking, physical Abuse and sexual harassment

The survey sought the views of respondents on smoking as a habit, physical abuses and sexual harassment they have suffered from the mining area. The findings suggest that about 61.0 % smoked. More males (67.3%) than females (14.3%) smoked. About 32.7 percent of males and 85.7% of females stated that they did not smoke. Indeed, the sale of 'wee' was common and its cultivation is also common. Researchers interacted with people into the sale of 'wee' and they confirmed that was their main activity in the mining area.

About 49.2% of respondents affirmed ever suffering from sexual harassment while 50.8% stated otherwise. More female migrant (85.7%) than male migrants (44.2%) reported being victims of sexual harassment in the mining area. About 55.2% of males and 14.3% of females indicated not having suffered from sexual harassment in the mining area.

With regard to physical abuse, as expressed in terms of beating with hand, unprovoked fights, physical intimidation and the sort, another 63.3% of the respondents reported having suffered from physical abuse. More males (66.0%) were predisposed to physical violence compared to female migrants (42.9%). About 34.0 percent of males and 57.1% of female migrants indicated not suffering from physical abuse while in the mining area.

Challenges faced

Migrant miners identified a number of challenges they encounter at the various mining sites. The lack of potable water is a major challenge miner's grapple with on a daily basis. In the five different mining areas, the 'Accra' mining site had a borehole. Even though 'Tarkwa' mining site has a borehole, it does not work. Miners depend on hand dug wells, which are easily susceptible to pollution from the mining activities. Again, about one-fifth (20.0%) of the respondents identified the lack of technology to properly mine gold as another major challenge that the people face in the area. Another 15% of respondents identified the high cost of living associated with the mining area as a huge challenge. The mining location is very remote to the district capital where basic commodities can be acquired. Thus, the transportation of basic amenities to the mining area attracts cost and this cost is passed on to consumers. Other factors identified as challenges include 'gold boom is down' (13.3%), respiratory related ailments arising out of the dust emitted (8.3%), no health facilities (5.0%) pits collapsing on people (2.3%) and capital intensive nature of the gold mining (2.3%).

²A sponsor in small-scale mining in the Talensi district is a financier of ghettos/deep pit miners. The sponsor buys the equipment for digging. He pre-finances the individuals involved in the digging in terms of their daily feeding as they search for the 'black stone with the gold'. When they eventually find the gold, the sponsor is reimbursed by the ghetto owner, and the condition under which an agreement was reached is made to kick start.

Ownership of mining pits

More than a quarter (26.3%) of migrants confirmed owning mining pits (ghettos) while 73.3% did not. About 21.7% of migrants stated that they operated licensed concession mining while 78.3 stated otherwise.

Opportunities

The study set out to find out the opportunities available to them in the mining areas. With regard to opportunities, migrants identified petty trading (21.7%), mining as a source of livelihood (18.3%), being a gold buyer (11.7%), combining farming and rearing (10.0%), the ability to support their families (8.3%), picking of shea nuts for processing (6.7%) as opportunities available to them in the mining.

Payments

The findings indicate quite clearly that an overwhelming proportion (91.7%) of respondents received payments by themselves. The majority (45.0%) of migrants described the payment system as one based on luck. About 28.3% stated that they made earned income daily, weekly constituted (5.0%) while 13.3 mentioned monthly. On a daily basis, people earned from GHS 10 to GHS 150. In a week, migrants they could earn a minimum of GHS 60 and a maximum of 300 on the average while monthly earnings revealed a minimum of 200 cedis and a maximum of 3000. However, the caveats with respect to these earnings are that it is not regular and largely based on luck.

Relationship to community

Migrants were asked about their working relationship with the indigenes. Half (50.0%) of the respondents intimated having a cordial relationship with the indigenes while 20.0% of them described their working relationship as good except that indigenes often want to have the upper hand in their dealings. Another one-fifth (20.0%) of the respondents described the relationship as mixed. They contend that some of the indigenes are good while others are not friendly. Another tenth (10.0%) of them stated as having peacefully co-existed with the indigenes.

Likewise the majority (58.3%) of migrants estimate that indigenes perceived them as good while nearly a third (28.3%) perceived them as positive. About 8.3% felt that indigenes did not perceive migrants as not too good while 5.0% perceived them as somewhat. About three quarters (78.3%) of migrants expressed their happiness working at the mining locations while 20.0% were not happy.

As a mining site, conflicts are a regular occurrence especially as people compete in the search for gold. However, migrants confirmed that there is a robust conflict model they employ to settle conflict cases that come up. There is a committee comprising opinion leaders of the major ethnic groups and the indigenes. They receive complaints and invite feuding individuals for hearing. In instances that, the committee is unable to resolve, the matter is sent to the chief who has jurisdiction over the mining area. However, criminal offences are reported to the police for redress. But, migrants contend that the committee in most instances resolves conflict cases and often request the individuals to live in peace. Through interviews with diverse groups, the common mantra that run through was; 'money does not like conflict.' There is consensus among people of diverse backgrounds that their primary objective is to make money, so people consciously reach out to amicably resolve problems.

4.5 Women

4.5.1 Women in Wassa Area

Background information

The study covered 60 women engaged in mining at Japa and surrounding communities where the sites they work are also located. Of the number interviewed, 78.3% are migrants while 21.7% are natives and also born in the community. Twenty per cent of the women were brought to Japa area to undertake mining by their relatives (uncles, aunties, brothers and sisters), 21.6% by friends, 21.6% by parents, 7% by husbands, 5% by themselves and 3.4% through their landlords.

Ages

The ages of the women miners in Japa area ranged from 18 to 41 years. Those between the ages of 18-23 were 14.9%, 24-24 years were 38.3%, so also were those between 29 and 33 years. The rest were from 34-38 constituting 6.7% and 39-43 being 1.7%.

Years in ASM

Most of the women in mining have been in the area for more than two years as said by 61.8%, 13.3% have been into mining for between a period of six months to one year, 5% have been working for three to six months prior to the survey, while another 13.3% have been there for less than three months. Those born in the community and covered by the study were 3.3% and the remaining 3.3% could not tell how long they have been working as miners. Others have been there working as miners for between 6 to 18 years. It came out that 13.4% have worked for 6-10 years while another 6.8% have worked in mining for period spanning 12 to 18 years.

Occupational activities

Most of the women, as indicated by 65% sole work as miners in the area. Others combine mining with other activities including trading (11.6%), and farming (1.7%). It was found however that 13.4% and 8.3% engaged in farming and trading respectively.

Educational background

Forty-five per cent of the women involved in the study have attended school before but the remaining 65% never did. Levels of education attained were as follows: primary 5%, JHS 28.3%, SHS 3.3% and tertiary 1.7%. It came out that 48.3% of those that never attended school faced financial difficulties from home while 6.7% said they were introduced into trading from childhood.

Marital status and having children

The survey showed that 43.3% of the women are married, 53.3% said they are not while 3.3% never disclosed the marital status. Of those that are married, 30% stay with their husbands. The husbands that are with their wives in the mining area are also working alongside. One said the husband is a teacher in the community, 5% are excavator operators while the rest undertake similar mining duties as their women.

Five per cent of those married but not staying with the husband at the working location said they are separated while another indicated that the husband lives at their hometown at Sogakope in the Volta region. Also, 31.7% of those not married said they have sexual partners while 20% said they do not have. It came up that 1.7% have more than one sexual partner.

Twenty per cent said they have no children, 73.3% have children and the remaining 6.7% did not respond. The study showed that 68.3% of the women have children. Thirteen of them representing 21.7% have a child each, 38.3% have two children, those with three children stood at 6.7% and one indicated that she has 5 children. Thirty-two respondents constituting 53.3% said they do have female children. Of the women miners 34 of them (56.7%) live with their children.

Accommodation

The women miners live in structures that are found in the community. Thirty per cent lived in thatch and mud houses, 63.3% lived in mud houses roofed with aluminium zinc while 6.7% lived in huts or improvised homes.

The miners were found to be sleeping on different materials. Notably, they used cardboard (3.4%), straw mat (25%), rubber/plastic mat (6.7%), and mattress (65%). It was found that 93.3% took their bath in open spaces and 6.7% in bathhouse (free). On the number of times that they took their bath in a day, 23.3% said it was once while the remaining 76.7% bathed twice in a day.

Decision to go into mining

The women went into mining either on their own or through someone. Those who went into mining on their own as a means of seeking jobs formed 58.2%. 10% were introduced to mining by family members, 6.7% by friends, 3.4% by landlord/mine site manager and 21.7% by their parents, especially mothers. Aside mining 63.3% indicated they do cleaning, washing and cooking in the house. As why they are engaged in mining all had a common position of seeking for jobs, raising money for upkeep and support their families (either nuclear or extended). It was enticing to be in the mining as per information giving to the women by those who were in the business already. The study also revealed that 13.8% were pushed into mining because of family circumstances. Again, 56.7% said they found ASM as a convenient source of income while 55% attributed their involvement in mining to lack of other work opportunities. In addition, 61.7% said poverty was the most influential factor that determined their entry into ASM.

Tasks performed at site

Most of the women performed common task of carrying load, panning and segregating gold bearing rocks as said by 80%. Five per cent of the women worked as supervisors, one worked as a general supervisor, one operated a chanfan grinding machine and 11.6% work by washing sand on the sluice box. It is also the women who carry the ore to the machine location for grinding.



Plate 3: L- women carrying load from a pit R- a woman working for herself

Habits

Among the women, only 3.3% said they smoke while another accepted having a multiple sex partner. On whether they have experienced sexual harassment, 21.7% indicated in the affirmative while 15% said they have suffered physical abuse. On whether any of them have contracted STDs and HIV, 83.3% said no while 16.7% said they have not tested and cannot therefore confirm or otherwise.

Challenges faced in mining area

Acquiring concession

Among the women, only one person said she is able to raise enough money to acquire a concession for operating ASM. None of them however owns a licensed concession. On opportunities available, 53.4% said there are no opportunities apart from galamsey while the remaining identified trading and galamsey as opportunities available for income generation. All the children respondents indicated that ASM activities have enabled them raise money for their upkeep, take care of their children's education and make assets through that. Fifteen per cent did not indicate whether ASM has benefited them in a way or not, 65% said it has not benefited them while the remaining 20% said it has benefited them by offering job and raise money.

With regard to acceptance into the community, 86.7% showed that there were various levels of co-operation, 88.3% indicated different levels of happiness, only 26.6% were of the view that there was social safety in the community they live and work, 20% agreed with reduction in cost of transaction, 23.3% on social status and 20% agreed that there was economic safety.

Payment modes

The women miners are mostly paid in cash as depicted by 83.3% of the respondents. Ten per cent received payments partly in cash and partly in kind, 5% received theirs in kind while 1.7% said no payment is made. Five per cent of those who do not receive cash did not indicate what they are paid with, 1.7% received food, 3.3% were paid with clothing, another person received accommodation facility, and 6.7% had their school fees paid in lieu of the work they do.

Apparently, majority of the women are paid on daily basis as 60% of them said so, 8.3% paid weekly, one person paid monthly and 13.3% have their payment not based on any fixed schedule.

Cash payments received by the women on daily basis ranged from GHC 10.00 - 400.00. Those paid weekly received between GHC 50.00 - 400.00. Those who are paid on monthly basis received between GHC 350.00 - 800.00. Variations in earnings were attributed to availability of water for processing ore, the mineralisation of the land worked on, or when there is a breakdown of the machines they use. One respondent indicated that her mother received payments on her behalf, 91.7% said they received their own payments due them while 6.7% did not show who receives their wages.

Uses of income

The women miners used their incomes for different purposes. Two key things they do as said by 20.2% each were to support their children's education and remit home for the upkeep of their children. Also, 18.7% save for their basic needs requirement and upkeep, 16.7% saved to settle debts and support family, 13.4% used it for their children's educational need and establish business. However, 5% did not show how they use their income.

Though the women raised income for a number of purposes, only 6.7% indicated that they are satisfied with the work as miners while 88.3% said they are not satisfied citing the difficulties they go through before earning a meagre amount. Five per cent did not indicate whether they are satisfied with the work they do or not.

4.5.2 Women in Talensi Area

Background information

The study covered 60 women engaged in mining at Talensi and surrounding communities. Of the number interviewed, 76.7% are natives while 23.3% are migrants. More than half (53.4%) of women attributed their presence in gold mining areas to poverty. Another 8.0 % of women moved to the mining sites with their husbands while 5.0% cited haven migrated with their parents some twenty years ago, when mining started in the area. Trade, marital breakdown, and the success stories of other women in gold mining informed their presence at the mining sites.

A significant proportion (45.0%) of women lived in the mining area for a duration spanning more than two years but less than five years, while one-fifth (20.0%) of them lived there over 10 years. Women who spent between five years and less than ten years constituted (13.0%) while a similar percentage (13.3%) also reported spending more than three months but less than six months. Those who spent six months but less than a year constituted 6.7% whereas those less than three months constituted 1.7%.

Ages

The ages of women in artisanal gold mining in Talensi ranged between 20 and 50 years. The average age of women in mining was 33 years. About a quarter (23.3%) of the sampled women were within the age group of 31-35 while 26-30 year group constituted a fifth (20.0%) of the respondents. The 36-40 and 41-45 year age groups constituted 15.0%. The statistics imply that mining is attractive to women in their productive ages of 20-35.

Years in ASM

The question was asked of respondents the length of time spent in the mining sites. The findings indicate that nearly half (45.0%) of the women spent more than two years but less than five years at the mining sites. This was followed by a fifth (20.0%) of the women spending more than

ten years at the mining sites. A little over a tenth (13.3%) of women spent between five and ten years while a similar percentage (13.3%) spent between three months but less than six months at mining sites.

Occupational activities

Most of the women (53.3%) at the mining sites Talensi, engaged in surface mining while alluvial constituted 20.0% of the women interviewed. The rest of them engaged in trading activities including operating a drinking spot (3.3%), food vendor (8.3%), running a provision shop (3.3%), water vendor (5.0%) and petty-trading (6.7%).

Educational background

The findings show that half of the respondents had never been to school while another half ever went to school. Of the half that went to school, about a quarter (25.0%) of them stopped school at the Junior High School level while a fifth (20.0%) of them stopped schooling at the primary level. From the statistics, it is quite clear that women obtained education at the basic level. Further, among the women who never went to school, the overriding reason (18.3%) is that they were not interested in school. Another reason (11.7%) was that their parents never sent them to school while others (10.0%) cited the lack of schools in their community. Less than a tenth (8.3%) of them mentioned the inability of their parents to afford to enrol them in school.

Marital status and having children

The study again asked questions bordering on respondents marital status and sexual relationships while in the mining sites. More than two thirds (66.7%) of the respondents indicated that they were married while 33.3% were not. Among the married women, four out of ten of them lived with their husbands at the mining site while a little over a quarter (26.7%) of them did not. The study further examined whether the unmarried women at the mining sites had sexual partners. The findings revealed that about 33.3% of them had sexual partners while a tenth (10.0%) of them did not. Only 6.7% of the unmarried women confirmed having multiple sexual partners.

The question was asked of respondents, the number of children they had, about 76.7% of women canvassed from the mining sites reported having children. The study further explored the number of children each of the women surveyed had. The results indicate that about a fifth (20.0%) of them had four children. Another 16.7% of them had three children. Nearly a quarter (23.3%) of the women stated that they did not have children. Indeed, on average, women at the mining sites were more likely to have three children. Only a tenth (10.0%) of the women surveyed had a child each. The findings of this study mirrors the national statistics of the Ghana Demographic Health Survey of 2014 which reports that with fertility remaining constant at current levels, a woman from Ghana would bear an average of 4.2 children in her lifetime. But the difference between the findings of the GDHS 2014 and this study is that the rural average of women giving birth to 5.2 children sharply contrasts this study's average of 3.3 which collected data among women in mining whose context is rural except the circumstances of their work.

Accommodation

The housing conditions and the living arrangements in a given geographical area to some extent can be a measure of the quality of the people. Of the 76.7% of women who indicated that they had children, more than half (58.3%) of them lived with their children in the mining site while nearly a fifth (18.4%) of them did not. What this means is that the responsibility of childcare becomes more burdensome if on the average women had three children living with them at the

mining sites. About two-thirds (60.0%) of women lived in mud houses roofed with thatch while another 35.0 lived in mud houses roofed with aluminium zinc. The rest of the respondents lived in hut buildings (3.3%) and or improvised homes (1.7%). Again the majority (61.7%) of the respondents slept on rubber mats while another 21.7% of them slept on straw mats. A little over a tenth (11.6%) of the respondents stated that they slept on mattresses while another 5.0% slept on the skin of animals. Furthermore, the study found that the majority (58.3%) of women at the mining sites took their bath once in a day while the rest (41.7%) stated having their bath twice in a day.

Decision to go into mining

The dynamics that occur in a household basically attempt to explain the patterns of such changes in terms of relations between household members. The study sought to understand whose decision in the household setup influenced them into artisanal small-scale gold mining? The results from Figure 2, show quite clearly that the majority (61.7%) of women were influenced into small-scale gold mining by their own decisions. Another source of influence for women participation in ASM was from husbands while about 6.7% were from family relatives while 5.0% were from parents. Interestingly, friends constituted only 1.7% of the sources of influence going into artisanal small-scale gold mining.

Household dynamics at the gold mining sites

Prior to the discovery of gold between 1994/1995, the mining sites were unsettled sparse land. The mining sites have now emerged as settlement communities of miners for both migrants and indigenes. The study attempted to understand the household duties performed by women in these emerging settlement mining sites. The household duties performed by women were varied. The majority (63.3%) of the women indicated performing duties including: cooking, washing (clothes and dishes), sweeping and fetching water while more a tenth (16.7%) cited the fetching of firewood as domestic activities they carried out regularly. Another 8.3% of the respondents indicated feeding their children while 6.7% prepared their children for school

The study further wanted to understand the duties performed by partners/spouses of women in mining. Characteristically, a greater proportion (43.35) of the women stated that their partners/spouses they lived within the mining sites did not support them with childcare duties while a little over a third (35.0%) stated that their partners/spouses are the providers for their family upkeep. Only 3.3% indicated that their husbands supported them with childcare duties while 1.7% indicated that the husband sometimes picked the child from the school. About 15.0% of the respondents did not respond to this question

Tasks performed at gold mining sites

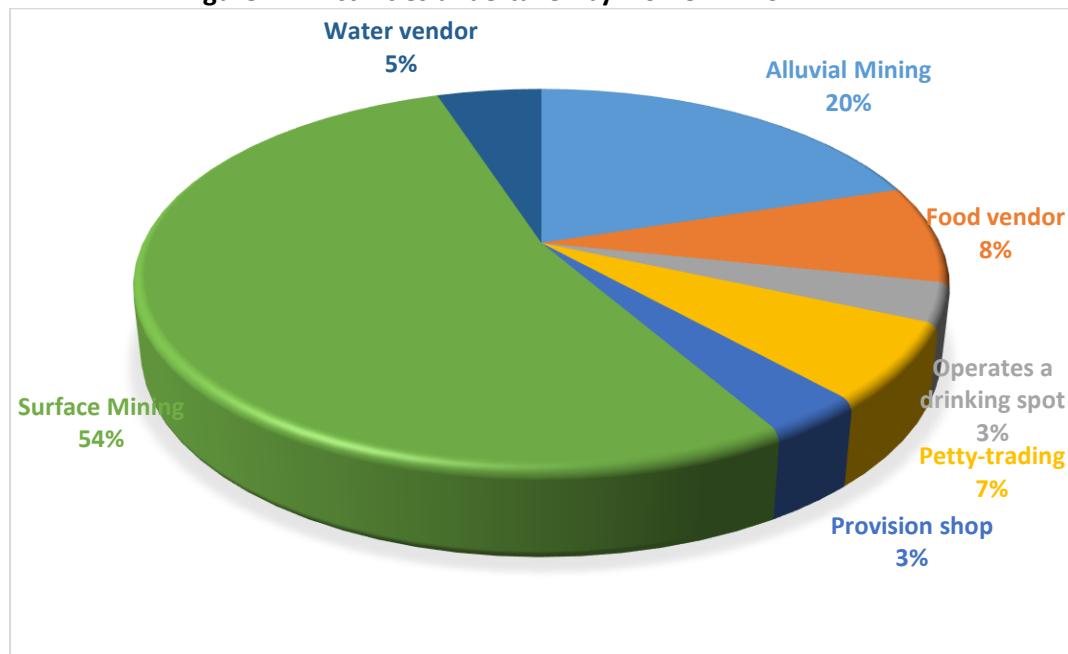
In Africa and Ghana in particular, women mostly in rural areas undertake daily activities including: Cooking, fetching water, gathering firewood, trading, cleaning, farming, pounding, among many others. At the five mining sites in Talensi, women were found undertaking the following activities:

1. Digging the soil for ore
2. Carrying sand, stones, mud, water and transporting these to sieving and crushing sites
3. Shank/panning
4. Collecting sand, and hiring the services of a 'motto king' to a sieving and crushing sites
5. Fetching water for sale to miners
6. Engaged in petty-trading

7. Operating drinking and provision shops

The findings of the study as indicated in Figure 2 shows that women were involved in enervating work. More than half (54.0%) of women sampled from the mining sites were engaged in surface mining while another 20.0% of them in alluvial mining. In surface mining women basically engaged in activities including: Digging the soil for ore, head portorage of sand, stones, mud, water and the transportation of these to sieving and crushing sites while shanking/panning and the collection of sand and sometimes hiring the services of a motto king to transport the sand and stones. At the mining sites about 8.0% were food vendors while another 7.0% were petty-traders selling foodstuff and ingredients. Again of the sampled respondents, 5.0% were water vendors with some carrying sachet water for sale while others fetched potable water in buckets and basins to sell.

Figure 4.4: Activities undertaken by women in ASM



Habits

The study inquired to know whether women smoked. Of the 60 respondents none of them indicated that they smoked. About 66.7% of women confirmed haven suffered from sexual harassment while another 33.3% stated otherwise.

Challenges faced in gold mining sites

Women reported of several challenges they were faced with. Access to potable water is one major challenge that about a third (30.0%) of them cited. Dust and its associated cause of cough and difficulties breathing was one other challenge women identified having to contend with in the search for gold money (10.0%). Chest pains arising out carrying heavy loads of sand from pits to grinding sites were identified as one of the challenge women faced. Other challenges cited include the lack of electricity to support mining activities, carrying babies while working and exposing the children to excessive dust, lack of proper healthcare system in the area, customers buying goods on credit and eventually not paying because the gold boom is down and prices of

gold have fallen and therefore having a cascading effect, high cost of living in the mining area as well as having to endure sexual harassment from adult males in the area.

Acquiring concession

The study set out to find out if women in small-scale gold mining were able to raise the needed money to commence the process of acquiring a permit to mine. The findings indicate that only a very small proportion (3.3%) of women are able to raise money to commence the process of acquiring a permit while a significant proportion (81.7%) stated otherwise. About a tenth (10.0%) of the respondents answering this question were not directly involved in mining while another 5.0% did not respond to the question. Subsequently, an insignificant proportion confirmed operating a licensed concession in this mining area.

Payment modes

About three-quarters (75.0%) of women in Talensi reported receiving cash as payment for work done in gold mining while a quarter (25.0%) of them received a proportion of the ore as payment. With regard to 'receiving a proportion of the ore', Women come into verbal agreement with pit owners, to be given some quantified amount of the ore in the form of: grinded sand, raw stones, or coarse material/dug out where they go to process it by themselves. Women who accept this form of payment could either gain or lose entirely. The highest proportion of women (35.0%) interviewed, received their payment on a daily basis, while a little over a quarter (26.7) of them reported receiving payment only when they worked. Nearly one-fifth (18.3%) of them received weekly payments whereas 5.0% accepted monthly work payment system. Another 15.0% described their payment system as unscheduled³³.

Cash payment women received in a day ranged between 20 to 150 GHS, while in a week, women mostly earned between 100 to 250 cedis whereas in a month, their earnings ranged 300 to 500 on average. Respondents explained that there is a lot of variation in their earnings as it is often luck, season where gold boom is high, especially the availability of water helps those of them in alluvial and surface mining. About 96.7% of respondents mentioned that they received payments by themselves while only 3.3% stated that their husbands received any income they earned on their behalf.

Uses of income

The study was further probed into what women spent their earnings from the activities of artisanal gold mining on. About four in ten women sampled from the gold mining sites indicated that they supported the upkeep of their families with earnings from mining while a little over a third (36.7%) of them saved. Another 10.0% used their money to pay school fees while 6.7% of them used their earnings for personal upkeep. Another 5.0% stated using their money to expand the businesses they were operating at the sites.

Drivers of Women in ASM

One cardinal objective of this study was to understand the drivers of women into artisanal small-scale gold mining. A little over a third (35.0%) of the respondents cited poverty situation as the main driver of their presence in mining while nearly another third (28.3%) attributed their presence in mining was to raise money to support their family and children. About 15.0% of women cited mining as the main alternative source of making money close to them. Other

³³ Unscheduled payment means that irrespective of the daily, weekly, or monthly verbal agreement you might have with pit owner or a buyer, your payment can be delayed much longer than expected or given much earlier than expected depended on the fact that the pit owner or buyer one is working for has money.

reasons for women's presence in mining include the fact that: Personal upkeep (6.7%), my husband not employed and I work to support him and dropped out of school because pregnancy and in mining to support self (3.3%).

The study subsequently sought to rate some key factors that possibly explained women's presence in artisanal gold mining. The rating as reflected on the scale of 1-5, with one meaning never being influenced and five meaning most influential factor. Respondents scored all the factors as influential. The lack of opportunities obtained the highest mean score of 4.3 with a standard deviation of 1.1. The implication is that respondents scored the lack of opportunities as an influential factor responsible for their presence in mining as reflected on the scale. With a standard deviation score of 1.1, it demonstrates the commonality of views expressed by respondents on the rated factor. Similarly, respondents found artisanal small-scale mining as a convenient source of earning income as the second rated influential factor as it obtained mean and standard deviation scores of 4.1 and 1.0 respectively. The factor, pushed into gold mining because of my family circumstances was the third rated influential factor as it also obtained mean and standard deviation scores of 3.7 and 1.4 respectively.

Risks in small-scale Gold Mining

The study attempted to understand the risks women suffered while in mining. Of all the women canvassed, none of them smoked. An overwhelming majority of them indicated that they did not have multiple sex partners while 6.7% confirmed having multiple sex partners. Interesting, the findings of the study suggest that about four-fifths (83.3%) of women in mining suffered sexual harassment. Again, a large proportion (75.0%) of the women confirmed suffering physical abuses while nearly a quarter (23.7%) never suffered physical abuses. Only a tenth (11.7%) of women in mining confirmed suffering from sexually transmitted diseases and HIV/Aids. A large proportion (85.0%) of women indicated that they had never contracted any sexually transmitted diseases and HIV/Aids.

Opportunities available to women in ASM

The study sought to find out the opportunities that are available to women in small-scale gold mining. The findings clearly indicate that nearly half (48.3%) of women cited petty-trading as a lucrative opportunity available to them at the mining sites. Petty trading includes individuals engaged in preparation and sale of food, water vendors, operating provision shops, drinking spots among others. Another 16.7% mentioned the picking of shea nuts for processing into shea butter as an opportunity available to them in the mining area. The five mining areas is home to a lot of shea trees. A little over a tenth (13.3%) identified earning income as an opportunity exposed to them in while working in mining. Other reasons offered by women as opportunities available to them included the ability to raise money and start a small (5.0%) and farming (1.7%).

The study again sought to ascertain how artisanal mining is supportive to the course of women. The respondents proffered a number of reasons to buttress the claim of how gold mining supported them. About 21.7% of the women cited the ability to support their family from the activities they engaged in mining while another fifth (20.0%) of them stated financial independence as another source of support from artisanal gold mining. Some other notable reasons mentioned by women included: Payment of school fees of their children (15.0%), ability to feed and care for themselves (15.0%) improved living conditions (10.0%), ability to raise money (5.0%) and lastly the ability to solve financial problems without recourse to men (3.3%).

A significant proportion (65.0%) of women sampled, stated that they were satisfied working in artisanal small-scale gold mining while about 7.0% of them were very satisfied. A little over a quarter (27.0%) of them indicated that they were dissatisfied working in small-scale gold mining.

5.0 DISCUSSIONS OF THE SURVEY

5.1 Demographic Characteristics of Children

Sex of Respondents (Child Miners) for the two study areas is presented in Table 5.1 and discussed.

Table 5.1: Sex of Respondents

Sex composition by Region	Region				Total	
	Western region		Upper East			
	Count	% within Region	Count	% within Region	Count	% within Regions
Male	39	65.0%	31	51.7%	70	58.3%
Female	21	35.0%	29	48.3%	50	41.7%
Total	60	100.0%	60	100.0%	120	100.0%

The survey canvassed 120 children, 60 each from Wassa Japa area in the Western Region and Talensi in the Upper East Region. In all, it established that there are more male (58.3%) children in mining than female (41.7%) children. More male (65.0%) children were found in Small-scale Mining in the Wassa area as compared to their counterparts in Talensi (51.7%). However, with regard to the females, more girls (48.3%) from Talensi were found in small-scale mining 35.0% as compared to the Wassa area. This finding is supported survey findings of Round Six of the Ghana Living Standards Survey (GLSS6:28). It found more male (0.4%) children in quarrying and mining than female children (.1%). Subsequently, the Upper East region (0.7%) recorded more children in quarrying and mining than the Western region (0.4%). This survey observed in both Talensi and Nabdam, there were more male children than female children. The predominance of male children over female children in gold mining was explained by ghetto operators as that; boys are stronger and bolder and carry out hard tasks in *ghetto* mining than their female counterparts. In an interview with one of the leaders of mining operations at 'Tarkwa' in Talensi, on why male children were preferred to female children, the 'Unique Chairman' explained that: "we lack lifts or mining equipment from the underground pits to the surface; hence, the work load is manpower. We employ the male children to go inside gather the *locco*⁴ into sacks and also help to pull the load from the ghetto pits to the surface." Similar observations were made in Japa, where male children were identified to have the strength to work than females in either carting the material from one point to the other. The implication is that boys are more likely to be at risk of facing occupational hazards than their female counterparts.

With regard to girls, in both Talensi and Japa, girls were either involved in alluvial mining or trading activities, as either helping their mothers and or relatives. This aspect of the finding appears to be supported by the ILO (2007) study of girls in mining in Ghana, Peru and the United Republic of Tanzania, where they found that "the involvement of girl child labour in the small-scale mining industry exists both as a part of the mining process and of the commerce that surrounds the mining settlements" (p.3).

⁴*Loco* refers to waste materials or the dugout coarse sand and stones from the '*ghetto pits*'. Boys who engage in this are called *loco* boys

Table 5.2 examines the **age** of the child miners from **Talensi and Wassa** area, with the proceeding paragraphs discussing it.

Table 5.2: Age of Respondents

Age	Age of Respondents (Children)					
	Western Region		Upper East Region		Total	
	Count	% within region	Count	% within region	Count	% within regions
5-10	0	0.0%	4	6.7%	4	3.4
11-14	21	35.0%	16	26.7%	37	30.8
15-17	39	65.0%	40	66.7%	79	65.8
Total	60	100.0%	60	100.0%	120	100.0%

The ages of the child miners as observed in the two study areas ranged from 5 to 17 years. The study grouped the ages in years into three, 5-10, 11-14 and 15-17. In the Wassa Japa area, none of the child miners was in the age bracket of 5-10 years. On the other hand, 6.7% of their counterparts in the Talensi area in mining are between the ages of 5-10. In the second age group of child miners from 11-14 years, it was realised that 35.0% of those in Wassa Japa area and 26.7% of those from Talensi area are into mining. In both the Wassa Japa and Talensi areas, the majority of the child miners were between 15 and 17 years. It was 65.0% in Wassa Japa area and 66.7% in Talensi area.

A study by Centre for Social Policy Studies (2007) which sampled a population of 165 found that the majority (74.0%) of girls in mining were within the age range of 15-18 years. But, findings of Round Six of the Ghana Living Standards Survey (GLSS6: 10) found about one-fifth (19.8%) of children in child labour to be aged 15-17 years. The findings of this survey are consistent with the study by CSPS (2007). What is quite clear is that these studies were conducted directly in mining as compared to the GLSS (2014) which did not specifically analyse age of respondents and the economic activity except with the general age range in child labour. The implication of the finding of this survey is that gold mining is attractive to adolescent children in Talensi and Japa. The reason why adolescent children are involved in gold mining is that, gold mining is a community based activity and attracts all manner of people including children, particularly adolescents, who are in search of money to meet several needs that may not be met by parents.

5.2 **Ages at which children entered gold mining**

From the survey the minimum age at which the first child miner entered into mining was 6 years, while another 5.0% entered at age 7 and all are from the Wassa Japa area. On the other hand the youngest person from the Talensi area entered at age 8. The particular age at which more of the child miners entered into mining was age 14. The percentages were 23.3% and 33.3% for Wassa and Talensi areas respectively. It is seen from the outcome that from the age of 6 years to 17 years, there is continuous potential for children to enter into mining when they have the opportunity. Though the situations fluctuate the number of children entered into mining increased from ages of 10 through 14 and drops a little from 15 years to 17 years. Cumulatively, those children who entered into mining from age 5-10 years constituted 23.3%, 11-14 years were 58.3%, and 15-17 years were 18.4%. This shows that the target age at which majority of the child miners enter into gold mining when the opportunities are available is 11-14 years.

The Western region in terms of mining has a longer history compared to Talensi in the Upper East Region. Thus, it comes as no surprise that more children (25%) between the ages of 5 and ten years were found in Japa than in Talensi (22.0%).

Figure 5.1: Age at which Child Miners First enter into Mining

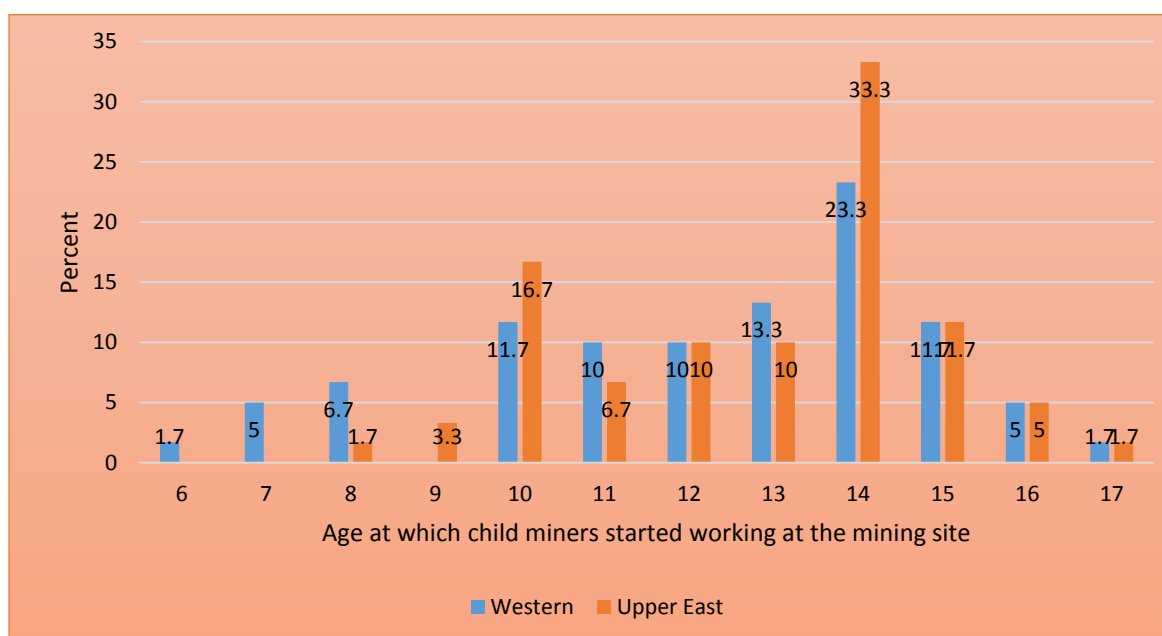
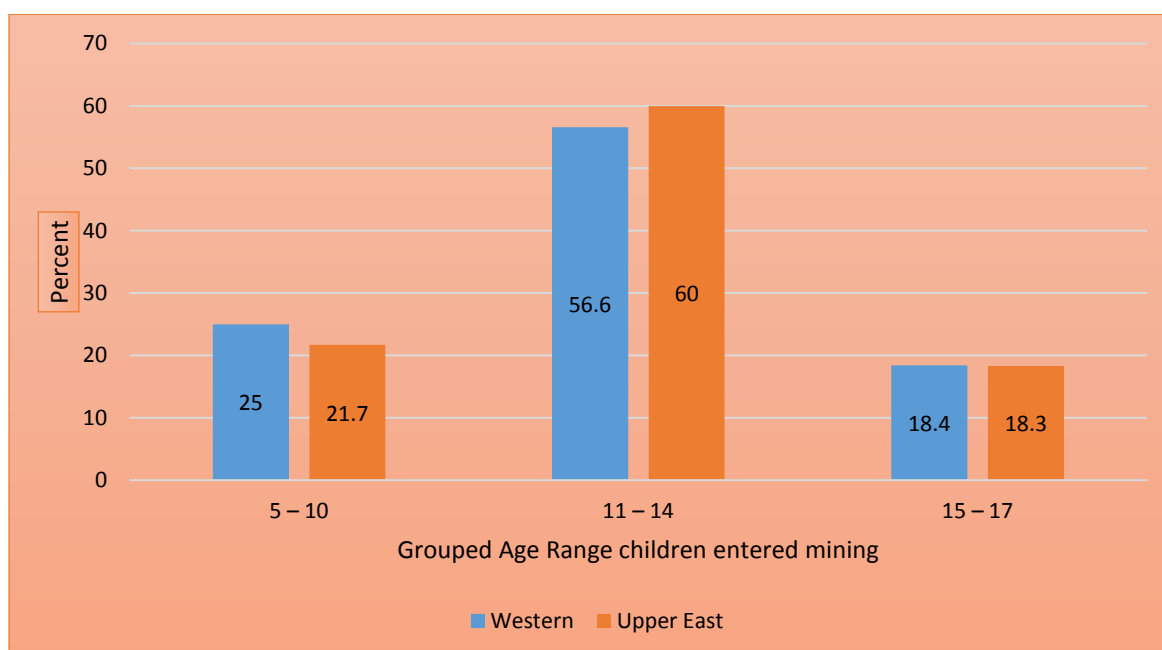


Figure 5.2: Grouped Age Range children entered mining



5.3 Ethnicity

In terms of child miners (as presented in 5.4), it is seen that in both Wassa and Talensi, the indigenes are more in terms of numbers. While 60.0% of those in Japa area are Wassa indigenes, 76.7% of those operating in Talensi area are Talensi. The other ethnic groups found among the child miners who can be described as migrants came relatively from nearby regions or traditional/ethnic areas. Among the Japa area 35.6% were Akans, 3.4% Ewes, and 1.7% Nzemas. From the Talensi area, other ethnic groups that were found were the Nabdam with 13.3%, Grunsi with 1.7% and Effutu from the Central Region with 1.7%. Interestingly, 6.7% of the child miners in the Talensi area are Mossi who come from Burkina Faso.

The survey found that children in small-scale mining were mainly indigenes in both study areas. It again found that there is migration of diverse ethnic groups to the mining communities of the Talensi and Japa. Inquires established that children from other regions migrate to the mining communities with their parents and or guardians. In the case of Talensi, the predominance of people of the Upper East region supports the findings of Hison (2010) that the flourishing small-scale gold mining activity in Talensi and Nabdam has become the economic cornerstone of the Upper East Region. As at then Hison, estimated over 10,000 men, women and children to be directly employed by the small-scale gold mines. He contends that but the number continues to increase 'because people are getting ore' and the price of gold is at a record high. Again the findings of Canagarajah and Portner (2003) suggest that there is about 30 percent school dropout rate among school children in the Upper East region and that many unemployed youth seek work in the small-scale mines.

Table 5.3: Ethnicity of Respondents

Ethnicity of Respondents	Region				Total	
	Western region		Upper East			
	Count	% within Region	Count	% within Region	Count	% within Regions
Akan	21	35.6%	0	0.0%	21	17.5%
Ewe	2	3.4%	0	0.0%	2	1.7%
Wassa	36	60.0%	0	0.0%	36	30.0%
Nzema	1	1.7%	0	0.0%	1	0.8%
Talensi	0	0.0%	46	76.7%	46	38.3%
Nabdam	0	0.0%	8	13.3%	8	6.7%
Mossi	0	0.0%	4	6.7%	4	3.4%
Grunsi	0	0.0%	1	1.7%	1	0.8%
Effutu	0	0.0%	1	1.7%	1	0.8%
Total	60	100.0%	60	100.0%	120	100.0%

5.4 Indigenes versus Migrants

In categorising the child miners into migrants and indigenes in general, it was found that 62.5% were indigenes and 37.5% migrants. However, the percentages differed between the two study areas. Whilst there were 50.0% each indigenes and migrants from the Wassa Japa study area, it was 75.0% indigenes and 25.0% migrants for the Talensi study area.

Flowing from the above **Table 5.4**, on ethnic backgrounds of children in mining areas, it is important to note that Western region as part of southern Ghana, has a rich history of mining and largely explains the huge presence of indigenes compared to Talensi (see Table 5.5).

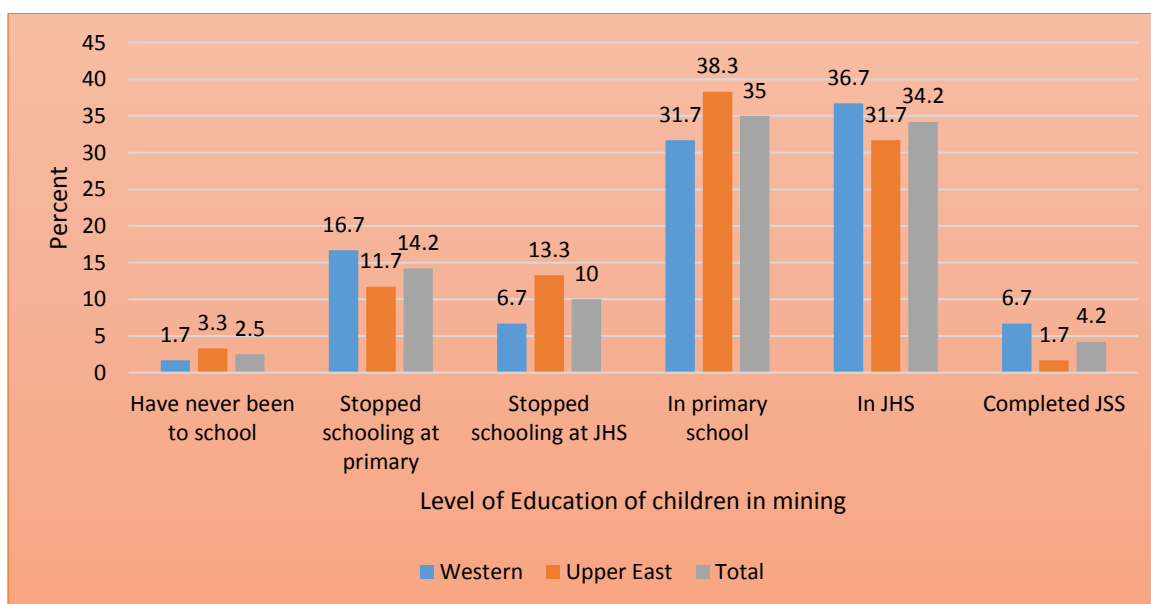
Table 5.4: Status of Child Miners - Migrants and non-Migrants

Status of Respondent	Region				Total	
	Western region		Upper East			
	Count	% within Region	Count	% within Region	Count	% within Regions
Migrant child in mining site	30	50.0%	15	25.0%	45	37.5%
Indigene	30	50.0%	45	75.0%	75	62.5%
Total	60	100.0%	60	100.0%	120	100.0%

5.5 Educational Characteristics of Child Miners

From Table 5.6 one can deduce the educational characteristics and its implications with respect to child miners.

Table 5.3: Educational Characteristics of Child Miners



The survey ascertained the levels of education that the child miners are. It came up that 2.5% of the respondents (on the average) have never been to school before. Of these, 1.7% were from Wassa Japa operations area while 3.3% were from the Talensi area. Also, 14.2% of all the child miners stopped schooling at the primary level and are in active mining. They are made up of 16.7% of the Wassa Japa area miners and 11.7% of those from Talensi area. The school discontinuing rate at primary level at Wassa Japa area is 5.0% higher as compared to those from

the Talensi. However, the drop-out rate for entry into mining at the JHS level is relatively lower at Wassa Japa area with 6.7% as compared to 13.3% in the Talensi area. The children in mining and still at the primary school level for Wassa Japa were 31.7%. In the Talensi area, however, 38.3% of the child miners are still in primary school. The study's findings further shows that more of the JHS school-attending child miners are in the Wassa Japa area than in the Talensi area. Whilst the number increased from 31.7% at the primary level to 36.7% in Wassa Jappa area, it decreased in the Talensi area from 38.3% to 31.7%.

The implication of this finding is that children are more likely to drop out of school at the Primary level in Wassa Japa than in Talensi and in the converse the dropout rate is more at the JHS level in Talensi compared to Wassa Japa. This is explained by the age children enter mining. It is observed that in the Western region as depicted in **Table 5.3**, children started mining at age 6, which implies that the likelihood of stopping primary education is higher while many more children in Talensi started entering from 10 and 11 years, thus the likelihood of dropping out is higher. As argued by Gage (2005) that the demand for child labour has been identified as the primary factor behind low school attendance in the Upper East Region, although it is unclear whether there is a direct trade-off between schooling and work.

The findings also brought to the fore the fact that children combined school with mining. Children who have completed JHS are still in mining. This is represented by 4.2% of all the child miners interviewed and constituted by 6.7% from Wassa Japa area and 1.7% from the Talensi area. This shows that more children from the Wassa Japa area prefer to continue mining after JHS, with the reason that they want to mobilise funds to continue their education at the SHS level.

Educational attainments of the child miners were examined to ascertain its possible connotations on children into mining as depicted in Table 5.7.

On the side of the fathers, it came out that in all, 53.8% have been to school before. It was made up of 68.4% and 40.0% of the fathers of the child miners from Wassa Japa and Talensi areas respectively. The 46.2% of these fathers who have not been to school before were distributed as 31.6% for Wassa Japa and 60.0% for Talensi areas. Five per cent of the child miners from Wassa Japa could not tell whether their parents ever attended school or not as they passed away while they were in tender ages. For those who attended school, were relatively low. It was observed from the analysis that 43.8% from Wassa study area had JHS education, 8.3% completed middle school form four, another 8.3% had primary education, and 1.7% completed SHS level. None had a tertiary education. From the Talensi study area, 11.7% had JHS education, 21.7% with primary education, 5.0% with SHS level and 1.7% with tertiary level of education.

Table 5.5: Educational attainment of parents of child miners

Educational attainment of parents of child miners	Region				Total	
	Western region		Upper East		Count	% within Regions
	Count	% within Region	Count	% within Region		
Has your father ever attended school?						
Yes	39	68.4%	24	40.0%	63	53.8%
No	18	31.6%	36	60.0%	54	46.2%
Total	57	100.0%	60	100.0%	117	100.0%
if yes, please indicate the level of education						
None	23	38.3%	36	60.0%	59	49.2%
JHS	26	43.3%	7	11.7%	59	27.5%
Middle School Form Four	5	8.3%	0	0.0%	5	4.2%
Primary	5	8.3%	13	21.7%	18	15.0%
SHS	1	1.7%	3	5.0%	18	3.3%
Tertiary	0	0.0%	1	1.7%	1	0.8%
Total	60	100.0%	60	100.0%	120	100.0%
Has your mother ever attended school						
Yes	27	45.0%	10	16.7%	37	30.9%
No	33	55.0%	50	83.3%	83	69.1%
Total	60	100.0%	60	100.0%	120	100.0%
if yes, please indicate the level of education						
None	33	55.0%	50	83.3%	84	69.1%
JHS	20	33.3%	2	3.3%	22	18.3%
Primary	7	11.7%	8	13.4%	14	12.5%
Total	60	100.0%	60	100.0%	120	100.0%

A look at the educational background of the mothers of the child miners showed that 45.0% of those from Wassa study area and 16.7% of those from Talensi did attend school to a certain levels. The general percentage for all the mothers for the two study areas stood at 30.9%. In effect, 69.1% of these mothers of the child miners had never been to school before. The levels attained in education by the minority of the mother who have been to school before was still not encouraging as it came out that 33.3% from Wassa area and 3.3% from Talensi area had JHS education. Also, 11.7% and 13.4% of the mothers from Wassa and Talensi areas respectively had only up to primary level of education. It can be said generally that the parents of these child miners had low level of education, especially the mothers of the respondents from the Talensi area. This finding is collaborated by Hilson (2010) when he observes that throughout the district, high level of illiteracy is common among parents; yet, most still encourage their children to attend school.

Research indicates the beneficial effects of parental educational level as an important index of predicting children's educational achievement and behaviour (Dubow, Boxer & Huesmann 2009). Duncan and Brooks-Gunn (1997) concluded that maternal education was linked

significantly to children's intellectual outcomes even after controlling for a variety of other Socio-economic status [SES] indicators such as household income. In the general social learning and social-cognitive framework Bandura (1986) notes that behaviour is shaped in part through observational and direct learning experiences. Those experiences lead to the formation of internalized cognitive scripts, values, and beliefs that guide and maintain behaviour over time (Anderson & Huesmann, 2003). From the foregoing discussion, it is apparent that children whose parents have little or no education are most likely not to be able to influence their children internalize the positives of formal education. It stands to reason that a lot of children in gold mining are products whose parents have low or no education and therefore unable to influence them acquire education for their future career particularly from the poor rural context. An attempt to address this concern adequately must consider seriously a holistic educational programme targeting parents as well as to see the benefits of supporting their children in school. Community role models would constitute a significant influence in this regard as in the views of Bandura, observational learning is key in this regard. Communities have to identify educational achievers and these educational achievers are utilized to help in the sensitization process.

5.6 Factors driving children into ASM

In order to understand the factors that push children into mining, the survey as presented in Table 5.8, looked at the drivers.

Table 5.6: Factors driving children into ASM

Drivers	Region				Total	
	Western region		Upper East			
	Count	% within Region	Count	% within Region	Count	% within Regions
Help pay school fees and buy school items	1	1.7%	11	18.3%	12	10.0%
Influence from friends	3	5.0%	2	3.3%	5	4.2%
Not attending school	1	1.7%	3	5.0%	4	3.3%
Poverty, and a convenient source of earning a living	35	58.3%	31	51.7%	66	55.0%
Support family	20	33.3%	4	6.7%	24	20.0%
Support my mother	0	0.0%	7	11.7%	7	5.8%
The family migrated here	0	0.0%	2	3.3%	2	1.7%
Total	60	100.0%	60	100.0%	120	100.0%

In discussing child labour in gold mining, the survey set out to find out the factors driving children into artisanal gold mining. From **Table 5.8**, the main reasons cited for children in mining is poverty, and mining seen as a convenient source of livelihood and the need to support family. More than half (55.0%) of child miners identified the poverty situation of their families, parents and their environment as driving them into mining and the fact that artisanal mining in their communities is a convenient source of earning a livelihood for themselves. One-fifth of them (20.0%) stated that they were in mining to support their families. The need for children to pay school fees and buy school items accounted for ten percent while support for mother (5.8%), influence from friends (4.2%) as well as children not attending school (3.3%) accounted for their presence in artisanal gold mining.

It is observed from Table 5.8 that support for family and the poverty situation cum mining seen as a convenient of livelihood slightly appears to be driving children more in the Western region (Wassa Japa area) compared to Talensi. Another observation from the data is that children mined in order to support them pay school fees as well as buy school items (18.3%) is a major driving factor among children in Talensi. In addition, the need for children to support mothers, not attending school families relocating to mining areas appear to be driving children in the Talensi into mining.

5.7 People who influenced children into mining

To know of the liking individuals of child miners into the act, the study specifically asked the people or individuals that introduces the children into mining. This is to understand further who the forces are and be able to link them to the drivers for possible intervention. The outcome is presented in Table 5.9, followed by the discussion.

Table 5.7: People who influenced children into mining

Influential people	Region				Total	
	Western Region		Upper East			
	Count	% within Region	Count	% within Region	Count	% within Regions
Father	1	1.7%	4	6.7%	31	4.2%
Mother	9	15.0%	17	28.3%	26	21.7%
Uncle	1	1.7%	0	0.0%	1	0.8%
Auntie	0	0.0%	1	1.7	1	0.8%
Self	30	50.0%	36	60.0%	66	55.0%
Friends	13	21.7%	2	3.3%	15	12.5%
Caretakers who brought them to the location	6	10.0%	0	0.0%	6	5.0%
Total	60	100.0%	60	100.0%	120	100.0%

The findings indicate that the majority (55.0%) of child miners went into artisanal gold mining by themselves. Talensi (60.0%) record a slight majority of children going into mining by themselves over Wassa Japa (50.0%). Mothers (21.7%) were the second most influential people with regard to children going into mining. Again, children from Talensi (28.3%) were influenced by their mothers than Wassa Japa (15.0%). Friends (12.5), fathers (4.2%) and caretakers who brought children to the mining locations (5.0%) are some of the influential people in respect of going into mining. It is noted from the data that children themselves, mothers and fathers in order of rank are the influential people in Talensi while children themselves, friends, mothers and caretakers are also the influential people responsible for children going into mining. The implication of this finding is that the immediate families of children in mining areas influence them into ASM. Every attempt must therefore be made in targeting this people in an effort to overcome child labour in mining.

5.8 Social Characteristics of children in Mining

Literature review provide estimates of children involved in artisanal small-scale mining. But these studies does not give information on the social backgrounds of these children in small-scale gold mining in Ghana. This survey attempted to fill this yawning gap by trying to understand the social characteristics of children involved in small-scale gold mining activities in the country. This situations are presented in **Tables 5.8, 5.9, 5.10, 5.11, 5.12, 5.13 and 5.14** with discussions.

Table 5.8: Living arrangements of children in gold mining

Do you live with your parents in the mining site?	Region				Total	
	Western region		Upper East			
	Count	% within Region	Count	% within Region	Count	% within Regions
Yes	34	59.6%	42	70.0%	76	65.0%
No	23	40.4%	18	30.0%	41	35.0%
Total	57	100.0%	60	100.0%	117	100.0%

The study looked at the social characteristics of the children in mining by finding out if they lived with their parents or not at the mining sites. It came out that majority of them lived with their parents as affirmed by 65.0% of the respondents. This was indicated by 59.6% from Wassa Japa area and 70.0% of those in the Talensi area. The remaining 35.0% lived with other relatives, employers and friends.

Table 5.9: Social backgrounds of children in mining areas

Father alive	Region				Total	
	Western region		Upper East		Count	% within Region
	Count	% within Region	Count	% within Region		
Yes	48	80.0%	34	56.7%	82	68.3%
No	12	20.0%	26	43.3%	38	31.7%
Total	60	100.0%	60	100.0%	120	100.0%
Mother alive	Count	% within Region	Count	% within Region	Count	% within Region
Yes	55	91.7%	45	75.0%	100	83.3%
No	5	8.3%	15	25.0%	20	16.7%
Total	60	100.0%	60	100.0%	120	100.0%
An orphan						
Yes	7	11.7%	11	18.3%	18	15.0%
No	53	88.3%	49	81.7%	102	85.0%
Total	60	100.0%	60	100.0%	120	100.0%

The child miners answered whether either of their parents or both were alive or not. It came out that 20.0% and 43.3% of the child miners in the Wassa Japa and Talensi areas do not have their fathers alive. On the state of their mothers, 8.3% of the children from Wassa Japa and 25.0% of the children from the Talensi area indicated to have lost their mothers. On the whole, 11.7% of child miners from Wassa Japa area and 18.3% of those from Talensi area are orphans (lost both parents average 15%). This sums up to show that 40.0% of child miners from the two study areas are orphans, possibly indicating the need to do mining for survival. This sums up to show that 40.0% of child miners from the two study areas are orphans, possibly indicating the need to do mining for survival. It is no surprise that about 50.0% and 60.0% of children in Wassa Japa and Talensi respectively are in mining by themselves. The patterned trend is that poverty and the convenience of ASM in mining communities appears to be driving children into ASM. This is immediately followed by the need to support families.

Table 5.10: Social backgrounds of children in mining areas

Are your parents separated?	Region				Total	
	Western region		Upper East			
	Count	% within Region	Count	% within Region	Count	% within Region
Yes	37	61.7%	30	50.0%	67	55.9%
No	23	38.3%	29	48.3%	52	43.3%
Non applicable	0	0.0%	1	1.7%	1	0.8%
Total	60	100.0%	60	100.0%	120	100.0%
	Region				Total	
	Western region		Upper East			
Are you a child of a single parent?	Count	% within Region	Count	% within Region	Count	% within Region
Yes	16	34.0%	18	30.0%	34	31.8%
No	31	66.0%	42	70.0%	73	68.2%
Total	47	100.0%	60	100.0%	107	100.0%

Whether the parents of the child miners were staying together or not was explored. From the Wassa Japa area, 61.7% of the child miners said their parents are separated while 50.0% of those from Talensi said their parents are separated. Further questioning revealed that 34.0% of child miners from Wassa Japa and 30.0% of those from Talensi are children of single parents.

Table 5.11: Father still married to the mother

If both parents are alive, is your father still married to your mother?	Region				Total	
	Western region		Upper East			
	Count	% within Region	Count	% within Region	Count	% within Region
Yes	19	44.2%	32	54.2%	51	50.0%
No	24	55.8%	23	39.0%	47	46.1%
Parents not living together by marriage	0	0.0%	4	6.8%	4	3.9%
Total	43	100.0%	59	100.0%	102	100.0%

Of the 120 child miners from the two study areas, who have both parents alive, it was found that 44.2% and 54.2% from Wassa Japa and Talensi respectively were still married. From the Wassa Japa area, 55.9% of those whose parents were alive are no longer married. From the Talensi area, 39.0% of the child miners whose parents were alive are no longer staying as couples. The study again showed that 3.9% of the child miners from Talensi area have both parents alive but do not live together by marriage.

Table 5.12: Number of siblings of child miners working in gold mining

How many siblings are working in gold mining					Total	
	Western region		Upper East			
	Count	% within Region	Count	% within Region	Count	% within Region
0	3	5.0%	19	31.7%	22	18.3%
1	24	40.0%	6	10.0%	30	25.0%
2	16	26.7 %	17	28.3%	29	27.5%
3	4	6.7%	8	13.3%	12	10.0%
4	2	3.3%	6	10.0%	8	6.7%
5	5	8.3%	4	6.7%	9	7.5%
6	2	3.3%	0	0.0%	2	1.7%
7	1	1.7%	0	0.0%	1	0.8%
8	2	3.3%	0	0.0%	2	1.7%
10	1	1.7%	0	0.0%	1	0.8%
Total	60	100.0%	60	100.0%	116	100.0%

The study looked at the number of siblings that the child miners have. It was observed from the study that the number of siblings ranged from none to 10. The data showed that those from Talensi ranged from zero to five, while that of Wassa ranged from zero to 10. It was realised that those with one or two siblings were in majority with a total of 52.5%. Within the study area however showed that 40.0% of those in Wassa Japa area have one sibling while those from Talensi had only 10.0%. Those who had two other siblings were 26.7% for Wassa and 28.3% from Talensi. Children in mining who had no siblings stood at 18.3% made up of 5.0% from Wassa and 31.7% from Talensi.

Table 5.13: Fathers' occupation

Occupation of father	Region				Total	
	Western region		Upper East			
	Count	% within Region	Count	% within Region	Count	% within Region
Do not work	15	25.0%	19	31.7%	34	28.3%
Barber	1	1.7%	0	0.0%	1	0.8%
Cocoa merchant	3	5.0%	0	0.0%	3	2.5%
Driver	3	5.0%	1	1.7%	4	3.3%
Farmer	21	35.0%	21	35.0%	42	35.0%
Galamsey	12	20.0%	18	30.0%	30	25.0%
Machine operator	1	1.7%	0	0.0%	1	0.8%
Miner	0	0.0%	1	1.7%	1	0.8%
Palm wine tapper	1	1.7%	0	0.0%	1	0.8%
Trader	3	5.0%	0	0.0%	3	2.5%
Total	60	100.0%	60	100.0%	120	100.0%

One other social characteristic of the parents of the child miners that was examined was their occupation. On the fathers 28.3% said they do not work. They were made up of 25.0% from Wassa and 31.7% from Talensi areas. Those fathers that worked as farmers constituted 35.0%

each from the two study areas. The results also showed that 25.0% of the fathers of the child miners were into *galamsey* activities, constituted by 20% from Wassa and 30.0% from Talensi. Other occupational activities undertaken by the fathers included barbering (0.8%), cocoa merchant (2.5% - all from Wassa area), driver (3.3%), machine operator (0.8%), miners (0.8%), palm wine tapper (0.8%) and trader 2.5%).

Table 5.14: Mothers' Occupation

What is the occupation of your mother	Region				Total	
	Western region		Upper East			
	Count	% within Region	Count	% within Region	Count	% within Region
Do not know	13	21.7%	9	15.0%	22	18.3%
Farmer	19	31.7%	2	3.3%	21	17.5%
Food vendor	5	8.3%	1	1.7%	6	5.0%
Galamsey	13	21.7%	23	38.3%	36	30.0%
Housewife	0	0.0%	9	15.0%	9	7.5%
Miner	0	0.0%	3	5.0%	3	2.5%
None	1	1.7%	0	0.0%	1	0.8%
Trader	9	15.0%	13	21.7%	22	18.3%
Total	60	100.0%	60	100.0%	120	100.0%

The mothers of the child miners occupational activities examined showed varied activities as well. It came up that 18.3% do not know the activities that their mothers engage in as indicated by 21.7% from Wassa and 15.0% from Talensi areas. Seventeen per cent said their mothers are farmers as indicated by 31.7% and 17.5% of the respondents from Wassa and Talensi areas respectively. One occupation that the mothers engaged more in it is *galamsey* as said by 30.0% (21.7% from Wassa and 38.3% from Talensi). Other occupations that were engaged by some mothers of children in mining were food vending (5.0%), miner (2.5% - all from Talensi area), and no work (0.8%), trading (18.3%: 15.0% from Wassa and 21.7% from Talensi). It also came out that 15.0% of the women from the Talensi area whose children work as miners are housewives. This situation was completely not existing at the Wassa area.

Working hours of children in gold mining

The number of hours child miners work at mining sites has implications on their health and schooling with particular concerns about the academic performance. The responses obtained from this are presented in Table 5.17 and followed with the discussions.

Table 5.15: Working hours of children in gold mining

Number of hours worked in a day	Region				Total	
	Western region		Upper East			
	Count	% within Region	Count	% within Region	Count	% within Region
1-3	17	28.3%	13	21.7%	30	25.0%
4-6	22	36.7%	36	60.0%	58	48.3%
7-9	19	31.7%	6	10.0%	25	20.8%
10 hours or more	2	3.3%	5	8.3%	7	5.8%
Total	60	100.0	60	100.0%	120	100.0%

A major cause of concern and a source of great vulnerability for child labourers in gold mining area relates to the number of hours that they are reported to working in. The results indicate about a quarter (25.0%) of children worked between one to three hours. Nearly a third of them (8.3%) came from Wassa Japa area while a little over one-tenth of them (21.7%) were Talensi in the Upper East region. The findings indicate quite clearly that the bulk (48.3%) of children worked between 4 and 6 hours with two-thirds of them (60.0%) from Talensi while a little over a third of them (36.7%) from the Wassa Japa area. In addition, children who worked between 7 and 9 hours constituted 20.8 % of those interviewed. Wassa Japa area recorded the highest proportion (31.7) of them working in this category while Talensi had about 10.0 % of them. Moreover, less than a tenth (5.8%) of children worked more than 10 hours a day with the Talensi recording the highest number of them (8.3%) while Wassa Japa recorded 3.3% of them.

A close observation of the number of hours worked as seen on the Table, reveals that on a cumulative basis, children from Talensi area spent more hours in gold mining than those in Wassa Japa. The finding that children from Talensi spend more time in in gold mining than those in Wassa Japa area, appears consistent with the Round Six of the Ghana Living Standards Survey report on child labour which found the highest proportion of children from rural Savannah Zone working more 43 hours in a week compared to other children from other ecological zones.

The finding of this survey has impact on children who combined school with mining. This is against the backdrop that in the Children's Act (560), the hours of work is embodied in the child labour concept as those of them either engaged in conditional or unconditional worst forms of child labour to be exploitative. It is exploitative to the extent that when children work for long hours, it endangers their health, affects their participation and performance in school and thus affects their overall development.

Forms of payment

As found in other studies the motivation into mining by children is to make many and meet some expectations. The findings from the two study domains are presented and discussed in Table 5.18.

Table 5.16: Forms of payment

Payment mode	Region				Total	
	Western region		Upper East			
How are you paid?	Count	% within Region	Count	% within Region	Count	% within Region
Cash	50	87.7%	42	71.2%	92	79.3%
in kind	2	3.5%	13	22.0%	15	12.9%
Both cash and in kind	5	8.8%	4	6.8%	9	7.8%
Total	57	100.0%	59	100.0%	116	100.0%

The findings of the survey revealed different forms of remuneration exist in the mining sites. Evidence from Wassa Japa and Talensi, gold mining areas suggests that three quarters (79.3%) of children received their payment by cash. Cash payment was more pervasive in Wassa Japa (87.7%) than in Talensi (71.2%). In kind⁵ payment constituted nearly 13 percent (12.9%) with

⁵ In kind payment here refers to a system whereby children receive a proportion of the ore, work directly for their parents/guardians and do not directly get the proceeds of their labour.

children (22.0%) in Talensi utilizing this form of payment compared to their counterparts in Wassa Japa, which accounts for only 3.5%. In other instances, both cash and in kind payments apply at the same time. It was the least form of payment system used in both Talensi and Wassa. It was slightly recorded more in Wassa (8.8%) than in Talensi (6.8%).

Unlike in other places like Peru that the mode of payment is largely determined by the task, this was not found to be so in both places. Irrespective of task a child engages in, either in Talensi or Wassa, a child is aware of the form in which he or she would be paid.

Mercury usage

Gold amalgamation at the artisanal levels is heavily done with mercury, though harmful if it enters the body. Its use in the study areas and the children's knowledge about it are presented in Table 5.19 and discussed.

Table 5.17: Use of Mercury

	Region				Total	
	Western region		Upper East			
Do you use mercury in amalgamation of gold?	Count	% within Region	Count	% within Region	Count	% within Region
Yes	34	57.6%	46	76.7%	80	67.2%
No	25	42.4%	14	23.3%	39	32.8%
Total	59	100.0%	60	100.0%	119	100.0%

The findings indicate that the use of mercury in the amalgamation of gold is quite common in Waasa Japa and Talensi mining areas. About 67.2 percent affirmed the usage in both mining with Talensi recording the highest (76.7%) amount of usage by children compared to Wassa Japa (57.6%). On the contrary, more children in Wassa Japa (42.4%) expressed not having ever used mercury before as was found with children from Talensi (23.3%) in the Upper East region. In the case of Talensi, children indicated that they often go into the ghettos to gather debris of rocks after dynamites locally referred to as 'kagum', 'foot', 'light rope' are used for blasting. They shared their experiences which relate to the fact that anytime they go down to collect the broken rocks into sacks for haulage, they inhale the fumes from the blasting which sometimes make them fall sick. This situation is however, not so in the Wassa Japa area. The children in mining are mostly doing so on their own or with their peers or benefactors. The nature of mining is also alluvial and do not do underground rock mining. Where ghettos are involved, there are no children allowed.

Indeed, during interviews with children from Talensi, it was found that male children were more familiar with the use of mercury in amalgamation and burning of gold ore than females. Children also reported illness that showed signs and symptoms from mercury poisoning. For example, having itchy eyes, respiratory problems, cough with blood stains and chest pains amongst others. This finding supports Afrikids (2008) medical assessment of children in gold mining from Nangodi and other gold mining areas in the Nabdam and Talensi districts and found mercury poisoning to be high among children. This finding also supports Hinton (2005), that one of the most studied health aspects of ASM is mercury misuse, which poses a serious occupational and health hazard to gold miners. Hinton's study explained that, the risk of exposure to gold processing is greater when burning is conducted in confined spaces or the miner, or other

observers are in close proximity to the amalgam during burning. Her study, found that chronic exposure to mercury vapour caused gingivitis, muscular tremors and psycho-pathological symptoms, such as depression and exaggerated emotional responses. The finding noted that mercury poisoning is difficult to diagnose as it could easily be confused with alcoholism, fever, malaria or other tropical diseases. In the Wassa area, the child miners obtain the mercury from the buyers. What the children do is to use it extract the gold obtained. They then send it to the buyers who apply heat to get in refined and weigh and pay them. The danger however is that they are still exposed the fumes generated through the process and any inherent health hazard that could be associated.

The Minerals and Mining (Explosives) Regulations, 2012 (LI.2177) prescribe regulations under which explosives can used. In fact, these regulations apply to large scale miners or licensed mining where the Chief Inspector of Mines is mandated to ensure the proper use of explosives under the regulations set. In Talensi, for example, a lot of the mining activities are illegal because they are unregistered and therefore not supervised (Hilson, 2010). Miners do not follow the regulations as envisaged under the Legislative Instrument (LI 2177). It is therefore imperative that steps are taken by appropriate authorities such as the District Assembly.

Child Protection teams

Interviews were conducted with the Talensi and Wassa Amenfi East District Assemblies, the Department of Social Development, Department of Community Development and (Afrikids and child rights Non-Governmental Organization only in Talensi). These interviews were conducted to learn from these institutions/stakeholders what worked well or what did not work well with respect to the implementation of the National Plan to Eliminate the Worst Forms of Child Labour in the country by 2015, particularly in artisanal small-scale mining.

The findings revealed that these institutions were unaware of the implementation of any such National Plan. Indeed, the Department for Social Development confirmed attending workshops leading to the eventual launch of the plan in 2009 in Talensi District, but indicated that since then, funds have not been allocated to execute the plans at the district level. The child protection teams as envisaged in the plan are not in place on the ground. In the Wassa Amenfi East District, the Assembly is overwhelmed by the situation because the mineralisation is so high that there are *galamsey* activities everywhere making it virtually impossible the trace everywhere.

However, the Talensi District in collaboration with Afrikids, implemented an ILO sponsored Time Bound Programme that identified and withdrew 150 child labourers in mining. This project put in a community child labour committee system that worked in identifying the children in the mines. This project was for a period of two years. It must be pointed out that the awareness created by the Time Bound Project contributed significantly to parents eventually disallowing their children participate in mining. Had the National Plan been implemented, it would have built on the efforts already started. However, the vigour is gradually waning, no wonder, a number of children were found mining in the various locations. In the Wassa Amenfi East District, it has been interventions by the District Education Directorate that have been carrying out sensitisation programmes in the schools about the dangers and the need to stay in school.

The Talensi and Wassa Amenfi East districts identified the paucity of financial capacity to ensure that law enforce agencies execute the requirements of eliminating child labour in the country as

directed by the Children's Act. Also, the district further explained that at the mining sites, there is no Police presence to enforce law and order of which child labour is a part. The district on its own cannot afford except programmes such as the National Plan on the Elimination of Child Labour is followed through.

Cases of Child Trafficking

Researchers enquired to know if children were trafficked to the mining areas. The response from various stakeholders contacted; opinion leaders, Department of Social Development, miners and in some cases NGOs, was an emphatic no. In the case of Talensi, Afrikids, a Non-Governmental Organization which partnered the ILO to withdraw children from mining through its programme director in Tongo (Ayaaba Yilas) stated without reservation of no incidence of child trafficking occurring at the mining sites. He explained that the children found at the mining sites are indigenes from nearby communities while the rest of the other children migrated with their parents to the mining sites.

5.9 MIGRANTS

5.9.1 Demographics/background characteristics

A trend commonly found at ASM sites is a mixture of local residents and migrants or settlers working together. The study also looked at this trend to see if miners move from longer distances to undertake mining. The findings are discussed from the data presented in **Tables 5.18, 5.19 and 5.20.**

Table 5.18: Demographics of Migrants in small-scale mining

Regional composition of Respondents	Region				Total	
	Western region		Upper East		Count	% within Regions
	Count	% within Region	Count	% within Region		
Ashanti	4	6.7%	2	3.3%	6	5.0%
BrongAhafo	1	1.7%	0	0.0%	1	0.8%
Burkina Faso	0	0.0%	7	11.7%	7	5.8%
Central	8	13.3%	7	11.7%	15	12.5%
Eastern	8	13.3%	3	5.0%	11	9.2%
Northern region	3	5.0%	8	13.3%	11	9.2%
Upper East	14	23.3%	23	38.3%	37	30.8%
Upper West	2	3.3%	4	6.7%	6	5.0%
Volta	1	1.7%	3	5.0%	4	3.3%
Western	19	31.7%	3	5.0%	22	18.3%
Total	60	100.0%	60	100.0%	120	100.0%

The 2010 Housing and Population Census describes migration as a change in one's usual place of residence. A migrant is therefore defined as a person whose usual place of residence is different from his/her place of birth or previous residence. Findings of the survey in terms of regional representation indicates with the exception of Greater Accra, people from other regions migrate

to places artisanal gold mining activities are undertaken. A significant (30.8%) of people from the Upper East region appear to be migrating to places where ASM activities are undertaken. For example, in Talensi (38.3%) and Wassa Japa (23.3%), people of the Upper East are involved. The next region is the Western region with nearly one-fifth (18.3%) of them in ASM activities. In Wassa in particular, there is about 31.7% of them while in Talensi about 5.0% of them engaged in ASM activities. Interestingly, citizens of Burkina Faso are found in ASM activities in Talensi and not in Wassa Japa. The reason could be the proximity of Burkina Faso to the Upper East region. Even though Wassa Japa area is closer to Cote D'Ivoire, there is no record of foreigners migrating to the area to participate in ASM activities. It is possible that the Mining Act (703) which criminalises the engagement of foreigners in small-scale mining operations and also makes it an offence for Ghanaians to employ or engage foreigners to undertake or participate in illegal small scale-mining activities is observed in Wassa Japa and not in Talensi.

The Northern Territories were deemed by the colonial regime to have little direct economic value, hence in the 1920s Governor Guggisberg designated the territories as a labour reserve for the supply of cheap labour for the mines and general labour in the cities in the South (Guggisberg 1920). The period 1919 to 1924 saw the acceleration of labour recruitment in the Northern Territories. When Guggisberg launched his development plan in November 1919 he calculated that a labour force of 27,000 men would be needed and suggested that a special recruitment scheme be organised in the Northern Territories (Anarfi et al., 2003).

The 1910 Annual Report of the West African Chamber of Mines complained that 'all the local supply of native labourers was exhausted and the industry was faced with a shortage'. This problem came about as a result of the fact that Akan mine labourers resented underground work. They believed that underground mining was associated with unfriendly spirits (Anarfi et al., 2003). The demand for labour in the mining industry far outstripped supply in what used to be a predominantly agrarian economy in these areas. It is known that in many cases, indigenous people or the local labour force were either unwilling or unable to supply the labour requirements (Adepoju, 2005). The shortfall in labour supply, improvements in road networks and communication infrastructure, and less stringent inter-regional border controls provided the necessary impetus and demand that encouraged a wave of immigrants from neighbouring British, French and German colonies into the Gold Coast in search of work. Immigrants from other West African countries congregated in the mining areas and constituted a workforce that often far outnumbered native or indigenous people. It is on record that just before the onset of the Second World War, well over 100 prospects or deposits, located in fairly narrow gold-bearing corridors described as belts, were owned by foreigners in the Gold Coast and northern territories (Junner, 1935).

Table 5.19: Sex of Migrant Miners by region

Sex of respondents	Region				Total	
	Western region		Upper East		Count	% within Region
	Count	% within Region	Count	% within Region		
Male	28	46.7.0%	53	88.3%	81	67.5%
Female	32	53.3.0%	7	11.7%	39	32.5%
Total	60	100.0%	60	100.0%	120	100.0%

Of the 120 migrants surveyed, 60 each representing respondents from Wassa Japa area in the Western Region and Talensi in the Upper East Region. The results indicate that there are more male (67.5%) migrants in mining than females (32.5%) migrants. More male (88.30%) migrants were found in Small-scale Mining in the Talensi compared to their counterparts in Wassa Japa area (46.7%). However, with regard to females, more female migrants (53.3%) from Wassa Japa were found in small-scale mining as compared to Talensi (11.7%).

Dinye and Erdiaw-Kwasie (2012) observe that in the extraction of high value products, such as gold, men take control of the mining sites and that women tend to participate in greater numbers in the ones with low value commodities, as observed in Nigeria (salt), South Africa (kaolinite) and Brazil (sand and gravel). They further argue that women's participation in small-scale mining generally increases with the decreasing scale of the operation. This may also be related to disparities in education and training in small-scale mining techniques. Typically, women's direct participation decreases with increased scale of operation and prevalence of mechanization. Nonetheless, the roles that women play in most sectors of the economy especially the small scale gold mining sub-sector cannot be overlooked.

Table 5.20: Age of respondents by region

Age	Region					
	Western region		Upper East		Total	
	Count	% within Region	Count	% within Region	Count	% within Regions
18-27	21	35.6%	15	25.0%	36	30.3%
28-37	35	59.3%	11	18.3%	46	38.7%
38-47	2	3.4%	15	25.0%	17	14.3%
48-60	1	1.7%	19	31.7%	20	16.8%
Total	59	100.0%	60	100.0%	119	100.0%

Table 5.22 presents the age distribution of migrants in small-scale gold mining in Wassa Japa and Talensi. The table shows that of the total number of migrants aged 18-60 years, 30.3% are aged 18-27 years, while 38.7%, constituting the majority, are within the age group 28-37 years. A little over a tenth (14.3%) of the migrants are aged 38-47 years, while similar percentages is observed among the age group 48-60 (16.8%). The results quite clearly indicate that younger (18-27 and 28-37 age group) migrants are more (94.9%) in Wassa Japa compared to same age groups in Talensi (44.3%). The implication small scale gold mining in Wassa Japa attracts younger persons compared to Talensi. On the flip side of the results, Talensi has people who are more advanced in age (38-47 and 48-60) involved in mining. The observation to be made of this finding is that as of the time small-scale gold mining was discovered in Talensi in 1994/1995, a lot of people migrated to the area have largely stayed on as reflective in their age ranges.

5.9.2 School attendance/ educational attainments

School attendance/educational attainment of migrant miners were examined and information obtained is presented in Table 5.23 and followed with discussions.

Table 5.21: School attendance by region

Have you attended school before	Region					
	Western region		Upper East		Total	
	Count	% within Region	Count	% within Region	Count	% within Regions
Yes	42	70.0%	45	75.0%	87	72.5%
No	18	30.0%	15	25.0%	33	27.5%
Total	60	100.0%	60	100.0%	120	100.0%
If yes, which level						
Never attended	18	30.0%	15	25.0%	33	27.5
Arabic school	0	0.0%	1	1.7%	1	0.8%
JHS	18	30.0%	10	16.7%	28	23.3%
Middle School	1	1.7%	4	6.7%	5	4.2%
Primary	3	5.0%	15	25.0%	18	15.0%
SHS	18	30.0%	12	20.0%	30	25.0%
Tertiary	2	3.3%	3	5.0%	5	4.2%
Total	60	100.0	60	100.0	120	100

Migrants were asked whether if they had ever attended school. This question was aimed at measuring the literacy levels among them. As captured by the 2010 Population and Housing Census which describes literacy as the ability of a person to read and write in a Ghanaian language, English or French. The question on literacy was therefore asked of migrants in relation to migrants haven attended school before and if that guaranteed some level of literacy. The highest proportion of them 72.5% stated haven attended school while 27.5 never attended school. About a quarter of migrants completed Senior High School, and many more of them came from Wassa Japa (30.0%) area compared to Talensi (20.0%). Junior High School was the next level of education (23.3%) achieved by migrants with the highest proportion of them from Wassa Japa area in comparison to Talensi (16.7%). Talensi recorded more (25.0%) migrants completing Primary level as Wassa Japa obtained only 5.0%. Interestingly, at the tertiary level, Talensi had a slight majority of 5.0% to 3.3% in the Wassa Japa area. Migrant's level of education achieved before provides an indication of formal schooling in society. In a society where few people have had formal education, it stands to mean that few people would have the requisite knowledge and skills needed for social and economic development.

5.9.3 Social Backgrounds of Migrants

One social factor delved into among the migrant miners was their marital status. The study explored this status and whether they are in sustained marriages as the as well undertake ASM activities. Tables 5.24, 5.25 and 5.26 present the outcome with discussions.

Table 5.22: Social Backgrounds of Migrants

Are you married?	Region					
	Western region		Upper East		Total	
	Count	% within region	Count	% within region	Count	% within Regions
Yes	24	40.0%	38	63.3%	62	51.7%
No	36	60.0%	21	35.0%	57	47.5%
Widowed	0	0.0%	1	1.7%	1	0.8%
Total	60	100.0%	60	100.0%	120	100.0%
If married are you living with your wife at the mining site?						
Yes	17	28.3%	18	30.0%	35	29.2%
No	6	10.0%	20	33.3%	26	21.7%
Non applicable	35	58.3%	22	36.7%	57	47.5%
No response	2	3.3%	0	0.0%	2	1.7%
Total	60	100.0%	60	100.0%	120	100.0%

The survey asked questions on marital status of respondents. **Table 5.22** shows that more than half 51.7% of the migrant population sampled were married while 47.5 % were not. An insignificant proportion of them were widowed (1.7%). The proportion of migrants married is higher among those in Talensi (63.3%) than Wassa Japa (40.0%). What could possibly explain the difference is that in Talensi, the mining sites have become settled communities and the researchers identified migrants who have lived in those mining sites for quite a considerable length of time. Inquiries were made regarding migrants living with their wives at the mining sites. About a third (29.2%) of them affirmed living with their wives while another 21.7% did not. Of migrants who lived with their wives, many more of them in Talensi (30.0%) did compared to Wassa Japa area (28.3%).

Table 5.23: Sexual partners, multiple sexual partners by region

	Region					
	Western region		Upper East		Total	
Do you have a sexual partner?	Count	% within Region	Count	% within Region	Count	% within Regions
Yes	32	53.3%	22	36.7%	54	45.0%
No	7	11.7%	11	18.3%	18	15.0%
Non applicable	21	35.0%	9	15.0%	30	25.0%
No response	0	0.0%	18	30.0%	18	15.0%
Total	60	100.0%	60	100.0%	120	100.0%
have more than one sexual partner at mining site						
Yes	12	20.0%	22	36.7%	34	28.3%
No	28	46.7%	23	38.3%	51	42.5%
No response	20	33.3%	15	25.0%	35	29.2%
Total	60	100.0%	60	100.0%	120	100.0%

The survey examined the issue of sexual partners among migrants. Results as shown on **Table 5.23** indicate that about two-fifths (45.0%) of respondents affirmed having sexual partners with

the majority (53.3%) of them from the Wassa Japa area with Talensi recording a little over a third (36.%). Interestingly, a quarter (25.0%) of the respondents did not answer the question on having sexual partners. In terms of multiple partners, nearly a third (28.3%) admitted with Talensi recording a higher proportion (36.7%) than Wassa Japa (20.0%). Again, no response, recorded a large proportion (29.2%) of the response category for that question.

Table 5.24: Living arrangements of migrants and their children by region

Do you have children?	Region					
	Western region		Upper East		Total	
	Count	% within Region	Count	% within Region	Count	% within Regions
Yes	34	57.6%	38	63.3%	72	60.5%
No	25	42.4%	22	36.7%	47	39.5%
Total	59	100.0%	60	100.0%	119	100.0%
Do you live with your children here at the mining site						
Yes	21	35.0%	21	36.2%	42	35.6%
No	14	23.3%	8	13.8%	22	18.6%
Non applicable	9	15.0%	4	6.9%	13	11.0%
No response	16	26.7%	25	43.1%	41	34.7%
Total	60	100.0%	58	100.0%	118	100.0%

Findings of the survey shows that about two-thirds (60.5%) of migrant miners had children, with about 39.5% of them indicating that they have no children. Migrant miners in Talensi (63.3%) had children than those of them in Wassa Japa area (57.6%). It was further found that some migrant miners (35.6%) lived with their children at the mining sites. Talensi (36.2%) had a slight number of migrant miners living with their children at the mining sites as compared to Wassa Japa area (35.0%). On the converse, nearly one-fifth (18.6%) of migrant miners did not live with their children at the mining sites. More migrant miners (23.3%) in Wassa Japa did not live with their children at the mining sites as in the case of Talensi (13.8%).

5.9.4 What migrants sleep on

What migrant miners slept on had health implications and was asked in the survey. Findings are presented in Table 5.27 followed by discussions.

Table 5.25: What migrants sleep on at mining sites by region?

What do you sleep on?	Western region		Upper East		Total	
	Count	% within Region	Count	% within Region	Count	% within Regions
Cardboard	2	3.3%	4	6.7%	6	5.0%
Benches/tables	1	1.7	0	0.0%	1	0.8
Straw mat	44	73.3%	9	15.0%	53	44.2%
Rubber mat	0	0.0%	34	56.7%	34	28.3%
Mattress	13	21.7%	13	21.7%	26	21.7%
Total	60	100.0%	60	100.0%	120	100.0%

Migrants were asked about the material the sleep on as a proxy means of understanding how they live in the mining area. The highest proportions (44.2%) of migrants in small-scale mining areas sleep on straw mats. Straw mats were commonly used in Wassa Japa (73.3%) area than

Talensi (15.0%). Nearly a third (28.3%) of migrant miners used rubber mats. Rubber mats was found to be used by migrants in only Talensi (56.7%) and not in Wassaja. A little over one-fifth (21.7%) of migrant miners in both Wassaja area slept on mattresses.

5.9.5 Risks

The risks factor considered among the adult miners was whether they smoke or not. The outcome is presented in Table 5.28 with discussions.

Table 5.26: Smoking at Mining Site

	Region					
	Western region		Upper East		Total	
Do you smoke?	Count	% within Region	Count	% within Region	Count	% within Regions
Yes	10	16.7%	18	30.0%	28	23.3%
No	50	83.3%	40	66.7%	90	75.0%
No response	0	0.0%	2	3.3%	2	1.7%
Total	60	100.0%	60	100.0%	120	100.0%

The survey findings from Wassaja area and Talensi indicate that less than a quarter (23.3%) of migrants in small-scale mining reported smoking. The majority of migrant intimated that they did not smoke. Of those who smoked, Talensi (30.0%) recorded more compared to Wassaja area (16.7%).

5.9.6 Sex and regional comparison of physical abuse in mining areas

The study examined factors of sex and abuse and harassment at mining sites. The reported situations by the respondents are presented in Tables 5.29 and 5.30 with discussions.

Table 5.27: Sex and regional comparison of physical abuse in mining areas

Sex	Incidence of physical abuse	Response	Region					
			Western region		Upper East		Total	
			Count	% within Region	Count	% within Region	Count	% within Regions
Male	Have you suffered physical abuse before	Yes	1	3.6%	4	7.5%	5	6.2%
		No	27	96.4%	47	88.7%	74	91.4%
		No response	0	0.0%	2	3.8%	2	2.5%
		Total	28	100.0%	53	100.0%	81	100.0%
Female	Have you suffered physical abuse before	Yes	7	21.9%	1	14.3%	8	20.5%
		No	25	78.1%	6	85.7%	31	79.5%
		Total	32	100.0%	7	100.0%	39	100.0%
Total	Have you suffered physical abuse before	Yes	8	13.3%	5	8.3%	13	10.8%
		No	52	86.7%	53	88.3%	105	87.5%
		No response	0	0.0%	2	3.3%	2	1.7%
		Total	60	100.0%	60	100.0%	120	100.0%

With regard to abuses that pose as risks to migrant miners suffered while in mining areas, about 10.8 % reported suffering from physical abuses. Of male migrants, only 6.2 stated that they suffered physical abuses through fights and assaults from colleague adults during the process of mining. Still among males, Talensi, recorded a slightly higher proportion (7.5%) of reported

physical abuses than Wassa Japa area (3.6%). With respect to females, many more of them 20.5% of them reported suffering from physical abuses. Wassa Japa area recorded more (21.9%) physical abuses compared to Talensi (14.3%). As earlier noted, Talensi did not record many female migrants, therefore, it is not surprising that physical abuses to women is seen more in Wassa than Talensi.

Even though the proportion of migrants who suffered physical is very low (10.8%) as expected the proportion of females (20.5) experiencing physical abuse is higher than male migrants. Physical abuse as captured in section (i) of the Domestic Violence Act, is seriously frowned upon as a criminal matter especially as it applies to female migrants. It specifically says:

physical abuse, namely physical assault or use of physical force against another person including the forcible confinement or detention of another person and the deprivation of another person of access to adequate food, water, clothing, shelter, rest, or subjecting another person to torture or other cruel, inhuman or degrading treatment or punishment.

The results further indicate quite clearly that females (20.5%) in mining areas suffer more sexual abuse than males (6.2%). Sexual abuse occurred more among females in Wassa Japa area (21.9%) than Talensi (14.3%). Sexual abuse as respondents described included fondling especially among women who went to sell items to miners at site. Other forms of sexual abuse experienced by females in mining areas include force sex, incidents of rape, and suggestive conversation of sex engaged them by adult males against their will. Males also reported suffering from sexual abuse as in some instances, ladies dress to provoke or seduce them to attract their attention. Even though not too many men (6.2%) affirmed sexual abuse as occurring to them, more migrant men in Talensi (7.5%) stated sexual abuse occurring to them than in Wassa Japa area (3.6%). This finding also has serious implications as it violates the domestic violence act which criminalizes sexual abuse. Sexual activity appeared a common thing occurring in the mining areas.

Table 5.28: Sex and regional comparison of suffering sexual harassment

Sex	Issue	Response	Region					
			Western region		Upper East		Total	
			Count	% within Region	Count	% within Region	Count	% within Regions
Male	Have you suffered sexual harassment	Yes	1	3.6%	4	7.5%	5	6.2%
		No	27	96.4%	47	88.7%	74	91.4%
		No response	0	0.0%	2	3.8%	2	2.5%
		Total	28	100.0%	53	100.0%	81	100.0%
Female	Have you suffered sexual harassment	Yes	7	21.9%	1	14.3%	8	20.5%
		No	25	78.1%	6	85.7%	31	79.5%
		Total	32	100.0%	7	100.0%	39	100.0%
Total	Have you suffered sexual harassment	Yes	8	13.3%	5	8.3%	13	10.8%
		No	52	86.7%	53	88.3%	105	87.5%
		No response	0	0.0%	2	3.3%	2	1.7%
		Total	60	100.0%	60	100.0%	120	100.0%

5.9.7 Economic exploitation

During data gathering process, various migrant miners hinted of economic exploitation and abuse as occurring. Economic exploitation occurred in instances where some natives where the mining activity is taking place will come to drive away a migrant from a pit he has dug. In the ways of one migrant miner in Talensi he recounted:

Box 4: Abuses at work

One migrant miner in Talensi he recounted:

"You know over here we work like elephants and eat like ants. There have been instances, as a stranger here, when you dig your pit and you are about hitting the money zone, some native young men will organize and come drive you away from the pit. Thus is a common occurrence. We the migrants have on several occasions lodged complaints to the committee chairman, the Assemblyman and the Chief for this area. Sometimes, the local people are able to bring them under control, other times, they are not. This is a real worrying situation as I work here as a stranger. See, my brother there, his pit was recently ceased and we had to bring in the police to control these unscrupulous guys"

In Wassa Japa area, this type of exploitation does occur especially where the individual works alone at a site without the consent of the land owners. It happens to both migrants where the indigenes take away any ore extracted. To survive for the day, the affected persons will have to move to another location to work to enable to one strive for survival for the day. This mostly happens to the women and children. Where male adults are involved it may result in physical fights.

5.9.8 Cases of Trafficking

The research team through informal interactions with opinion leaders and miners themselves tried ascertaining whether some adults are trafficked to the mining areas. Respondents squarely denied any adult trafficking and that adult migrant's move to the mining locations out of their own volition

Box 5: Abuses at work

One such miner remarked in Talensi:

"Look, look at the work involved, how can you either forcefully or deceitfully bring a human being to this place to come and work if that person is not interested. It is just not possible. See, people heard about the money being made here, but when they come over and see the work involved, some of them cannot withstand it and return. The work over here is very very difficult. Tell me, how can somebody be trafficked to come and work here. Will that person be a Ghanaian or not? You know the police once in a while come over and you will be reported to the police if anybody trafficked an adult to this place."

5.10 WOMEN

5.10.1 Demographic characteristics of women in gold mining

Table 5.29: Regions of women and their status in gold mining

Region of Origin	Region					
	Western region		Upper East		Total	
	Count	% within region	Count	% within region	Count	%
Central	1	1.7%	0	0.0%	1	0.8%
Northern	0	0.0%	1	1	1.7%	0.8%
Upper East	0	0.0%	58	96.7%	58	48.3%
Western	59	98.3%	0	0.0%	59	49.2%
Total	60	100.0%	60	100.0%	120	100.0%
Status of respondent						
Migrant	47	78.3%	14	23.3%	61	50.8%
indigenes	13	21.7%	46	76.7%	59	49.2%
	60	100.0%	60	100.0%	120	100.0%

Table 5.31 shows the regions women in small-scale gold mining came from. The results indicate that women in gold mining mainly came from their respective regions where mining is taking place. Nearly all the women interviewed in Wassa Japa and Talensi came from the Western region (49.2%) and the Upper East region (48.3%) respectively. However, it was realized that in Talensi, few women in gold mining came from other regions; Central (0.8%) and Northern regions (0.8%). It is possible these women from other regions found in Talensi migrated there with their husbands.

The survey asked respondents about their status in the mining areas. By status, the survey sought to find out if respondents hailed from the district the mining activity was taking place. The results show that a significant proportion of women in Talensi mining areas are indigenes with about 23.3% of them from other districts but mostly from the Upper East region. However, with respect to Wassa Japa area, the finding is dramatically different. An overwhelming majority (78.3%) of women in the Wassa Japa area came from other districts of the Western region. A little over one-fifth (21.7%) of the women were indigenes or came from the district.

Table 5.30: Age of women in Mining

Age	Region					
	Western region		Upper East		Total	
	Count	% within region	Count	% within region	Count	%
18 years and more but less than 21 years	3	5.1%	2	3.5%	5	4.3%
21-30	38	64.4%	20	35.1%	58	50.0%
31-40	17	28.8%	23	40.4%	40	34.5%
41-50	1	1.7%	12	21.1%	13	11.2%
Total	59	100.0%	57	100.0%	116	100.0%

The findings indicate that about half (50.0%) of women interviewed in gold mining were mostly within the 21-30 year age range followed by the 31-40 year age group (34.5%). Wassa Japa area

recorded more women (64.4%) within the 21-30 age range, compared to Talensi (35.1%). However, Talensi also had more women (40.4%) aged 3-40 years in gold mining than women from Wassa Japa area. Women aged 18 years and more but less than 21 years constituted the least (4.3%) found in gold mining aged.

Table 5.31: Age and Marriage of women in gold mining

Region study was conducted			Are you married					
			Yes		No			
Western (WassaJapa area)	Age of respondents	Less than 21 years	1	33.3%	2	66.7%	3	100.05
		21-30	13	34.2%	25	65.8%	38	100.0%
		31-40	12	70.6%	5	29.4%	17	100.0%
		41-50	1	100.0%	0	0.0%	1	100.0%
		Total	27	45.8%	32	54.2%	59	100.0%
Upper East (Talensi)	Age of respondents	Less than 21 years	0	0.0%	2	100.0%	2	100.0%
		21-30	10	50.0%	10	50.0%	20	100.0%
		31-40	18	78.3%	5	21.7%	23	100.0%
		41-50	9	75.0%	3	25.0%	12	100.0%
		Total	37	64.9%	20	35.1%	57	100.0%
Total	Age of respondents	Less than 21 years	1	20.0%	4	80.0%	5	100.0%
		21-30	23	39.7%	35	60.3%	58	100.0%
		31-40	30	75.0%	10	25.0%	40	100.0%
		41-50	10	76.9%	3	23.1%	13	100.0%
		Total	64	55.2%	52	44.8%	116	100.0%

The marital status of women in gold mining was asked. The proportion of women married was more than half (55.2%) while those not married constituted two-fifths (44.8%) of the sampled population. The 41-50 age group had the highest proportion (76.1%) of women married whereas 23.1% were not. This was closely followed by the 31-40 year age group with three (75.0%) while a quarter of them were not. With regard to the 21-30 age group, about two-thirds (60.3%) were not married while nearly forty percent (39.7%) of them were married. Women who were 18 years and more but less than 21 years had the highest proportion (80.0%) of unmarried women with just twenty percent married among the age group. Talensi had more married women (64.9%) in gold mining than Wassa Japa area (45.8%). In Talensi, the highest proportions of married women were within the 31-40 year group (78.3%) while that of Wassa Japa was 41-50 age groups (100.0%). This was immediately followed by the 41-50 year group (75.0%) for Talensi while the reverse was the case for Wassa Japa (70.6%).

In both Wassa Japa and Talensi, women within the 21-30 year age groups and less than 21 years were the least in marriage unions. Not too many women within that age group found in gold mining are married.

5.10.2 Educational Characteristics of women in gold mining

Table 5.32: School attendance and level of educational attainment of women in Mining

Have you attended school before?	Region					
	Western region		Upper East		Total	
	Count	% within region	Count	% within region	Count	%
Yes	27	45.0%	30	50.0%	57	47.5%
No	33	55.0%	30	50.0%	62	52.5%
Total	59	100.0%	60	100.0%	119	100.0%
Never attended	33	55.0%	30	50.0%	63	52.5%
Stopped at JHS	17	28.3	15	25.0%	32	26.7%
Stopped at Middle school	0	0.0%	1	1.7%	1	0.8%
Stopped at Primary	6	10.0%	12	20.0%	18	15.0%
Stopped at SHS	3	5.0%	2	3.3%	5	4.2%
Tertiary	1	1.7%	0	0.0%	1	0.8%
Total	60	100.0%	60	100.0%	120	100.0%

The survey inquired whether women in gold mining had attended school before. More than half (52.5%) of the women had never been to school. Wassa Japa area recorded the highest proportion (55.0%) of the respondents who had never been to school. Half (50.0%) of the respondents from Talensi indicated ever been to school while another half did not. Of the women who ever attended school, about a quarter (25.0%) in Talensi and nearly a third (28.3%) stopped school at the Junior High level. About one-fifth (20.0%) of women in the Talensi and a tenth (10.0%) in Wassa Japa area stopped school at the primary level. Only five percent in Wassa Japa and 3.3% in Talensi stopped school at the Senior High School level.

5.10.3 Social Characteristics of women in mining

Table 5.33: Women who live with husbands/partners at the mining sites

Are you living with your husband/partner at the mining site?	Region					
	Western region		Upper East		Total	
	Count	% within region	Count	% within region	Count	%
Yes	16	26.7%	24	40.0%	40	33.3%
No	11	18.3%	16	26.7%	27	22.5%
No husband	33	55.0%	20	33.3%	53	44.2%
Total	60	100.0%	60	100.0%	120	100.0%
Do you have children						
Yes (wedlock)	44	73.3%	20	33.3%	64	53.3%
No	12	20.0%	6	10.0%	18	15.0%
Child out of marriage union	0	0.0%	34	56.7%	34	28.3%
No response	4	6.7%	0	0.0%	4	3.3%
Total	60	100.0%	60	100.0%	120	100.0%

The survey sought the views of women on whether they lived with their husbands and or partners at the mining sites. About a third (33.3%) of women interviewed affirmed living with their husbands/partners at the mining site while 22.5 percent indicated they had husbands and or partners but did not live with them at the mining site. About four out ten women (44.2%) interviewed did not have husbands and or partners.

With regard to women having children, more than half (53.3%) of the women interviewed indicated having children but out of wedlock. Women in Wassa Japa had more children (73.3%) out of wedlock compared to their counterparts from Talensi (33.3%). About a third (28.3%) of women had children out of marriage unions. This was observed only in Talensi (56.7%). From previous analysis, women in gold mining from Talensi were largely indigenes as opposed to women in Talensi. The study has observed that the likelihood of indigenous women in gold mining being in marriage unions is higher than women in mining who are non indigenous women. What this means is that women who migrate from other places to mining areas are more likely to be get children out of wedlock as suggested by this study' findings.

5.10.4 Care duties women undertake at the mining sites

Yakovleva (2007), noted that the roles played by women within families as a caretakers for children is transferred to gamamsey sites and that most women tend to bring their children who fall within the age range 1 to 3 year olds to work. She observes that very small children are brought along to mining for breast feeding while older children are cared for at home or made to attend nurseries and schools in their home communities.

In this survey, women cited the following care duties they continuously carry out the mining sites while living with their husbands/partners and their children. Some of these care duties include covering long distances to fetch water, fetching firewood as fuel for household use, cleaning, farming, washing of clothes and bowls, cooking, and preparing the child for school and or carrying the child along for work. Of the myriad of challenges women face including, exposure to excessive dust, breastfeeding infants in dusty and unacceptable environments, exposure to mercury use, poor sleeping places and arrangements, poor sanitation, high cost of food items, lack of proper healthcare for women and children. But, of these challenges, women highlighted the lack of access to potable water as the overriding challenge they face in the mining areas.

In the case of Talensi, about a third (30.0%) of women cited the lack of potable water as their major challenge. In Talensi for instance, the mining activities is located in very remote areas that were previously unsettled lands. Communities largely depended on unimproved sources such as (hand dug wells, river/ streams for domestic and livestock rearing. With the advent of gold mining particularly gamamsey, most water bodies are polluted with chemicals, human excreta and other waste generated from the uncontrolled mining activities going on. For drinking purposes, inhabitants rely on sachet water brought in from the district capital and Bolgatanga, the regional capital, a distance well over 65 kilometres. Following the precarious nature of securing potable water for consumption, women walk several metres to nearby communities where mining activities are not taking place to just fetch good drinking water for household use.

As observed by Yakovleva (2007), since women spend the entire day at a galamsey sites, its negative implications on older children left at home is childcare neglect, and a worsened situation of the nutritional standards by children. The Upper East region is one of the districts have time and gain seen children suffering from malnutrition.

Table 5.34: Care duties at the mining sites by partners/husbands

If with a partner/spouse, what care duties does he undertake at the mining site?	Region					
	Western region		Upper East		Total	
	Count	% within region	Count	% within region	Count	%
Husband/partner does not support with childcare duties	10	16.7%	26	43.3%	36	30.0%
Husband/partner the main provider for the family upkeep	17	28.3%	21	35.0%	38	31.7%
My husband supports me in childcare duties	13	21.7%	5	8.3%	18	15.0%
No support from partner/husband	20	33.3%	8	13.3%	28	23.3%
Total	60	100.0%	60	100.0%	120	100.0%

The survey asked women about the care duties their partners and or husbands supported them with while at the mining sites. Nearly 32 percent of the respondents stated that their husbands were the main providers for the upkeep of the family at the mining sites. About a third (35.0%) of women from Talensi than Wassa Japa area identified their partners/husbands as the main providers for the family upkeep. Another thirty percent of women mentioned that their husbands/partners did not support them with childcare duties. More women (43.3%) from Talensi than Wassa Japa area (16.7%) expressed the fact that their partners did not support them with child care duties. In terms of husbands/partners supporting their women in respect of child care, more women (21.7%) from Wassa Japa area received childcare support than Talensi (8.3%). The reason for the huge difference could be attributed to the fact that men from northern Ghana in general appear more paternalistic compared to their counterparts from southern Ghana. As rightly observed by Yakovleva (2007) due to socio-cultural practices, traditionally, African women are seen solely responsible for child care and many other domestic duties. Because of this worldview, women bringing younger children to mining areas highlight the lack of child care options for women, in which they are often compelled to bring their children to the mining sites. Narrations from women in Talensi and Wassa Japa areas underscored some critical facts which must be noted, that is, mothers bringing children to the mining sites affects the well-being of these children in several ways. For instance, the children are exposed to contamination from minerals, unsafe water, and poor sanitary conditions; the children suffer the risk of forgoing their education in the case older ones brought to support younger ones as mothers work at the mining sites. The likely is that because it is difficult for such children to resume their education in later years, they may lack the requisite skills to enter other labour markets and may be forced to remain in mining permanently as they grow up.

Table 5.35: Women and sexual partners at the mining sites

Do you have a sexual partner?	Region					
	Western region		Upper East		Total	
	Count	% within region	Count	% within region	Count	%
Yes	21	35.0%	20	33.3%	41	34.2%
No	13	21.7%	6	10.0%	19	15.8%
In Marriage	26	43.3%	34	56.7%	60	50.0%
Total	60	100.0%	60	100.0%	120	100.0%
Do you have more than one sexual partner						
Yes	4	6.7%	4	6.7%	8	6.7%
No	26	43.3%	22	36.7%	48	40.0%
No because of marriage union	30	50.0%	34	56.7%	64	53.3%
	60	100.0%	60	100.0%	120	100.0%

Women in gold mining were asked about having sexual partners. About a third (34.2%) of women in gold mining confirmed having sexual partners at the mining locations. Wassa Japa area recorded a slight majority (35.0%) of respondents over Talensi (33.3%) in terms of women having sexual partners. Some even cited haven had different children with different men in the process. Nearly sixteen percent (15.8%) indicated not having sexual partners. More than half (53.3%) of the respondents interviewed also mentioned not having sexual partners because they are in marriage unions.

The women were further asked about having multiple sexual partners at the mining sites. Less than a tenth (6.7%) of the respondents interviewed revealed that they had multiple sexual partners. Even though this survey did not record high numbers in terms of women having multiple sexual partners but its existence in mining areas still portend some risks. In fact, health professionals in Talensi, particularly; Datuku and Nalmolgo, the only immediate referral and nearby health facilities to the mining areas confirmed the reported high incidence of HIV/AIDS and other sexually related transmitted diseases common to inhabitants of the mining area.

Table 5.36: Sexual and physical abuse of women in mining

Have you suffered sexual harassment?	Region					
	Western region		Upper East		Total	
	Count	% within region	Count	% within region	Count	%
Yes	13	21.7%	40	66.7%	53	44.2%
No	45	75.0%	20	33.3%	65	54.2%
No response	2	3.3%	0	0.0%	2	1.7%
Total	60	100.0%	60	100.0%	120	100.0%
Have you suffered physical abuse before						
Yes	9	15.0%	44	73.3%	53	44.2%
No	49	81.7%	16	26.7%	65	54.2%
No response	2	3.3%	0	0.0%	2	1.7%
Total	60	100.0%	60	100.0%	120	100.0%

According to Yakovleva (2007: 37) "many women interviewed from at galamsey sites near Ntronang and Noyem admitted that they are sexually harassed by men at camps both physically

and verbally.” She further hints that some women are forced into sexual intercourse by bosses in order to secure a job at the mining sites. This survey enquired from women if they were sexually harassed at the mining sites? Nearly four out of ten (44.2%) of the women interviewed confirmed that they have suffered sexual harassment from adult men at the mining sites. Sexual harassment appeared occurring more in Talensi (66.7%) than Wassa Japa area (21.7%). This finding is quite consistent with a national survey that reported that one out every third women in the country have been sexually harassed (Dorcas, & Appiah-Coker, 1998).

Yet again, more women from Talensi (73.3%) than Wassa Japa area reported of ever suffering from physical abuse. The Domestic Violence Act of 2007 (Act 732) criminalizes sexual and physical abuse against women. The implication of this finding is that there is greater need to enforce these provisions in high risks prone areas such as mining areas where sexual, and physical abuse is reported to be common.

5.10.5 Economic exploitation

Lanjouw and Lanjouw (2001) contend that rural women are more than ever forced to bring additional non-farm income to the household and that an estimated 42% of rural women in Ghana undertake non-farm employment as a primary or secondary source of employment. Indeed, this observation is true to the extent, rural women from northern Ghana often travel in the long dry season to southern Ghana to undertake economic activities to supplement household incomes. Women, in the attempt to meet this expectation often become victims of economic exploitation. Economic exploitation is one form of abuse that women face and which is quite common in the mining areas. Narrations from women indicated that sometimes they are made to work for gold buyers, ghetto owners and to be paid in the future. Women willingly, accept to work under these terms by transporting sand from one point to the other, carrying water to washing sites in anticipation to be paid when those who engage eventually complete the gold processing and eventual sale of the acquired gold. Some unscrupulous gold buyers/sponsors and or ghetto owners flatly renege to pay women who have worked for them. Other women narrated instances of blatant cheating by men either during the washing of gold ore owned by a woman or they simply just get cheated when the gold is being burnt or eventually sold to a buyer. Women therefore experience a chain of economic abuse and exploitation in the process of searching for gold. One woman at the ‘Accra mining site’ in Talensi remarked that women work like elephants and their benefits is like that of an ant’.

6.0 RECOMMENDATIONS

Child labour

Special Poverty Targeting Strategy

The literature and the findings of this study clearly suggest that the principal cause of child labour is small-scale gold mining is poverty. In an ideal situation, children should not be involved in any mining-related activities because it is hazardous. However, to prevent children from engaging in gold mining remains a huge policy challenge given that poverty is responsible for children working in mining. To this extent, child labour needs to be recognized by the government of Ghana and development partners as one of the indicators of poverty reduction. In view of this, child labour issues need to be incorporated into development plans and poverty reduction strategy documents. However, a different approach to tackling poverty in the country is what is required. Districts where gold mining is taking place are unable to enforce law and order because of finance related issues. A lot of money is generated from these mining areas and what is required is a well-thought out special poverty strategy that will tap into this resource envelope already coming out of these communities that individuals are privately generating. A vigorous poverty reduction programme needs to be developed to address poverty in mining communities in Ghana.

Providing Targeted Education to mining communities

The ILO Time Bound Programme implemented in the Talensi district for instance, withdrew children from the mining location and allowed some to go the city (Bolgatanga) to learn a trade. The difficulty with this approach is that it is not sustainable after the project life ends. Intervention measures like these tend to attract children to go into gold mining, because other children will be hoping to be targeted for withdrawal too. Admassie (2003) suggest that increased school attendance is strongly associated with decreased child employment (that schooling is the best 'antidote' to the child labour 'problem' in the region, particularly in rural areas, a view strongly shared by Hilson (2008). There is some evidence that supports this position. Ray (2002), for example, concluded in his study on child labour and education in rural Ghana that improved school attendance rates led to a reduction in child labour. Similarly, Admassie (2002: 262), in reflecting on the situation in sub-Saharan Africa overall, argues that 'participation in school reduces, first of all, the available time the child has for work at home or in the labour market' and therefore views education for every child as the key. It is the position of this research that the children in mining are very vulnerable. There is therefore the greater need to provide specialized targeted education to those communities in order to hugely reduce the vulnerabilities children are exposed to.

To prevent child labour in artisanal gold mining will require some prevention programmes. A prevention programme will seek to holistically identify different stakeholders that will aim at tackling issues of sensitization, enforcement, and the provision of education. There should be sensitization programmes for communities, parents, miners, children and teachers about the adverse effects of child labour in small-scale mining. The key to eliminating child labour in mining lies in the sensitization of the identified persons supra.

Districts where mining activities are taking place need to be technically supported to develop a special programme on the enforcement of child labour issues. The child protection committees envisaged under the national plan and the Children's Act needs to be piloted under a special programme starting from mining communities. In relation to this, a task force needs to be

formed to help enforce this problem while the government (district assembly) and Ghana Education Service should work assiduously towards addressing the provision of adequate infrastructure and logistics required for teaching and learning in the district.

It is further recommended that the Youth Enterprise Agency (YEA) should be given technical support to develop a module in small-scale mining that will aim at employing the teaming unemployed youth, adult men and women in rural communities where there are gold deposits. However, this module must ensure that children do not participate and that all the necessary protocols are followed to ensure that small-scale gold mining is conducted in safe conditions. For example, such a module, can consider training children aged 15 to 17 years in other areas like; bicycle and motor repairs, masonry, carpentry, plumbing and other more lucrative and long lasting skill employment acquisition.

Women

The findings suggest that a lot of women in mining are there with their children. There is need for pro-poor government policies seeking to target the economic empowerment of women, particularly women who demonstrate dexterity in petty trade among others. Many women identified petty-trade as an opportunity they discovered while in mining communities. Women from these areas have to be deliberately targeted for support in order to enhance their business acumen.

Data from health centres close to mining communities suggest strongly that sexually transmitted diseases and HIV/Aids is one of the top ten diseases recorded. Women who experience sexual harassment and contract STDs in the process indicates that sexual and reproductive health education needs to be intensified in the mining communities, if a reduction in sexually transmitted diseases is to be achieved. Ghana Health Services in conjunction with NGOs that are into sexual and reproductive health issues should assist to provide proper sexual and reproductive health education to people living in the mining communities.

The findings revealed the apparent lack of health institutions at the mining sites. Considering the activities women undertake in gold mining, lends themselves to accidents and other ailments, it is advocated that the provision of mobile health facilities be considered a top priority in the provision of medical services. Many women are seen breastfeeding babies while working. Periodic medical examinations are recommended for both women and their children. This will help in the early detection of excessive exposure of women and children to mercury and determine early signs of poisoning. It is also proposed that urine analyses are conducted on a regular basis, with special attention to individual levels of mercury contamination and to trends in the larger mining population.

Again, given the fact that both men and women keep multiple sexual partners, is a course to worry. This is because of the easy transmission of sexually transmitted diseases (STDs) that partners can pass onto each other. Therefore, more and intense sexual health education is needed for adult men and women to understand the consequences of keeping more than one sexual partner. The Ghana Health Services could assign community health workers or nurses to the mining community for this education. They could also make time for a radio discussion program in the local and common dialect to the women at the time that they will be resting from the gold mining and can have time to listen.

Migrants

There is gradually a shift in the discourse in the mining industry. The mining law requires that individuals interested in artisanal gold mining should move from illegal mining to register for concessions before one can mine. An apparent difficulty facing migrants in the process to acquire land for concession mining as demanded by the Law. The process for acquiring a license is cumbersome especially getting the environmental permit. Economic exploitation occurs in instances where some natives miners drive away migrants from a pit they operate. This brings about acrimony among the operators. To survive for the day, the affected persons will have to move to another location to work to enable one strive for survival. This mostly happens to the women and children. It is therefore necessary to streamline the system to ensure that the migrant miners do not become vulnerable.

Significantly, miners-diggers and others involved in the most arduous aspects of small-scale mining are those eager to express interest in alternative employment. This observation means that there is, in fact, room for any alternative livelihood programmes that the government and other actors (such as large-scale mining companies and external donors) may seek to implement to enhance the potential contributions of the small-scale mining sector to poverty reduction. In areas like Tarkwa-Prestea, where the majority of respondents reported hailing from outside the district, it would be futile to introduce alternative livelihood programmes to the area without first putting in place a policy to stem the flow of migrant workers from other parts of the country (Ofei-Aboagye et.al, 2004). This would mean identifying areas around the country with the greatest number of migrants and providing employment opportunities to discourage their young from gravitating towards Tarkwa-Prestea and other areas like it. This is one-way alternative livelihood programmes for the Tarkwa-Prestea area for instance, can prove viable and useful; otherwise, they will always be overwhelmed by the influx of new migrants seeking participation in programmes designed to cater for a fixed number of beneficiaries.

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