

DIGGING FOR SURVIVAL: FEMALE PARTICIPATION IN ARTISANAL AND SMALL-SCALE MINING IN THE TARKWA MINING DISTRICT OF GHANA

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ABSTRACT

Artisanal and small-scale mining (ASM) occurs in many countries around the world, and provides a source of livelihood to many impoverished local people in areas where it occurs. This paper reports the role of female participants and reasons why they engage in ASM. Field visits were made to 12 ASM sites located in the Tarkwa Mining District of Ghana to conduct interviews with male diggers and female participants. It was observed that over 100 women between the ages of 18 and 50 participate in ASM for survival. They engage in ASM largely because they have no alternative employable skills and income sources. These female participants depend on ASM to sustain the lives of their dependents.

INTRODUCTION

Artisanal and small-scale mining (ASM) conventionally involves use of rudimentary tools (such as picks, shovels, chisels and hammers) to exploit precious minerals and metals from the ground. It has been a major source of livelihood to many impoverished local people for more than a century. In many instances, it is the only source of income to indigenous people who have no alternative employable skills. The World Bank estimated that more than 100 million people around the world benefit from ASM which largely occurs in developing countries in Asia, Africa, Oceania, and South and Central America (World Bank, 2013). Cobalt, which is used in lithium-ion batteries to power cellphones, laptop computers, and electric vehicles, is largely produced by artisanal miners in Congo (The Washington Post, 2016). In Sudan, ASM is a significant contributor to the national economy, accounting for about 85% of total gold extracted yearly from 2010 to 2015 (Ibrahim, 2015). Also, according to the Embassy of Sierra Leone in Washington DC, USA, 90% of mineral export in Sierra Leone can be attributed to thriving artisanal diamond mining in the country (Sierra Leone Embassy, 2016).

In Ghana, the ASM sector was recognized by government as a multimillion industrial activity, and through a series of initiatives, it was legalized by promulgating the Small Scale Gold Mining Law of 1989 (PNDC 218). Presently, artisanal mining is widely practiced in two forms: licensed (registered), sometimes referred to as formal ASM, and unregistered (informal or illegal) operations, popularly called “galamsey”, a name believed to have been derived from “gather and sell” by ancient miners who could not communicate in the English language with European/British miners.

The ASM sector in Ghana, like other countries, has seen a rise in female participation over the years. A report by the International Labour Organization (ILO) indicated that women account for about 15% of total workforce in ASM in Ghana, and up to 50% in Africa (ILO, 1999). Other researchers have also estimated women participants in ASM to be between 30 and 70% in Africa (Hinton *et al.*, 2003a; Hinton *et al.* 2003b; Hilson, 2002). Presently, there is no reliable data from Ghanaian authorities on number of females engaged in ASM. However, data obtained from 15 ASM sites suggest that at least 40% of the employees are women. It is expected that a similar trend exists across ASM operations in Ghana.

The growing number of women in ASM can be attributed to issues of unemployment and increasing poverty among households in rural

communities in the country. Lack of scientific literature on women engagement in ASM has been a major hindrance to understanding the main reasons for female participation in ASM in Ghana. One study conducted by Yakovleva (2007) in the Birim North District of Ghana on women in “galamsey” observed that females engage in ASM due lack of ‘productive employment’. The study was not extended to women in licensed ASM operations.

In light of efforts by international organizations (such as the World Bank) in assisting Ghanaian authorities to improve ASM and the economy at large, it is important to have a comprehensive understanding of the demographics of ASM participants and reasons for engaging in ASM for appropriate interventions. Data acquired could be useful in developing appropriate policies that aim at bettering the lives of ASM participants and making the sector economically and environmentally sustainable. Thus, this study explored the reasons for female participation in ASM within the Tarkwa Mining District of Ghana. It also adds to existing literature on women in ASM in Ghana.

METHODS

Field Visits

The study was conducted in the Tarkwa Mining Area as described by Bansah *et al.* (2016). It is located on latitude 5.3000° N and longitude 1.9833° W in the Tarkwa Nsuaem Municipal Assembly of the Western Region of Ghana (Figure 1). The mining area hosts one of nine small-scale mining district offices established by the Minerals Commission of Ghana to provide extension services to active and prospective ASM operators. Registered ASM operations in the area mainly occur in the Tarkwa and Nsuaem communities. Illegal ASM activities also occur in these two communities and many other places in the mining area.

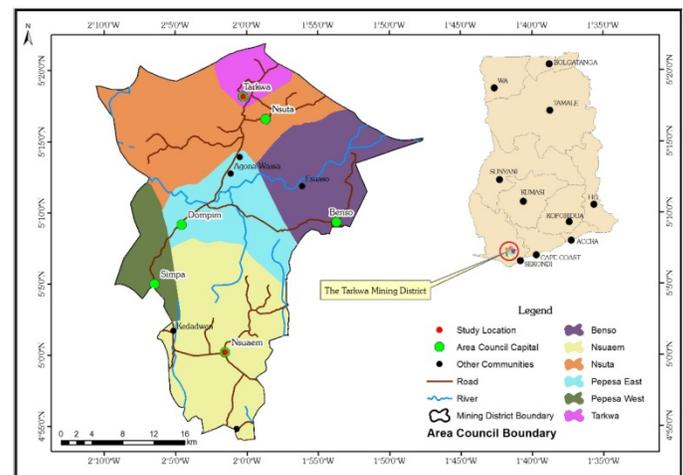


Figure 1. Study area.

The area has 15 active registered ASM operations that use both underground and surface mining methods to dig for gold. Twelve of these ASM operations in the area were visited between March and July of 2016. Underground operations involve the use of simple tools to

gain access to gold-bearing rocks, where the rocks are broken and carried to the surface by male miners. In some cases, miners access underground workings through abandoned adits created by the defunct large-scale mine, State Gold Mining Corporation (Ghana Government owned mining company). In the surface mining operations, overburden is typically removed by dozers while limited blasting is utilized to fragment competent or consolidated rocks for eventual handling using picks, handheld shovels, or small to medium size excavators. For alluvium, excavators are used to dig and stockpile auriferous gravels after overburden removal by dozers. In some instances, handheld tools are used by miners to dig alluvial materials.

Following digging, the materials are typically carried in head pans by women (see Figure 2) to processing plants where they are crushed, ground and washed or directly washed to obtain gold concentrate. Women also typically fetch water for sluicing activities.



Figure 2. Women carry headloads of excavated materials from mining location to processing facilities. This activity is typically done for four hours per day from Monday to Saturday.

Interviews with Participants

Interviews were conducted with two groups of women that exist at ASM sites; women primarily involved in mining operations (female miners – direct workforce) and women providing services such as sale of food to miners (indirect workforce). A total of 100 women were interviewed at the mine sites (Figure 3). They included 77 direct workforce who were randomly selected and had approval from their supervisors and 33 traders who were directly approached for participation. The narratives of respondents were recorded in field notebooks, and in some cases, voice recorded. Also, participant observations at the ASM sites were done to understand the work routine of the women and to have contextual perspective for their narratives.

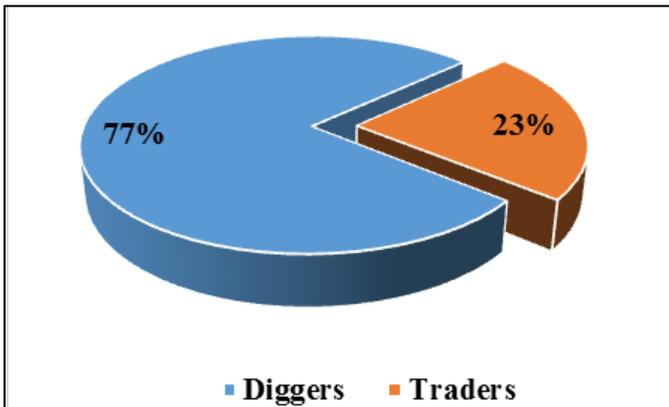


Figure 3. Interviewee Categories.

Additionally, semi-structured interviews and discussions were carried out with supervisors and male counterparts of the women to obtain their perspectives on women engaged in ASM activities. Due to lack of literature on the subject, data reported in this paper have mainly been derived from responses obtained during the interviews and discussions among participants. Applying pseudonyms, some of the narratives of interviewees' cases have been reported verbatim in this paper to provide illustration of conditions or reasons that necessitated their engagement in ASM.

RESULTS AND DISCUSSION

Results of field visits and interviews showed that many women involved in ASM within the Tarkwa Mining District have ages between 18 and 50 years, with average age of 33 years. Majority (41%) of these women were youth between the ages of 18 and 30 years while 32% were between 41 and 50 years. About 27% were between 31 and 40 years (Figure 4). A significant number of the women (82%) were married while 7% had never married (Figure 5). Another 7% were separated or divorced and 4% were widowed. Many of these women had at least three children, with married women having the largest number of children (Figures 6 and 7).

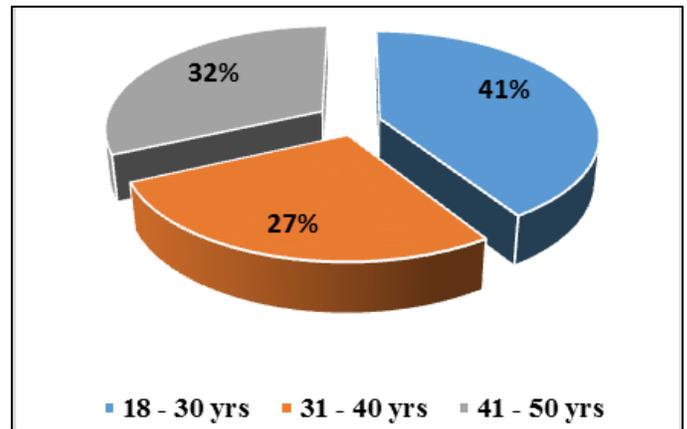


Figure 4. Age of Respondents.

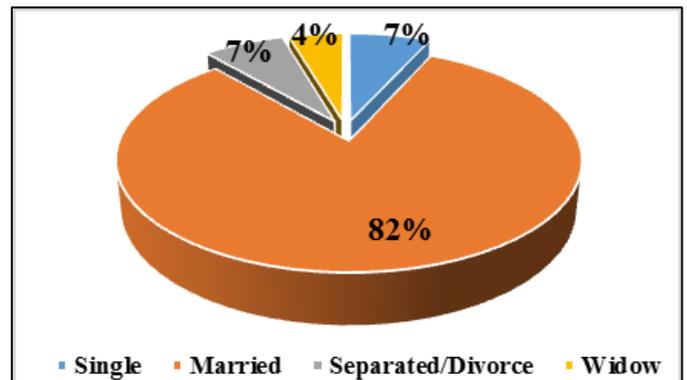


Figure 5. Marital Status of Respondents.

With a meagre income of GHC 12.00 (US\$ 3.00) per day (four working hours), the earnings are typically spent on shelter and food (27%), children's education (26%), utility payment (26%), personal needs (19%), and to some extent, support other family members (2%) (see Figure 8).

Many of the women have travelled over hundreds of kilometres from Northern Ghana and other parts of the country where there are limited livelihood alternatives and high poverty levels to work in ASM for income to support themselves and their families. Reasons assigned to working in ASM by the women include, lack of employment and alternative sustainable sources of livelihood, neglect by husbands, loss of parents at an early age, need to care for siblings, retrenchment of husbands from large firms, and lack of sustainable income.

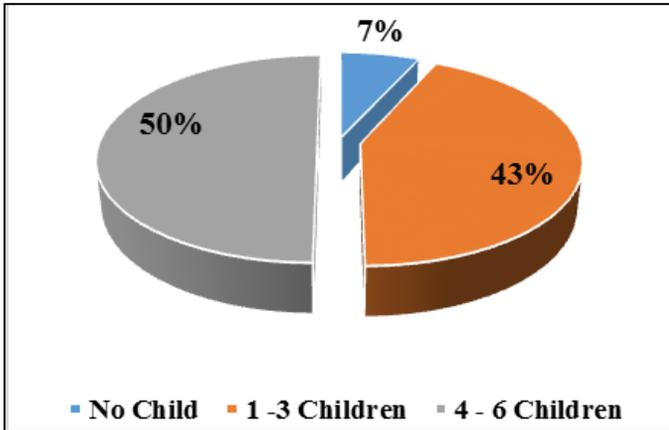


Figure 6. Family Size of Respondents.

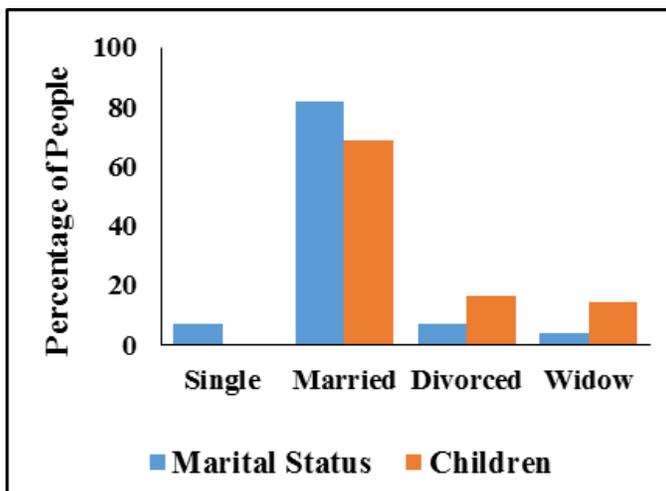


Figure 7. Marital Status and Number of Children.

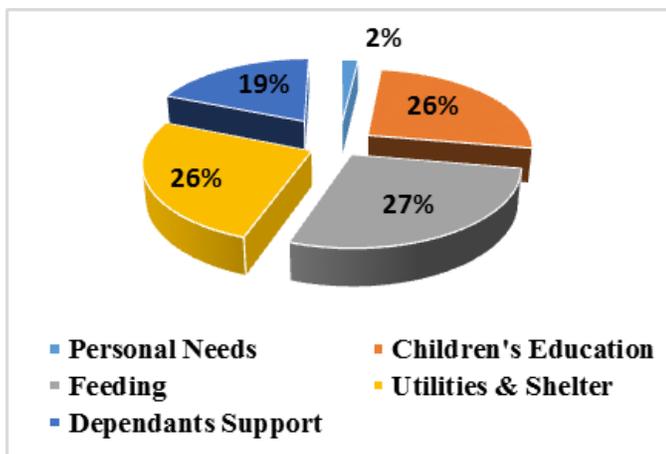


Figure 8. Income Distribution.

The interviews and analysis of data collected show that many women participate in ASM largely for survival. They also work in ASM to earn income to feed their families and pay for their children's school fees. An interviewee retorted: 'this job is a means to an end. I am trying to save money to learn a trade'. Esther Gudane, artisanal gold digger in Tarkwa shares a similar story:

Esther Gudane is 30 years of age and comes from a village in Wa in the Upper East Region of Ghana. She has no formal education and is married with two children. Esther's husband is a subsistence farmer in their hometown and derives little income. With no other source of livelihood and poor economic conditions,

she travelled more than 600 kilometres to Tarkwa to undertake ASM activities to earn income to supplement her husband's meagre income. Esther does not want her children to suffer and hopes to use her income from ASM to better the lives of her children. Even though Esther admits that working in ASM is extremely difficult for women, she cannot quit because it is the 'only way for the family's survival'. She added that she even goes to work when she is ill, because she would not want to lose her wage for the day.

Particularly telling is the story of Madam Abena, who is 50 years of age and divorced with six children:

Madam Abena comes from Mankessim in the Central Region of Ghana. She joined ASM as a load carrier when she was unable to care for herself and support her family. For 10 years, she carried headloads of dug materials from mining location to processing plants, and worked 4 hours per day at ASM sites. Presently, as a result of old age, she uses handheld hammer to fragment large pieces of broken rocks into smaller sizes before feeding them into crushing facilities. Although, her new task relieves her from the pain of carrying loads on the head, repeatedly striking hammer on rocks to break them into pieces is equally daunting. She cannot quit the job because it is her only source of income. She provides for the needs of her younger children and contributes financially to other dependents from the income earned from ASM.

The cases outlined are not different from that of Madam Comfort Arthur who trades at ASM site by selling food to diggers and non-diggers:

She is 48 years of age, mother of six children and widow for 16 years. Unable to provide the needed financial support for her family, provide for shelter and pay her children's school fees after the death of her husband, she resorted to selling food at an ASM site in Tarkwa. For 10 years, she has operated at the ASM site and uses her income to care for her children, pay for their education and provide shelter for the family. Presently, the eldest child is a polytechnic graduate and gainfully employed. Her second child is a final-year university student in Ghana, while the remaining four children are at various stages in secondary and primary education. According to Madam Comfort Arthur, selling food at ASM site to earn income has improved her living condition and made her self-dependent.

DISCUSSION

Female participants provide important services in the ASM chain. They work as porters, carrying broken rocks on their head; washers, carrying water for sluicing; and pounders, pounding ore into fines using manual mortar and pestle. These services provide are recognized by ASM supervisors who describe female participants as 'hardworking, disciplined and critical to ASM operations', yet, they are low-paid and not involved in decision making.

Many of these women have little or no formal education and enter ASM largely unskilled, recognizing ASM as a means of survival, pay for children's education, health care and put food in the pot for their families. Hence, a thriving ASM sector in Ghana could be an important source of hope for many impoverished rural women who lack alternative and sustainable sources of livelihoods.

Even though incomes earned by female ASM participants are mostly low, they are described as significant by the women, as such incomes meet their needs. It is probably for this reason that Heemskerk (2003) encourages female self-employment 'because higher incomes for women empower them, improve the health of their families, and alleviate poverty in society at large'. Hinton *et al.* (2003a) agree with these assertions by stating that 'for many women, artisanal mining signifies an opportunity to relieve the strains of poverty'. Hence, an improved ASM sector could enhance the standard of living of female participants and their families.

It is therefore important for authorities to explore female participation in ASM, and provide strategies that could help women participants to optimize potential benefits. Thus, recent action dialogue

(in January, 2016) championed by the International Institute for Environment and Development (IIED) to streamline ASM sector institutions, regulations and creating a business case to cause real transformation in the lives of people in the sector becomes an important intervention to reform ASM in Ghana. Given the support from the mining sector, civil society organizations, and government agencies, such initiatives could engender development programmes to catalyze transformation of ASM in the country.

Moreover, as a result of the crucial role women play in the development of sustainable community, policy advocacy and community encouragement could cause female ASM participants to rise from the "bottom of the pit", cleanse themselves of mud and move to positions of enlightenment and leadership in mining to facilitate positive changes in their lives and ASM sector in general.

CONCLUSION

We observed that many women participate in artisanal and small-scale mining for survival. They typically engage in ASM for income to feed themselves and their families, provide for educational needs of their children. These women play important role in artisanal and small-scale mining in Ghana. Therefore, efforts towards streamlining ASM should recognize the crucial roles played by female participants and involve them in decision making. Such recognition could encourage and empower women in ASM to cause a significant transformation to realize much benefit from the sector. As a result, their lives and the lives of their families would be improved.

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