UNIVERSITY OF GHANA

DEPARTMENT OF SOCIAL WORK

GOLD MINING AND DISABILITY: EXPERIENCES OF PERSONS WITH PHYSICAL DISABILITY IN THE OBUASI MUNICIPAL AREA

BY

MAVIS KONADU AGYEMANG

(10309184)

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JULY, 2017
DECLARATION

I, Mavis Konadu Agyemang, affirm that this thesis is my own work produced from research undertaken under supervision. It does not contain any material formerly published by another person or material which has been presented for an award of any other degree, except where due acknowledgements have been made in the work.

Mavis Konadu Agyemang
(Candidate)

Dr. Augustina Naami
(Supervisor)

Dr. Emma Hamenoo
(Supervisor)
ABSTRACT

Despite provisions to uphold and safeguard the rights of persons with disability in Ghana, there is evidence that they still encounter several challenges which limit their full and effective involvement in mainstream society, including the gold mining sector. The study sought to explore how persons with physical disability (PWPDs) experience gold mining in the Obuasi Municipal Area.

A qualitative research design was used to discover and to understand the experiences of PWPDs regarding mining. Purposive sampling technique was used to select five key informants for the study with the age range of (24-52 years) while snow ball sampling aided the selection of 16 persons with various forms of physical disability with the age range of (24-60 years). In-depth interviews were used to gather data. Data were analyzed using Creswell’s (2009) concept of thematic analysis.

The findings suggest that land degradation, although, affected everyone in the area, persons with mobility and visual impairment experienced much difficulty trekking the undulating land for long distances in search of arable land. Also, although mining activities are mostly labour-intensive, PWPDs were not employed even in areas where they could work. Further, cost of items in general was high, affecting PWPDs more due to their economic immobility and paying for other sources of water due to land degradation and water pollution. The study also discovered that the peculiar conditions of PWPDs were not factored into compensation payments and neither were females with physical disability engaged in compensation negotiations. Also, although some of the infrastructure provided by the gold mining companies in the area were physically accessible to some extent, they were not accessible in terms of information delivery.
There is a need to educate the public on the effects of mining on PWPDs, their needs as well as disability issues in general. The Minerals and Mining Act (703) should be amended to include provisions that would consider the peculiar needs of PWPDs in compensation payment.
DEDICATION

I humbly dedicate this work to Apostle Charles Hackman (The Voice of Ability on Air for Persons with Disability) from the Helping Hand TV Show, H4P Organization. God immensely bless you and you will forever remain my hero.
ACKNOWLEDGEMENT

I am extremely grateful to the Almighty God for seeing me through this work. I owe Him everything I used to do this work. I thank my parents, Mr. Marcellino Yaw Kagya Agyemang and Mrs. Philomena Agyemang and family for their financial support and concerns towards my work. I thank my supervisors, Dr. Augustina Naami and Dr. Emma Hamenoo, for their corrections and guidance that led me through the completion of this work. I appreciate my participants, both key informants and participants with disability, for the willingness to participate in this study. Without their participation, there would not have been any data to analyze. God greatly and richly bless you all.
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<td>AngloGold Ashanti</td>
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<td>AGC</td>
<td>Ashanti Goldfields Corporation</td>
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<td>CDT</td>
<td>Critical Disability Theory</td>
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<td>EPA</td>
<td>Environmental Protection Agency</td>
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<td>JHS</td>
<td>Junior High School</td>
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<td>OPD</td>
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<td>Senior High School</td>
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CHAPTER ONE

1.0 Introduction

Globally, disability is a great concern due to the exclusion of persons with disability from mainstream society and the attendant consequences of inequality in all spheres of life. Persons with disability represent the world’s largest minority group (United Nations Enable, 2016). They are estimated to be about 10 percent (about 650 million people) of the world’s population, and about 80 percent of all persons with disability live in developing countries (World Health Organization, 2016). Disability can be explained in models. The models of disability are outlines for comprehending disability. They provide information into why some attitudes towards disability persist and how they are exacerbated in the society (Sullivan, 2011). The two dominant models are the social and medical models. According to the medical model, the problems related to disability are seen as lying exclusively within the individual and his or her impairment, that is, the impairment results in the challenges that persons with disability face in the society (Sullivan, 2011). The preferred solution to the medical condition is the regular treatment or rehabilitation of the individual to be able to solve the problem to enable him or her function well in the society. In relation to this model, persons with disability are regarded as feeble, flawed, needy and dependent (Carson, 2009).

The social model of disability, on the other hand, was born out of activism work of persons with disability. In the 1970’s, during the civil rights movement in the United States of America, people with disability organized and advocated for equal rights and access and this resulted in the social model of disability. The social model opposes the notion of blaming persons with disability as the cause of the challenges they encounter in the society. In this model, people with disability are not
perceived as ‘different and faulty’ persons, rather as valued and fully fledged fellows of the society, who have rights to total and equal participation just like their able-bodied counterparts (Carson, 2009; Sullivan, 2011). The proponents of the model, who are persons with disability, posit that persons with disability are disabled because they are prevented from full involvement within mainstream society due to the existence of physical, organizational, transportation, architectural, and attitudinal barriers (Carson, 2009; Sullivan, 2011).

These barriers rather than their impairment, hinder persons with disability from achieving equal access to information, education, employment, public transport, healthcare, housing, social and other opportunities in the society (Carson, 2009; Sullivan, 2011) including gold mining areas. The social model of disability helps us understand why disability has become a global concern: exclusion of persons with disability from mainstream society as a result of barriers which result in inequality for persons with disability.

The global literacy rate for adults with disability is at three percent and that of women with disability is 1 percent (United Nations Enable, 2016). In developing countries, about 90 percent of children with disability are not in school (United Nations Enable, 2016). The world’s working age people with disability are estimated around 386 million people but the majority are unemployed (United Nations Enable, 2016). Unemployment among persons with disability is estimated at 50 percent in industrialized countries, and in developing countries, it is as high as 80 percent (United Nations Enable, 2007). Persons with disability are likely to receive lower wage (Mitra, Posarack & Vick, 2011). Consequently, persons with disability are estimated to be 20 percent of the world’s poorest people (United Nations Enable, 2016).
The situation is not different in Ghana. The estimate of the population of persons with disability in Ghana itself is problematic. While the 2010 Ghana Population Census estimated the number of persons with disability at seven hundred and thirty seven thousand, seven hundred and forty three (737,743) people (Ghana Statistical Service, 2013), the Human Rights Watch (2012) pegged this population at five (5) million people, including persons with mental disability who accounted for two million and eight hundred (2.8) people. In the Obuasi Municipality, the study area, the total population amounted to one hundred and sixty eight thousand, six hundred and forty one (168, 641) people (Ghana Statistical Service, 2014). It is estimated that 1.6 percent of the Municipal’s total population which made up two thousand, six hundred and ninety eight (2, 698) people, have one form of disability or the other. The types of disability in the municipality include sight, hearing, speech, physical, intellectual and emotion (Ghana Statistical Service, 2014).

The participation of persons with disability in gold mining are limited. For example, the Mining Qualification Authority of South Africa stipulated that persons with disability have a very narrow opportunity of participating in mineral mining due to its arduous nature (Mining Qualification Authority, 2014). However, they are confined to the clerical and administrative positions in the mining sector (Mining Qualification Authority, 2014) because those areas are less demanding. But according to an organization, The New 49’ers, (2013), shallow water dredging is a form of small scale mining that some persons with disability engage in.

Gold mining is a vital pecuniary activity which has the prospect of promoting the development of areas gifted with the resource (Yeboah, 2008).

In North America, raw mineral production was almost US$ 70 billion in 1998 (Mbendi, 2004). In Peru, the mining sector accounted for fifty percent of the nation’s yearly export earnings
(Acheampong, 2004). And, in South Africa, where gold contributes highly to the foreign income, gold mining only contributed 27.4 percent in mineral revenues (Mbendi, 2004). In 2009, the mining sector of South Africa employed three thousand, four hundred and thirty one (3,431) people with disability which constituted 0.7 percent of total population. Out of that number, the total population of persons with disability in gold mining only, were five hundred, and seventy four (574) people (Mining Qualification Authority, 2014).

In Ghana, the mining division performs an important role in the development of the economy. In 2000, minerals accounted for 38.96 percent of total export earnings, followed by cocoa (22.51 percent) and timber (9.03 percent) (Institute of Statistical Social and Economic Research, 2001). The mining sector contributes about 41 percent to foreign exchange in the country, it provides more foreign exchange than any other sector (Yeboah, 2008). In 2014, the sector contributed 1.24 billion cedis to the national revenue. This represented 16.2 percent of all direct tax in 2014 comparative to a share of 18.7 percent in 2013 (Ghana Chamber of Mines, 2014). The minerals and mining zone remain the leading source of fiscal revenue to the economy of Ghana (Ghana Chamber of Mines, 2014).

Obuasi is one of the areas noted for gold mining. The Municipality and its surroundings form a portion of AngloGold Ashanti’s wide searching concession which occupy an area of about 200sq km (Ofosu-Mensah, 2012). The Municipality is somehow equated to gold not just because of the elongated period of gold mining within the area but, also, because of the quantity and quality of gold produced (Ofosu-Mensah, 2012). Regardless of the benefits, mining activities constantly inform the rate and degree of changes in the natural, social and health issues which can have long term negative effects on community livelihoods (United Nations Economic Commission for Africa (UNECA), 2011). These long term impacts such as resettlement and relocation, forfeiting of
properties and environmental pollution (UNECA, 2011) can affect the livelihoods of the communities within and/or around where the mining activities take place. This can generate different experiences for different groups of people living within such communities. This is because some groups of people (such as women, children, the elderly and persons with disability) are perceived to be vulnerable and susceptible to negative outcomes (National Population Council, 2011) which include that of gold mining. Mining activities could impact more on the lives of persons with disability in Ghana, considering the numerous challenges they face in the society as discussed previously.

1.1 Statement of the Problem

There are laws and policies such as the 1992 Constitution of the Republic of Ghana, the Labour Act 2003, the Persons with Disability Act (715) to promote and safeguard their human rights and inclusion in society (Ghana Federation of Disability Organizations, 2008). However, persons with disability in Ghana, just like their counterparts across the globe, continue to experience several barriers in their communities, including gold mining areas. These prevent them from full-effective participation in the society (Naami, 2014; Tijm, Cornielje & Edusei, 2011).

There is evidence about the effects of mining (both positive and negative) on the general population (Akabzaa & Darimani, 2001; Awudi, 2002; Owusu-Koranteng, 2005; Yeboah, 2008). However, studies that have been conducted on the effects of mining consider the population of which mining affect as generic without constituting the fact that society is made up of several units and subgroups (Lahiri-Dutt & Mahy, 2007) such as persons with disability. Persons with disability continue to manage several barriers in their daily lives including physical, attitudinal, information
and transportation. Studies demonstrate that attitudinal barriers (e.g., misconception about their abilities, superstitious beliefs that they are cursed, stigmatization and discrimination, negative preconceptions about disability and the competencies of persons with disability) are key barriers to the employment of persons with disability globally (WHO, 2011; Heymann, Stein & Moreno, 2013; Mizunoya & Mitra; 2012) as well as locally (Naami, 2014; 2015). Negative attitudes and behaviours towards persons with disability could result in negative consequences such as low self-esteem and reduced participation in mainstream society (WHO, 2011).

Again, persons with disability in Ghana have to deal with physical barriers daily. Not only are most public buildings non-disability friendly (lack of ramps and elevators) but also, the lack of sidewalks compel persons with disability to use the major roads irrespective of the need for their safety (Naami, 2014; Tijm, Cornielje & Edusei, 2011). Transportation barrier also exists and hampers the full and real participation and inclusion of persons with disability in the society. For example, there is no transportation system in Ghana available to persons with disability. The difficulty in boarding and getting out of vehicles and other means of transport also impact on their participation in mainstream society (Ghana Federation of Disability Organizations, 2008; Naami, 2014; Tijm, Cornielje & Edusei, 2011).

It is obvious from the proceeding discussion that the continuous existence of barriers in the society impact on the full and effective participation and inclusion of persons with disability in mainstream society. Since persons with disability continue to manage several barriers in their daily lives, they could experience gold mining differently. Therefore, this study sought to explore how persons with physical disability experience gold mining in the Obuasi Municipal area.
1.2 Objectives of the Study

This study sought to explore how persons with physical disability experience gold mining in the Obuasi Municipal area. Specifically, the study sought to:

- Identify the environmental issues of gold mining which persons with physical disability in the Obuasi Municipal Area face.
- Identify the social issues of gold mining which persons with physical disability in the Obuasi Municipal Area encounter.
- Identify the health issues of gold mining which persons with physical disability in the Obuasi Municipal Area face.
- Examine the contributions of gold mining operations towards the wellbeing of persons with physical disability in the Obuasi Municipal Area.
- Find out whether or not persons with physical disability are involved in gold mining compensation, both payment and negotiation.
- Ascertain whether there are gender differences in the experiences of persons with physical disability regarding gold mining activities in the Obuasi Municipal Area.

1.3 Research Questions

- What environmental issues of gold mining do persons with physical disability in the Obuasi Municipal Area face?
- What social issues of gold mining are faced by persons with physical disability in the Obuasi Municipal Area?
What health issues of gold mining do persons with physical disability in the Obuasi Municipal Area encounter?

What contributions do mining operations in the Obuasi Municipal Area make towards the wellbeing of persons with physical disability?

What gold mining compensation activities in the Obuasi Municipal Area are persons with physical disability involved in?

Are there differences in the experiences of men and women with physical disability in relation to gold mining activities in the Obuasi Municipal Area?

1.4 Significance of the Study

The study served as a platform for participants to air their experiences concerning the operations of mining companies in their locality and how they affected their lives. This work contributes to existing knowledge in social work and disability studies on the experiences of persons with physical disability with regard to gold mining. It also serves as a resource guide for policy makers in drafting programmes and policies to benefit this group of people. The study could inform social work practitioners in planning intervention programmes to assist the target population in order to enhance their wellbeing and quality of life. Hence, the researcher will make this work available through presentations and publications.

1.5 Definition of Terms

Compensation: “refers to specific measures intended to make good the losses suffered by people displaced and/or negatively affected by the acquisition” (Gashaw, 2015, p.94).
Physical Disability: “refers to any degree of disability, infirmity, malformation or disfigurement of a physical nature caused by bodily injury, illness or birth defect and include, but not limited to, a disability resulting from any degree of paralysis or from diabetes mellitus, epilepsy, amputation, lack of physical coordination, blindness or visual impediment, deafness or hearing impediment, muteness or speech impediment, or physical reliance on a guide dog or on a wheelchair, cane, crutch or other remedial device or appliance” (New Brunswick Human Rights Commission, 2011).

Human Rights: “refers to those rights which are inherent to the human being and this concept acknowledges that every single human being is entitled to enjoy his or her human rights without discrimination as to race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status” (United Nations, n.d., p.2).

Relocation: “refers to the moving of people from one location or area to another and providing same or better standard of living to make way for mining” (Apeakoran, 2014, p.34).

Inclusive Education: “is a policy that provides an opportunity for all stakeholders in the educational sector to address the diverse learning needs of various categories of citizens in the Ghanaian education system under the universal design for learning and within a learner friendly environment for all” (Ministry of Education, 2013, p.5).

Excavation: “refers to any man-made cut, cavity, trench or depression in the earth’s surface formed by earth removal” (Occupational, Safety and Health Administration, 2015, p.1).
Gender: “refers to the socially determined ideas and practices of what it is to be female or male” (Baden & Reeves, 2000, p.3).

1.6 Organization of the Study

The study is organized in five chapters.

Chapter one consists of an introduction to the study, the problem statement, research questions, the objectives of the study, significance of the study and definition of terms.

Chapter two consists of the literature review and theoretical framework.

Chapter three consists of research methods. These include; the study design, study area, target population, study population, sources of data, sampling methods, data collection, techniques for data collection, data handling and analysis, limitation of the study and ethical consideration.

Chapter four consists of the presentation of the findings which comprise of the demographic characteristics of participants, findings and discussion.

Chapter five consists of the summary, conclusion, recommendations and implications of the study for social work practice and education.
CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

Mining activities drive the rate and degree of changes within the social, economic, health, and the environmental aspects of an economy. Mining activities change landforms and can have longer period of effects on communities and natural resources because of their extensive degrading nature, in addition to the use of chemicals and other harmful substances in the mining processes (UNECA, 2011). Literature were reviewed on environmental, social and health issues of gold mining, gender and disability and compensation payment and negotiations.

2.1 Environmental Issues of Gold Mining

The hostile environmental impacts of gold mining activities on the environment are verily recognized (Heath, Merefield & Paithankar, 1993, Veiga & Beinhoff, 1997, Warhurst, 1994; 1999). The extents of environmental effects of mining are dependent on the kind of minerals mined, the technology used, the scale of extraction activities and the location of the projects (UNECA, 2011). Environmental impacts also depend on the soil formation and the techniques of extraction (UNECA, 2011).

Africa experiences a higher level of the environmental burden of mining whose effects also reduce its benefits (UNECA, 2011). The heritage of mining in Africa is usually that of large empty holes and unreclaimed artisanal mining sites (UNECA, 2011).
Kuhndt, Tessema & Martin (2008) noted a high shift in European Union mineral resource attainment from domestic source to imports from developing countries such as Ghana. The shift was as a result of reducing the environmental cost of producing in their own countries. While the mineral resources in the European Union are increasing, developing countries (who are producing the resources) suffer from the environmental burdens of increasing extraction rates; enormous waste, waste water and other damages (Kuhndt et al, 2008).

In Ghana, studies in mining towns demonstrate the association of mining activities with environmental hitches such as land degradation, pollution and others. For instance, Akabzaa and Darimani (2001) pointed out that, in some areas in Tarkwa, the environment was suffering from hasty and terrible situations and its massive economic worth was dropping from year to year due to the concentration of mining activities in the area. Agricultural lands were not solely degraded but the destruction of land which affected agricultural production had as well led to the limiting of the fallow period from 10-15 years to 2-3years. The customary bush fallow system which adequately reprocessed large amounts of nutrients and prepared the next cycle for productivity could not be practiced any longer because of the shortage of land (Akabzaa & Darimani, 2001).

In the process of gold extraction, certain poisonous gases are used at various stages. Examples are sulphide, carbon, arsenic trioxide, and cyanide (Yeboah, 2008). These gases, according to Yeboah (2008), are extremely poisonous and destructive to human health if higher concentrations are released into the air, land and water bodies. Moreover, toxic waste released from the gold mining methods were put or channeled into tailing dams which served as avenues for land and air pollution to the communities in Obuasi Municipal Area (Yeboah, 2008). Environmental effects of mining
activities in the Obuasi Municipal area have resulted in several impacts on water resources and food production in the municipality (Yeboah, 2008). Water resources in Obuasi are not in the best condition. Most rivers and other water bodies are contaminated with chemical substances or are even dried up due to mining activities (Yeboah, 2008).

Environmental factors (such as degraded land, water pollution and drying up of the water bodies) affect the general population (Mitra et al., 2011). However, persons with disability could end up experiencing the brunt of these environmental issues more because of the difficulty they already face in accessing the existing environment. According to the UNECA (2011), women end up using more energy in accessing safe water and food because of degraded environments. The situation could be worse for women with physical disability due to the interplay between gender and disability.

2.2 Social Issues of Gold Mining

Gold mining has several hostile social outcomes including, the dislocation of populations and disturbance of livelihoods, increased internal economic inequalities and increased poverty (UNECA, 2011). Social impacts are the consequences to human inhabitants from any communal or reserved actions that change the conduct in which people work, play, live, relate to each other, manage to get their needs met and usually survive like members of society (Burdge & Vanclay, 1996). Mining operations in a community have both favourable and unfavourable outcomes on the social institute and traditional principles of the people.
Also, there is insufficient housing when mining in a community increases migration into those mining towns. The shortage of housing could increase the problem of housing, since housing units will be given to only those who can afford and leave out those who cannot afford (Akabzaa & Darimani, 2001). This scenario results in dependency on the few available housing facilities which gives housing owners much profit and leaves the community vulnerable when the mine closes down due to the reduced profit. This situation could affect the flow of money in the system (UNECA, 2011). Another social effect of gold mining is the inequality in the system. Inequality happens when some people benefit from the mining activities either directly or indirectly whilst others do not (UNECA, 2011). Inequality is one of the most important determinants of the impacts of gold mining on the people of a given community. As in many other situations, inequality leads to poverty in mining communities (UNECA, 2011). Persons with disability in these areas are more likely to experience poverty because they are prone to poverty due to their lower levels of educational attainment, likelihood of unemployment, lower wages, as well as discrimination against them (Mitra et al, 2011; WHO, 2011).

Furthermore, mining affects the livelihood of those who depend on subsistence production such as farming, which include persons with physical disability. Those who depend on subsistence production and environmental resources for their livelihoods are more susceptible to negative changes brought by gold mining than those people who have advanced knowledge and are equipped vocationally. Education levels often determine the economic status and decide one’s employment opportunities within the mining economy (Lahiri-Dutt & Mahy, 2007). Negative perception, fear, myth and prejudice limit the understanding and acceptance of persons with disability as potential members of the work force everywhere (O’Reilly, 2003). These coupled
with their lower educational attainments (WHO, 2011), could affect their employment in mining areas.

### 2.3 Health Implications of Gold Mining

Health can be defined as a condition of wholeness in physical, mental and social wellbeing of an individual and not just the lack of disease and infirmity (WHO, 2017). According to Stephens and Ahern (2001), mining continues to be one of the most hazardous occupations in the world. Studies of mining and health by the kind of mining processes are grouped into deep and open cast mines (Yeboah, 2008). Deep cast mines lead to severe harms for employees in terms of their threats of high blood pressure, heat exhaustion, myocardial infarction and nervous system disorders (Yeboah, 2008).

The use of cyanide, a chemical utilized by large scale mining companies and mercury used by Small Scale mines result in dangerous effects in the mining district. When visible to sunlight, some forms of cyanide breakdown into smaller pieces and are sometimes easily retrieved and reprocessed, while the extra remain in the environment for decades (Kitula, 2006). When metallic mercury is released into the environment, it is usually changed by biochemical processes into methyl mercury and this could be found at high absorptions in several levels of the food chain. This may result in serious intoxication, muscular atrophy, seizures and mental disorders (Kitula, 2006). Methyl mercury is easily conveyed from women to the fetuses with consequences extending from infertility, impulsive abortion and from slight to austere problems of the nervous systems (Kitula, 2006). These are some of the health effects of mining which could affect the health of persons with disability as well. According to WHO (2011), the existence of numerous health
complications can make the handling of health care and rehabilitation services for persons with
disability more problematic.

The World Health Organization (2011) asserts that it is insufficient to provide complete universal
data on disability without putting into consideration the connection between disability and health
conditions. Studies that consider health conditions and disability without bearing in mind
environmental factors are more prone to be emaciated (WHO, 2011). Friends of the Earth-Ghana,
obtained biostatistics from Obuasi in a survey. It showed a high occurrence of upper respiratory
tract infection (URTI) in the area which medical specialists connected to the mining activities and
related pollution (Awudi, 2002). Clinical symptom like arsenic poisoning were detected in patients
in the Ashanti Goldfields Company hospital at Obuasi. This was linked to the aerial pollution from
mineral treatment by the then Ashanti Goldfields Company (Awudi, 2002). Also, in the Tarkwa
area, with the commencement of mining investment, diseases such as malaria, diarrhoea, upper
respiratory tract infections, skin disease and acute conjunctivitis made up the leading ten diseases
in the area (Yeboah, 2008). The area had the maximum frequency of malaria in the Western
Region and Ghana in totality (Yeboah, 2008). Therefore, persons with disability living in these
areas are affected as well and they are affected more in the sense that according to WHO (2011)
the presence of numerous health conditions make the treatment of health and rehabilitation services
for persons with disability more challenging.
2.4 Compensation

Article 20(2) of the 1992 constitution requires that unbiased and sufficient compensation should be paid promptly for the compulsory acquisition of property by the state to anyone who deserves to be compensated (Republic of Ghana, 1992). Valuation has been a main problem related to compensation usually when it comes to buildings and crops affected by mining activities. The user value and market value has been a challenge between mining companies and rural communities (Twerefou, 2009). Majority of mining companies and government agencies do not see to it that compensation is at par with value of loss both in the long and short term (Tenkorang & Osei-Kuffour, 2013). Compensation payment is sometimes rated at what the mining company can pay and not the extent to which the local people are impacted (Tenkorang & Osei-Kuffour, 2013). According to Tsekpo (2002), some farmers received high compensation but they did not see it as enough and so they turned to oppose mining companies for more compensation for their settlement. This sometimes resulted in legal and civil means of challenging mining companies.

Kumi (2014) sought to explore the legal provisions on compensation and land acquisition in association with what a community expected in the Ahafo area of Ghana. The author indicated that Ghana’s laws do not match up to that of international standards. There is no agreed understanding in valuing items for compensation and local people lack the skill to negotiate adequately for themselves (Twerefou, Tutu, Owusu-Afriyie & Adjei-Mantey, 2015). Therefore, at the end of the day, local people feel cheated by mining companies when they receive their compensations because it turns out not to be enough.

When it comes to compensation negotiation, men have the advantage over women in participating in the negotiations as well as getting the compensation monies since they are seen as the family
heads. Studies show that some of the men who received compensation monies neglected their families after taking the money and returned home only when the money had been squandered (Akabzaa & Darimani, 2001). Some women expressed their bitterness on the unjust treatment they received when it came to compensation. As the monetary compensation did not trickle down to them, and this weakened communities, although, compensation money is one of the major ways of improving the effects of mining on people (Sweeting & Clark, 2000). In Tarkwa, one study found that women were part of the committees that negotiated for compensation for the people who were affected by mining operations but they did not receive the compensation money (Akabzaa & Darimani, 2001). Some persons with disability have also been left out of compensation negotiations and payment as their unique needs resulting from the various types of disability require special attention and payment that could sufficiently address those needs.

According to Ayitey, Kidido and Tudzi (2011) the new Mineral and Mining law 2006, (Act 703) was expected to serve as a remedy to insufficient assessment and compensation since the old mining law did not factor the need for deprivation of use. Though, the law states that persons are supposed to be remunerated for what they lose, however, it did not make any provision for persons with disability who lose their property to benefit from certain incentives in addition to the actual pay of their property. Either, they should be paid based on their disability in order to restore them back to their livelihood or the actual pay should be increased to benefit them due to their disability.
2.5 Gender and Disability

There are differences between persons with disability either biological or cultural. Therefore generalizations about disability can create a misconception about disability. Persons with disability have various demographic characteristics including gender, age, socio-economic status, sexuality and race. Each person has his or her personal choices and might respond to disability differently (World Health Organization, 2011). Also, while there is a relationship between disability and misfortune, not all persons with disability experience disadvantage which is as a result of discrimination on the same basis. Gender and disability interact to generate several challenges for women with disability compared to their male counterparts, irrespective of where they live. For example, not only are women with disability more likely to be unemployed, they also tend to earn lower income and work as clerical and service workers (Mitra et al. 2011; Ozawa & Yeo, 2006; World Health Organization, 2011). A study conducted by Naami (2015) in Northern Ghana presented similar findings. The outcome of the study demonstrated high unemployment rate (59.3 percent) among women with disability compared to men with disability (40.78 percent). Also, women with disability earned significantly lower than their male counterparts (in relation to the amount of money earned by females and males with disability, 87.9 percent of the females earned from 2cedis to 80cedis a month whilst 70.2 percent of males with disability earned the same amount. Also, 12.8 percent of males earned from 81cedis to 200cedis whilst 6.9 percent of females earned the same amount. Again, 2.1 percent of males earned from 201cedis to 300cedis whilst 0 percent of females with disability earned the same amount. Furthermore, 2.1 percent of males earned from 300cedis to 400cedis and 3.4 percent of females with disability earned the same amount. Finally, 12.8 percent of males with disability earned from 400cedis to 1100cedis whilst 1.7 percent of females with disability earned from 400cedis to 1100cedis) these show that males
with disability earned higher amount than females with disability (Naami, 2015). The Ghana Federation of Disability Organizations (2008) noted that in the cultural context of Ghana, women with disability endured the greatest affliction of cultural discrimination. Hence there is the need to determine the extent of effects on both females and males with disability and how to curtail those effects to benefit them (Oxfam, 2009).

2.6 Theoretical Framework

This study is underpinned by the Critical Disability Theory. Critical disability theory emerged from the critical social theory which was first propounded by Max Horkheimer in 1937 (Hosking, 2008). It is a theoretical framework that is used for the learning and investigation of issues pertaining to disability. Critical disability theory establishes the difference between the rules and values based on liberalism thinking and how these thoughts are actualized in the lives of persons with disability (Hosking, 2008). The key principle of the theory is that the dichotomy of disabled and non-disabled persons is created by society and deleteriously impacts persons with disability as this creation is built on values of normalcy (Hosking, 2008). Critical disability theory therefore seeks to challenge society’s perceptions about disability which create oppression for persons with disability (Hosking, 2008).

There are seven elements on which CDT operate and these are; the social model of disability, multidimensionality, valuing diversity, rights, and voice of disability, language and transformative politics (Hosking, 2008). However, this study focuses on three of the elements and these comprise of the rights of persons with disability, voice of disability and language of disability. These three elements were chosen because the researcher was interested in finding how these three elements
manifest in the experiences of persons with physical disability in relation to mining. In other words, how mining activities positively or negatively affect these elements in the lives of persons with disability living in a mining area. These elements relate more to the topic.

a) Rights

The right to function independently and partake in active involvement in the society is the main emphasis of the Critical disability theory (Hosking, 2008). CDT is not against liberalism but it exhibits how liberalism talks about rights and leave out the necessities and concerns of persons with disability and not appreciating their diversity and their individual and cooperative needs (Hosking, 2008). According, equal rights to persons with disability will help them exhibit their innate abilities so that they can also contribute equally to national development. Equal rights to persons with disability will help them benefit from the various systems within the society be it education, employment, health care and others (Hosking, 2008).

b) Voice

Traditionally, the voices of persons with disability have been subdued and relegated in mainstream society (Hosking, 2008). This is because persons with disability are seen as lacking abilities, pitied and despised (Hosking, 2008). Therefore, their voices are seen as demonstrating either the healthiness or unhealthiness of their lives in relation to their disability (Hosking, 2008). Persons without disability sometimes reject what they do not want to hear from their disabled counterparts (Hosking, 2008). Critical Disability Theory tends to give voice to persons with disability to air
their pleasure and displeasure (Hosking, 2008). Persons without disability think of disability from their own perspective. It is only when we listen to the views of persons with disability that society can comprehend that disability does not prevent meaningful and desired life (Hosking, 2008). Hence, there is the need to appreciate the perspectives of the disabled in our society by giving them equal voice opportunity to be able to speak for themselves and speak out what matters to them (Hosking, 2008).

c) Language

Language is an important element of critical disability theory. Language can either be verbal or non-verbal, written or imagery (Hosking, 2008). Language is used to describe a state of being and create perceptions about things (Hosking, 2008). Language influences the idea and the state of disability (Hosking, 2008). Certain perceptions are created by the use of words and images to describe disability (Hosking, 2008). How disability is portrayed in the media and in our individual lives affect the way people think and relate to persons with disability (Hosking, 2008). If a negative language is sent about disability, that is how people will perceive disability and this can create certain stereotype and prejudice about disability (Hosking, 2008). Some of the challenges that persons with disability face are negative attitudes toward them which have been as a result of how they are negatively portrayed in both visual and print media (Hosking, 2008). However, this media can be used to portray the positivity of disability so that people can understand and appreciate the state of persons with disability and see them as being part of the society (Hosking, 2008).
2.6.1 Usefulness of the Theory

The critical disability theory was used as lens for the study. The three key elements that were brought into view for analysis were the voice of disability, the language of disability and the rights of disability. The theory helped the researcher to identify some of the barriers and opportunities persons with physical disability experienced in the areas of voice, language and their rights in a mining area, Obuasi Municipal. In the area of rights the theory helped the researcher to discover that certain rights of some persons with physical disability were not promoted. This was because some infrastructure were not fully accessible to some persons with physical disability and these included the school, hospital, borehole and roads. This prevented persons with physical disability from participating fully in mainstream society.

Also, the theory helped the researcher to realize that the drawing and excavation of the rehabilitation centre for persons with disability by the mining company promoted the educational and economic rights of persons with disability.

In relation to the voice of disability, the theory made it known that the community centre promoted the voice of persons with physical disability in the Obuasi Municipal since it was given them freely to hold meetings and programmes. The provision of vehicle by AngloGold Ashanti to attend disability anniversaries promoted the voice of disability. This is because during these programmes, they discuss issues that matter to them, take decisions and make recommendations for policy.

These decisions and recommendations received media coverage which educated the general public on disability issues. This promoted the language of disability. Since some people use words that connote negative attributes about disability, which Obuasi is not an exception, it is important that some of these benefits help to promote the voice and language of disability. Despite the benefit of
promoting the voice of disability, it was clear that the voice of women with physical disability were not promoted since compensation negotiations were done without their participation.

These functions of the theory assisted the researcher to make recommendations for policy and practice decisions that could help address the challenges persons with physical disability, especially those in Obuasi Municipal, encounter in relation to mining activities.
CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter consists of the various research methods that the researcher used to recruit participants, gather, handle and analyze data on the topic.

3.1 Research Design

This study employed a qualitative research method. Qualitative research seeks to explore meanings people attribute to a social or human problem (Creswell, 2007). Qualitative research is a form of investigation in which researchers make an explanation of what they understand, hear and see (Creswell, 2007). A qualitative research design was adopted because the researcher sought to explore the experiences of persons with physical disability in regard to mining activities and she needed a detailed and contextual understanding of the issue (Babbie, 2007). This research design helped the researcher to analyze the phenomenon under study through personal experiences of persons with physical disability in the Obuasi Municipal area (Babbie, 2007).


3.2 Study Area

The study area for this research was the Obuasi Municipal area. This area was carved out of the Adansi West District Assembly (Ghana Districts, 2006). It occupies a land area of 162.4sq.km. The plant life is mainly a degraded and semi-deciduous forest (Ghana Districts, 2006). The forest is made up of scanty species of trees which are collected as lumber (Ghana Districts, 2006).

Obuasi Municipality has been equated to mining which has contributed greatly to its socio-economic development (Ghana Districts, 2006). In 2004, the existing mining company, AngloGold Ashanti acquired the license to operate after the then Ashanti Goldfields was no more. The company employed over 6000 Ghanaians and indirectly sustained between 50,000-60,000 people within the Municipality (Ghana Districts, 2006). This area was chosen because there had been consistent mining activities for a longer period of time (Ofosu-Mensah, 2012). Therefore, the people have experienced some of the environmental, social and health effects that have resulted from mining operations. Also, the mining companies have responded to some of the needs of the community and inhabitants. Hence, this area was conducive for the research as it helped the researcher to understand the effects of mining, responses of the mining companies to address the needs of the people as well as what else could be done, with more emphasis on persons with physical disability.
3.3 Target Population

The target population for this study were persons with disability living in the Obuasi Municipal area in the Ashanti Region, and key informants from institutions like AngloGold Ashanti, Small Scale Miners Association, the Mine School, Minerals Commission, and Environmental Protection Agency.

3.4 Study Population

The study population were persons with physical disability which included persons with mobility disability, visual disability, hearing disability, and persons with amputated limbs. The key informants were officials from AngloGold Ashanti, Minerals Commission, Small Scale Miners Association, the Mine School and the Environmental Protection Agency. The reason for selecting this sample (size) was to get different views and opinions to represent the different groups of stakeholders in mining. The age range for participation for both persons with physical disability and key informants was from 18 years to 60 years. This age range was chosen to allow the researcher interview adults from the different phases of the life cycle to know their experiences.
3.5 Sample Size

The sample size for this study were 21 research participants. This was because according to Creswell (1998) five to twenty five people for a qualitative research are enough in order to arrive at data saturation. The study attained saturation with this sample size. Sixteen of them were persons with physical disability out of which eight (8) were females and another eight (8) were males. For the remaining five, one was chosen from Environmental Protection Agency, one from the Minerals Commission, one from AngloGold Ashanti, one from Small Scale Miners Association and one from the Mine School.

3.6 Sampling Technique

Purposive sampling technique was employed to select the key informants to participate in the study whereas snowball sampling was used to select the participants with disability. The snowball sampling is a type of non-probability sampling where available study subjects enlist other participants from among themselves (Katz, 2006). The researcher chose this technique because she was not familiar with her participants. Purposive sampling, also called judgment sampling is the considered selection of an informant because of the qualities the informant possesses (Bernard, 2002). The criterion for selecting key informants was based on how long they had worked in their respective organizations with the least working period being six months. The minimum period of six months was chosen because the researcher believed that by that time an employee would have grasped certain basic organizational tenets and activities. Purposive sampling technique was used to select key informants from among the stakeholders in the mining sector due to the qualities they possessed (Bernard, 2002).
3.7 Data Collection

The study used primary data derived from the field with the use of an unstructured interview schedule to conduct in-depth interviews with the study participants. The interview schedule themes were used to direct the areas the researcher explored. The interviews covered areas such as the environmental, the social and health issues of gold mining that persons with physical disability faced; the contribution of the mining towards the wellbeing of persons with physical disability; and involvement or otherwise of persons with physical disability in compensation negotiations and payment. Different interview schedules were used for persons with physical disability and key informants and the interviews were recorded with an audio tape recorder with the permission from the research participants.

The interview schedule was used as a guide to the questions that were asked on the field. The researcher used field research interviewing to conduct in-depth interviews with participants. Consent and voluntary participation were sought from participants before the interviews were conducted. Participants were also informed that they could withdraw from the study whenever they believed they could no longer participate in the study. The unstructured interview schedule helped the researcher probe more for further responses. The interview schedule was designed in English. However, interviews were conducted in Twi, English and Sign Language. Therefore the researcher employed the assistance of an interpreter to sign for persons with hearing disability and the interview schedule was brailled for the participants with visual disability. However, not all the participants with visual disability were educated in the use of braille so the researcher read the interviews to them. All the interviews were conducted through face to face interactions except two that were conducted on the phone. This was because the participants were not physically present at the time that the researcher was on the field.
3.8 Data Handling and Analysis

Qualitative data analysis is the non-numerical valuation of the interpretations made through participant observations, in-depth interviews and other qualitative research techniques (Babbie, 2007). The aim of data analysis was to discover patterns among the data, patterns that direct to the theoretical understandings of social life (Babbie, 2007). In handling the data, the audio recorded data were kept on a computer as a back-up. The data were analyzed using Creswell’s (2009) concept of thematic analysis. These included: organizing and preparing the data for analysis by transcribing the data from the audio recorded file into a text format. After which I familiarized myself with the data, by reading through all the transcripts and getting an overall sense of the information, reflecting on the general meaning and grasping the content of the data.

Data were then coded by organizing related segments (of data) into categories, topics and subtopics. Then, I identified themes from the coding and searched for theme connections. Data from the two different groups of participants were analyzed separately then compared and contrasted to arrive at themes and categories. I generated a description of the data by using multiple viewpoints and quotations from the two groups and interpreted the larger meaning of the data by comparing the findings with research objectives and the literature.

In addition to the steps proposed by Creswell (2009), the researcher did member checking as a way of ensuring the trust worthiness of the data. The researcher went back to the participants with the themes and responses to verify if the information reflected their views and perspectives. The feedback the researcher got from the member checking was incorporated into the research report.
3.9 Limitation of the Study

It is possible that the study was limited in the sense that the researcher chose qualitative research design with a sample size of 21, using non-probability sampling. The sample therefore cannot be said to be a representative of the population of persons with physical disability in the Obuasi Municipal Area. Also, the study was constrained to only one geographic location. Thus, the findings cannot be generalized to the country as a whole. However, according to Lincoln and Guba (1985), the findings of a qualitative research can be applied to other contexts. Again, it is probable that translating from Twi to English and vice versa as well as from English or Twi to Sign Language and vice versa, affected the data for the study. Therefore, the researcher did member checking to ensure that the data collected reflected the views of participants. Also, it is likely that the researcher was constrained when it came to the probing for more responses from the hearing impaired since she employed the assistance of an interpreter. These limitations notwithstanding, the study highlights how persons with physical disability experience gold mining activities. Findings have both policy and practice implications which could help better the experiences of persons with disability with regard to gold mining.

3.10 Ethical Consideration

The researcher ensured that the following ethics were applied in the process of the study.

The researcher made sure that no harm was caused to any participant. She made sure that she did not injure the people being studied notwithstanding their voluntary participation in the study (Babbie, 2007). One of the ways through which this was ensured was by not using derogatory
terms to represent them. She also had in mind, the dignity and worth of participants. The researcher has not and will not reveal information from participants that will endanger their lives, friendships, jobs and so forth (Babbie, 2007).

Again, the researcher sought for the consent of participants and she made sure that the purpose of the study was made clear to participants and also sought for their voluntary participation in the study. In addition, the researcher ensured the confidentiality of the participants. She made sure not to disclose a given response and the identity of the participants publicly other than what the research was intended for. This helped to prevent any form of trace to participants. Furthermore, the researcher used pseudonyms to represent the participants and this helped to prevent the participants from being known.
CHAPTER FOUR

FINDINGS AND DISCUSSION

4.0 Introduction

This chapter expresses and discusses the findings of the study. The chapter begins with the analysis of the demographic characteristics of the participants. The researcher then moved to analyze the environmental; the social; and health issues of gold mining that persons with physical disability in the Obuasi Municipal Area faced; the contributions of gold mining activities towards the wellbeing of persons with physical disability; and the involvement or otherwise of persons with physical disability in compensation issues. The final section focuses on the discussion of findings.

4.1 Demographic Characteristics of Participants

The study sampled 21 participants. Out of the 21 participants, 16 were persons with physical disability with the age range of 24 to 60 years. The remaining five were key informants, one each from the Minerals Commission, AngloGold Ashanti, Environmental Protection Agency, the Mine School and the Small Scale Mining. Out of the sixteen (16) persons with physical disability who participated in the study, eight (8) were females and the remaining eight (8) were males. The ages of the women ranged from 30 to 60 years. Four of the females had attained junior high school education, three had tertiary education and only one was uneducated. Five of them were working whilst three were not working. Five were married, one had divorced and two were not married.

In relation to the males with physical disability, the age range was from 24 to 41 years. Four of the male participants had only junior high school education, three had tertiary education and one had
senior high school education. Out of the three who had tertiary education, one of them had a master’s degree, one was at the undergraduate level and one had a bachelor’s degree. With regards to their working status, four of them were working whilst four were not. Two had married and six were not married (See appendix (e) for more details).

The key informants were all males. Their ages ranged from 24 to 52 years. In relation to their educational status, four of them had tertiary education and one had middle school certificate. The four of them who had tertiary education, two had a master’s degree, one was then doing his masters and one had a bachelor’s degree. Out of the five key informants, four were married whilst one was not married. The duration of work of the key informants in their institutions was more than six months to nine years (See appendix (f) for more details).

4.2. Findings

Themes that emerged from the study were grouped under the study objectives and these included; environmental issues; social issues; and health issues of gold mining which persons with physical disability faced; the contributions of gold mining towards the wellbeing of persons with physical disability; and the involvement or otherwise of persons with physical disability in gold mining compensation issues.
4.2.1 Environmental Issues of Gold Mining Persons with Physical Disability Faced

The environmental issues of gold mining which persons with physical disability in the Obuasi Municipal area faced were land degradation and water pollution.

4.2.1.1 Land Degradation

Land degradation was described by participants in the following terms: farmlands, productivity and the prices of farm produce.

In relation to farmlands, participants with disability complained about how illegal mining had destroyed lands which could have been used for farming activities. Especially, lands that were closer to water bodies that could have been used for vegetable farming. This scenario was described by Riches:

"Because of the mining, especially, the illegal mining, it has destroyed so many lands that I could have farm on; tomatoes, garden eggs and the like, especially, those [referring to land] that are close to water bodies. The illegal mining has destroyed them all. So if you are looking for a place to plant them you can’t get (25yrs, Visually Impaired, Male)."

As a result of the degradation, land became scarce for everyone; both able-bodied persons and persons with physical disability. But, the participants with disability complained that they had to trek long distances to get arable land which was problematic due to their physical disability and the inaccessible environment as noted in the following narratives:

"The movement of persons with disability is a problem, so going to look for other land might be difficult. When you consider Mampamhwe they have destroyed the land from Pomposo..."
to Mampamhwe. So it will be difficult to get other land (Riches, 25yrs, Visually Impaired, Male).

Pollution of the land renders persons with disability incapable of working on their farms. It means they have to trek for miles to look for arable agricultural land (Accordance, 40yrs, Mobility Impaired, Male).

Under productivity and prices of farm produce, the study participants complained that the degradation of the land led to low productivity of farm produce and thus, increased the prices of food which impacted them greatly. This was due to their already limited financial situation as narrated by Life and Potential:

Because of the mining, places that you could use for farming, are also damaged and for that farmers, although they will farm, but not producing enough; therefore, increasing the prices of foodstuffs. How will persons with disability get money to buy these food stuffs with high prices, so it will reduce their standard of living (Life, 35yrs, Mobility Impaired, Female).

The fact that Obuasi is on AGA concession, there is little that indigenous people could do by way of farming. Therefore, food or cost of livelihood is a little bit higher compared to other towns around Obuasi. As a result of that, persons with disability, even as much as some of us have some means of livelihood, we are not able to afford the high cost of food. And even our immediate families too are also in the same condition. So life really is hard economically for persons with disability in the Obuasi mining area (Potential, 39yrs, Mobility Impaired, Male).
4.2.1.2 Water Pollution

Due to the water pollution in the area, some people had to travel long distance to fetch water and these included persons with physical disability. According to the participants, they had to travel long distance to fetch water. They noted that they spent too much time, as a result of their impairments, to travel to get water as narrated by Riches and Accordance:

Yes, please when it comes to the issue of water it has worried us, if I take where I stay the water we used to fetch was pompo. So if you are thirsty you can go and fetch some to drink. Even that’s what we were using to wash, bath and do so many things. But because of the illegal mining, they have destroyed the water. So if you are looking for water, you have to suffer and walk long distance. If the distance to fetch water is far, when you are going, you spend a lot of time before you get there. And also persons with disability if you are going, the distance that someone without disability will use to get there, persons with disability will spend more time before they can get there. And when you go, you have to join a queue to fetch pipe borne water before you can get some and bring to the house (Riches, 25yrs, Visually Impaired, Male).

Pollution of water bodies for instance affect the time spent by persons with disability to search for water. Because of their condition, it is difficult for them moving around in search of water (Accordance, 40yrs, Mobility Impaired, Male).

Sometimes, they reported that they used their already limited resources to pay for other sources of water if they were not able to fetch from the borehole as demonstrated in the narrative below:

Water has become very scarce as a result of the operation of the mining companies; they choosing to bypass some of their tailings through the streams and rivers. So preferably,
persons with disability will have to hire people to fetch water for them if the taps are not running. Also, if they are not able to fetch from the borehole, they have to pay for other sources, whereby, already economically they do not have a lot of sources of getting money or making extra income. So our already meager income would also be stifled or challenged one way or the other (Potential, 39yrs, Mobility Impaired, male).

4.2.2 Social issues of Gold Mining Persons with Physical Disability Faced

The study found several issues that affected the well-being of persons with physical disability socially. These included, employment of persons with physical disability, cost of items, resettlement and relocation, and housing situation.

4.2.2.1 Employment of Persons with Physical Disability

Participants with physical disability reported that it was difficult for them to get employment in the mines because the sector seemed to have restricted opportunities for persons with physical disability.

*I am not too sure of the employment policy but the law doesn’t permit them to discriminate that is what I know. I know a few people who were employed in the mining; it’s just a question of putting them in places that they can function, yea. I know at least of one person who used to be with the mine but he is on redundancy now. The other side is that when it comes to employment opportunities, persons with disability have very, very restricted access to opportunity (Potential, 39yrs, Mobility Impaired, Male).*
Heart believed they could not get jobs in the mines due to their low educational status:

_They don’t give us a chance, they claim our education is low except one guy who had employment there. If we don’t get employment in the mines it is sad and it is against God, God gave each one equal opportunity. Maybe there are certain jobs we can do but because we didn’t go to school it leads to discrimination and every time we need interpreters. If there are some it makes communication easy (Heart, 41yrs, Hearing Impaired, Male)._ 

But, other participants, especially the key informants, were of the view that, mining work is more labour-demanding and required physical strength to work there. They also noted that the mines were not conducive places for persons with physical disability to work due to safety reasons:

_The mining environment is a high risk environment prone to various forms of accidents. It is a rugged environment to work in. Before being employed they test your eye sight and your ear to find out if they are good. You are also required to be physically fit. All these are done to ensure that people work safely. It is a difficult environment for a blind man for example to work in. But someone with amputated arm or one leg cut who had their accidents in the mine, can work and are sometimes there depending on the level and are allowed to carry out light duties if they can. The work is normally physically and mentally demanding. Because of the kind of environment, it might not be favourable for the hearing impaired and the visually impaired. It’s a job that goes with communication and being alert and always ready to escape from danger. Even in the office one is always required to be alert and ready to move as fast as possible to safety (assembly points) in case of danger. I don’t think it is a good environment for the physically disabled to work (Hard work, 52yrs, Minerals Commission, Male)._
Yea, maybe they also didn’t apply, the work is open to the public. Mind you there are some jobs I think we have to face the truth, there are some jobs that if you are disabled you can’t do it. We have to be frank because if you are blind how can you go underground? You understand, underground the conditions there are different even people who are fit sometimes need a little bit kind of orientation and all that. It’s a whole different place altogether, but that does not dispute the fact that if you have the potential to do it we will prevent you. But in the job market there’s something that we call the five personality traits. You have to match your potential, your ability, your agility with your potential and then the job that you want to do. So some of these things, most of the persons with disability will have to be at the administration you get what I’m saying. But there are some jobs that truly to be frank with you, you have to limit it to some sets of people and its part of the requirements for the job (Inherit, 32yrs, AngloGold, Male).

The representative from the small scale mining commented that they did not employ persons with physical disability unless the person was incapacitated during working hours. This was reported by Access.

We don’t employ persons with disability, unless the person got the disability whiles working. But if you are a person with disability already, we will not employ you. (Access, 51yrs, Small Scale Mining)

Yet others, particularly persons with physical disability, believed that regardless of the labour-intensive nature of mining work, there were some departments like the administration, which persons with physical disability could work but due to discrimination they were not considered as lamented by Potential:
Also, it is partly because the core work of the company is labour-intensive and it requires the strength of able bodied people. But an area where by the company could have also helped us could have been their administrative work. But we have not seen any progress or policy by the company to hire persons with disability in that regard (Potential, 39yrs, Mobility Impaired, Male).

In relation to the employment of females with physical disability, the participants noted that, the issue of women was worse, since no woman with physical disability had been employed by any of the mining companies in Obuasi:

*They don’t employ females with physical disability. I don’t know the reason but the work is pressure work (Verity, 34yrs, Amputated Limb, Male).*

One of our members is an example. He is the only one even him it seems he had a problem with AGA and they wanted to help him that’s the only one I know. They haven’t employed a female (Compassion, 41yrs, Mobility Impaired, Female).

An official from AngloGold Ashanti confirmed that no female with physical disability had been employed in the mine.

*There has never been a female disable person that has been employed that I know of. Mining is more male dominated; females are not interested in the mining work. Because it is more physical, may be they couldn’t go through the employment process, may be they didn’t apply, may be too they applied but they were not successful applicants (Inherit, 32yrs, AngloGold, Male).*
4.2.2.2 Cost of Items

Persons with physical disability complained that the cost of items was high in the study area which impacted their ability to patronize certain basic necessities such as foodstuffs. They attributed the high price to the following: mining, the trading of gold and the economic immobility of persons with disability.

In relation to the trading of gold, participants complained that those who traded in gold in the area made people believe that there was so much money because the sellers made much profit. These perceptions, according to the participants, led to the increase in prices of items which greatly impacted persons with physical disability due to their low income base. This was asserted by Heart:

*The mining has increased the prices of items here. Because of the buying of the gold, those who sell the gold get more profit so people who sell think there is so much money here. That is why prices of items here are high, like if they were cheaper for persons with disability it would have helped us due to our financial challenges (41yrs, Hearing Impaired, Male).*

Participants, especially, those with disability lamented how increased in prices of items generally affected them due to their economic immobility as noted by Accordance:

*Persons with disability usually are not economically mobile, therefore, they have a very narrow income base. As a result whenever prices of items go up it affects their real income. When they lose their livelihood, they find it difficult to secure alternative jobs (40yrs, Mobility Impaired, Male).*
In terms of gold mining, participants reported they were unable to afford certain items, due to gold mining (legal and illegal) in the area. This was also due to the ability of mine workers to pay for certain things in the market. According to the participants, this demand induced inflation in the area rendered them incapable of buying basic necessities such as foodstuffs and other items as stated in the following narratives:

*The prices of items have gone high. Because of the mining in this area prices of items have gone high. So those of us with disability who do not do illegal or legal mining, when we go and buy items then we will be crying (Compassion, 41yrs, Mobility Impaired, Male).*

*Because the workers of the mine are able to afford things in the market those of us who are not working find it difficult to also buy because there is a rise in inflation. So those of us with disability because we don’t have money to buy, we will always be lacking certain basic items in life (Determination, 30yrs, Visually Impaired, Male).*

### 4.2.2.3 Resettlement and Relocation

Resettlement and relocation as participants reported, affected the means of livelihood of everyone, but persons with physical disability in particular. This was because they reported that they used to get some help from their neighbours but the help stopped when their neighbours were resettled. This issue was lamented by Heart:

*There were some hearing impaired persons in Kubi, because of AngloGold Ashanti’s concession they had to move to a different place. They were my friends; it hurt me because*
I used to get some money and food from there till they left (Heart, 41yrs, Hearing Impaired, Male).

Also, some participants commented that they could not get certain things such as food stuffs and vegetables, which they used to cultivate in their previous place, since they were relocated.

When people are going I can’t go so I don’t have money. Where I used to stay I had a garden but this place I even had to fight before I could plant this cassava. They said AGA says we shouldn’t plant here (Perseverance, 60yrs, Mobility Impaired, Female).

4.2.2.4 Housing situation for Persons with Physical Disability in Obuasi Municipal Area

Under housing, participants complained that it was difficult for them to get houses to rent due to the high rent. This was described by Riches and Heart:

Housing is not easy at all. When I was looking for a place I moved from place to place asking for a place to sleep (Heart, 41yrs, Hearing Impaired, Male).

Here, when you are looking for a house to rent, sometimes you don’t get some, you suffer before getting some and here too the rent is very high. Sometimes when you are looking for a house to rent, we persons with disability we are not able to work compared to those with no disability so you suffer before you get money. If the rent is high like that, how you will get money to pay is a challenge so it makes us suffer (Riches, 25yrs, Visually Impaired, Male).
Participants noted that housing was expensive because illegal miners and other migrants were able to patronize the high price since they were able to work and get more money. The participants with disability noted that they could not pay for rents, due to their inability to work and earn money to pay for the high prices. This was complained by Life, Riches and Beauty respectively:

_The illegal miners are also here, we have a lot of people coming from different places. When they go in search of the house, they don’t even care about how much they are asked to pay, they just pay and this has also increased the prices of the house. Most of the persons with disability in Obuasi are not working. As a result of that it is difficult to get money to pay for the high prices and searching for the house becomes very difficult (Life, 35yrs, Mobility Impaired, Female)._

_Because I am visually impaired and I am not able to do a tough work, I don’t really have money. So in case I want to rent a house, the price is high and the job you have to do to go and rent that house you don’t get. That’s why it makes housing situation difficult (Riches, 25yrs, Visually Impaired, Male)._

_Because of the mining activities housing rent is expensive, everything you do is expensive but as hearing impaired too we don’t get some of the work to do to help us in our life. If our rent expires there is litigation in the house till we move out. If we speak they don’t hear but when we look at their mouths we can see that they are insulting us (Beauty, 40yrs, Hearing Impaired, Female)._

In addition to the unaffordable housing, participants indicated that they had to put in a lot of efforts to maintain their apartments due to the scarcity of housing and disability based discrimination.
It’s expensive because there are inadequate rooms for rent. Since I’m not a worker and I am a person with disability, it is quite difficult in paying my rent. The least mistake you do then they give the room out to those who can afford. Some people don’t want to stay with persons with disability because of society’s perception about disabled people. They believe a disabled person cannot do anything for him/herself or for the society (Determination, 30yrs, Visually Impaired, Male)

Adding to the housing issues discussed earlier, is the issue of accessibility of buildings. Participants complained that the available housing units were not accessible because they all had several stairs making it difficult for wheel chair users, as lamented by Life:

*How the house has been structured is a problem. Let’s say some one using a wheel chair; it will be difficult for the person to go for a house with stairs* (Life, 35yrs, Mobility Impaired, Female).

Participants also complained about the positioning of the housing units and how challenging it was for them to use the place.

*The way the houses are positioned is not favourable for persons with disability. For example, in my house I find it difficult moving around easily or freely because of the rocks and stones in the surrounding or on the compound* (Patent, 30yrs, Visually Impaired, Female).

Again, participants complained about the inaccessibility of resettlement camps due to the presence of stairs as complained by Accordance:
In designing resettlement camps most of the needs of persons with disability were not factored. For instance almost all the resettlement buildings in Obuasi have stairs, making it difficult for persons with physical disability to access them. (Accordance, 40yrs, Mobility Impaired, Male)

4.2.3 Health issue of gold mining faced by Persons with Physical Disability

The key health issue of gold mining on persons with physical disability identified in this study was the discharging of chemicals. Some of the visually impaired participants alleged that the chemicals from the gold treatment plant caused their blindness as noted below but there was no medical record of such assertion:

Yea it has affected my eyesight. We lived beside the major gold treatment plant which was emitting harmful chemicals into the atmosphere; those chemicals entered my eye and my bloodstream. So that’s all that I can say for now. My visual impairment is very well, 100 percent linked to the mining activities. An eye specialist told me, he was completely sure (Determination, 30yrs, Visually Impaired, Male).

4.2.4 The Contributions of Gold Mining Activities towards the Wellbeing of Persons with physical Disability

The mining activities in Obuasi Municipal area contributed towards the wellbeing of persons with physical disability. These contributions were grouped into two: 1) General Contributions and 2) Infrastructure.
4.2.4.1 General Contributions

According to the participants, they benefitted from the general contributions from the mining companies in the form of Indirect and Direct benefits. The indirect benefit that participants with disability reported was the employment of their family members by the mining companies as narrated by Riches:

*The mining has brought some level of wellbeing in our lives. Because the mining gave employment to some of our relatives for them to get some money to sustain the house and they gave us some to also buy food and other things (Riches, 25yrs, Visually Impaired, Male).*

In terms of direct benefit, participants with disability reported that the mining activities benefitted them. This was in the sense that, the association of persons with disability, which encompasses all persons with disability, received two set of computers from AngloGold Ashanti; a vehicle from AngloGold Ashanti to attend disability anniversaries. They also had the initial excavation and drawing of the disability rehabilitation centre done for them for free by the then Ashanti Goldfields Corporation. This was narrated by Potential, one of the leaders of persons with disability:

*Well, the mining company has a lot of facilities here. Obuasi Municipal Assembly through the common fund is helping the disability community to put up the Obuasi training and rehabilitation centre. The initial excavation work and the drawing for example, was done for us freely by the mining company, the then AGC, so we will say we have benefitted from the company. Also, recently their community trust fund also gave two used sets of computers and one is what I have just been using. We have the other computer and the system unit inside there. This is all that I can say, but the assembly too they used to pay a*
lot of royalties, some also benefitted us and the people of Obuasi directly. If you quantify, the impact has not been massive but in the past too they used to help us. I quite remember, also last year the company sponsored us to Bolga, especially, their football team Ashgold gave my association a whole bus to convey us to Bolgatanga, for our disability anniversary. So these are the freebies that have come as a result of our stay in Obuasi (Potential, 39yrs, Mobility Impaired, Male).

4.2.4.2 Infrastructure Development

The mining companies in Obuasi provided certain infrastructure including hospital, school, community centre, road and boreholes. However, study participants noted that while some of the infrastructure were accessible to persons with physical disability others were not. Accessibility in this theme includes both physical and informational access determined in the following infrastructure: school, hospital, boreholes, community centre and road.

Under school (Junior High School), study participants professed that the physical structure of the school was accessible to some extent to persons with mobility disability. However, there was no sign language interpreter to sign for those with hearing disability; neither did they have a braille machine to braille study materials for those with visual disability. These provisions for those with hearing and visual disability were not factored in the educational system as reported by Inherit and Riches:

The schools, they are accessible but the only gap that I can talk about is the fact that when it comes to those who are blind, they have a special way of learning, they have a special way of teaching them. I can’t really say we have and I can’t also say we don’t have, but in
Obuasi I don’t think these are factored in the educational system. It is like the normal one. To be frank it is the normal education. May be if you have a problem with walking or you have a problem with mobility and I think that one you can attend that school. Oh, the wheel chairs they can use it. I think now you see we have a problem in Ghana and I think most of the time we think everybody is the same. Most of the vulnerable people are marginalized, like they are most of the time not being considered. I think if I should put it that way because, when we are building schools, we just build it. We think everybody can use the stairs, everybody can see from the black board, everybody can sit but we don’t take into consideration the disabilities (Inherit, 32yrs, AngloGold, Male).

A representative from the mine school (the school provided by AngloGold Ashanti) confirmed that the existing school is not an all-inclusive school. So currently, there were no provisions for persons with hearing and the visual disability. This was reported by Achievement:

Oh once that becomes the position of the school in terms of whom we admit or we become a more inclusive school. Once we take that position, then of course we would have to make provision to meet the needs of such students but at the moment we are not an all-inclusive school. Well, currently you know we have academic board and the board from time to time reviews the services we provide particularly the educational programmes we offer. As part of the discussions we’ve had so far, it has never come up that we want to do this yet. So it may be difficult to answer, provide a yes or no answer but who knows there could be the possibility. (Achievement, 38yrs, Mine School, Male)
The AngloGold Ashanti Hospital was open to the public as reported by participants and it was accessible to some extent to persons with physical disability in the Obuasi Municipal area, as wheelchair users could use this infrastructure. This was elaborated by participants that they were able to use wheel chair and clutches any time they had to visit the place. As were described by Potential and Inherit:

*The built environment of the hospital, some part yes it is accessible but some part no, it is not accessible. They have some ramps, however, there are certain areas too because where the hospital was built is just like a valley. So persons with disability I quite remember just recently, I took my daughter to the facility and from the OPD section to the casualty side it wasn’t easy. A lot of staircase and Obuasi comparatively, that hospital is most disable friendly than other different places that we have here because all the wards you can get in with your wheel chair. Recently, my mother got admitted I took my wheels to the ward and so its disable friendly to some extent. But there is more that they could do to kind of make it a perfect environment that persons with disability will enjoy the facility (Potential, 39yrs, AngloGold, Male).*

*Now I know most of the projects, even the hospital, our hospital, they have a place where by maybe if you are disabled, you can pull your wheel chair or whatever to access wherever you are going, you understand (Inherit, 32yrs, AngloGold, Male).*

However, persons with hearing disability noted that they were able to visit the hospital but they did not get anyone to interpret the discussions they had with the health professionals to them. This was complained by Heart and Beauty respectively:
It's been only two times I visited the hospital. Where I touched in my body was where the doctor treated, there was no one there to interpret how we feel (Heart, 41yrs, Hearing Impaired, Male).

But for hospital I sometimes attend AGA hospital. However we don't get anyone to interpret for us when we visit the hospital. When I get there, I sign to show them that I am hearing impaired. They take my card and tell me to sit down but I wouldn't hear when they call. I sit for so many people to go, it's when I go to them that they apologize. When I finally get the opportunity to see the doctor, I point the place where I am suffering to the doctor. There are times the doctor gives me a pen to write. When my child is sick and can't eat, I demonstrate to the doctor what the child is going through and he gives us medication (Beauty, 40yrs, Hearing Impaired, Female).

Similarly, one of the leaders of the disability association responded that currently those with hearing disability did not have people to sign for them when they visited the hospital. However, they had started training public service delivery institutions in basic sign language so that they can communicate with those with hearing disability whenever they visited those institutions. This was noted by Potential:

For signing no, no, no, it's just recently that the disability community came together. Recently, we had some training for key public service delivery institutions and we have trained them through the Ghana National Association for the deaf (GNAD). They received their common fund and they dedicated their support to train sign language interpreters for this place. So that any time a hearing impaired person goes to such a facility they will be in the position to have a nice discussion without any language barrier. They have just
finished the training, so we are yet to evaluate and see, but there was a general update as to all the participants were kind of happy and the service will help them to support the disability community. So that’s it but when it comes to like the braille, getting their policies, information in braille, for the blind in terms of their usage, that one we have not gotten there yet (Potential, 39yrs, Mobility Impaired, Male).

The representative from the Minerals Commission commented on how some mining companies behave towards the disability law when building infrastructure.

When they are putting up a hospital and there are no ramps we push them to do it. When they are building the facilities for the communities they are supposed to go by the laws including the disability laws. Some of them build the facilities to conform to the disability laws, some too may not (Hardwork, 52yrs, Minerals Commission, Male).

With regard to the boreholes, participants revealed that not everybody was able to fetch from the boreholes provided by AngloGold Ashanti. Participants asserted that the usage of the borehole was dependent on one’s type of disability. For example, wheelchair users and some other mobility impaired persons could not fetch water from the boreholes due to how they were built as asserted by Potential:

When it comes to the pipe borne water, that’s the borehole, it is dependent on your disability. If you are a hearing impaired person, you don’t have a problem. If you are visually impaired you don’t have a problem. If you are physically challenged who kind of whether your disability is partial is okay but if you are wheel chair ridden, it’s a big problem, so depending on your disability (Potential, 39yrs, Mobility Impaired, Male).
Regarding the community centre provided by AngloGold Ashanti, the participants noted that it was accessible to them and they were able to hold their meetings there. This was professed by Potential:

*Well, the mining company has a lot of facilities here, like AGA club house, where most of my meetings are held. At a point they used to give it to me for free to organize my meetings and when I request they still give it to me for free (Potential, 39yrs, Mobility Impaired, Male).*

In relation to the roads, it was noted that there were no pavements along the roads constructed by AngloGold Ashanti to serve the communities they had impacted on. Participants commented that the lack of pavements restricted their movement. This was lamented by Potential:

*It is because they are not disable friendly. The inaccessibility nature of such roads is the reason why persons with disability in Obuasi have needless restrictions in our mobility (Potential, 39yrs, Mobility Impaired, Male).*

### 4.2.5 Compensation

The study found that there were certain compensation issues of gold mining faced by persons with physical disability in the Obuasi Municipal area. These included: 1) The Involvement of the issues of persons with physical disability in Compensation Payment and 2) Women’s Involvement in Compensation Negotiations

In relation to the involvement of the issues of persons with physical disability in compensation payment, the conditions of persons with disability according to participants, were not factored in
compensation payment. Some participants complained that compensation payment did not consider the peculiar nature of persons with disability. Such as persons with mobility disability who use wheelchairs, clutches or have difficulty in walking, persons with visual disability, persons with hearing disability and other persons with physical disability. Thus, compensation payment did not restore persons with disability back to their livelihood, rather, they were given the general compensation as given to everyone else. This was reported by both the participants with disability and the stakeholders:

"The other interesting thing despite the peculiar nature of their disability status is that the companies do not tailor compensation to their impairment. They pay the general compensation that goes to everybody. For instance, you may have a wheel chair bound woman who is a farmer, and then she loses her farmland to mining. For me her case is much more peculiar and the company could do much more than giving monetary compensation. She could be restored to her livelihood through some other means rather than just calculating and giving her the money which will not benefit her in any way. Because she might not be in the position to take up other jobs elsewhere to take care of herself. yea! (Accordance, 40yrs, Mobility Impairment, Male).

That is a one size fits all kind of a thing. You can’t say you are giving a house to a person with disability that may cost 5000 and a house to another person without a disability at 4000. The package is usually the same for everybody. So that, we don’t single people out, by dealing with one person in a way and another person in a different way (Inherit, 32yrs, AngloGold, Male)."
When compensations are paid there is nowhere persons with disability are considered. The law does not talk about persons with disability. The law did not talk expressively about how persons with disability should be treated. There is a woman with disability who has been resettled and now sells charcoal. Imagine some people in the area selling charcoal how competitive would she be. The compensation package should have included percentage addition, should have considered her disability and employment, the package should have included an alternative livelihood to suit her disability (Potential, 39yrs, Mobility Impairment, Male).

Also, lack of involvement of women with physical disability in compensation negotiations was raised. Compensation negotiations take place between mining companies and the local people. According to the participants, males with disability and women without disability partook in the negotiations but not women with disability. Participants reported that the non-participation of women with disability in compensation negotiations was due to women’s attitude towards leadership positions in general which affected women with disability more as a result of the intersection of disability and gender. This was identified by Potential:

For the farmer base association there are women but you know women too have some attitude when it comes to leadership position, some of them prefer staying at the back. So sometimes it’s not the fault of the male guys to also relegate women to the background. So this is part of how women behave when it comes to the fore front. The fact that women with disability have not been able to come to the leadership or even some of the associations too they don’t even hold this democratic elections. And some of the women too could have
even lobbied and become leaders but they don’t. So we have had a compensation whereby women with disability received their packages but the leadership of the group who go for negotiation women with disability are not part of it rather, women without disability are part (Potential, 39yrs, Mobility Impaired, Male).

4.3 Discussion of the Findings

The study findings indicate that gold mining resulted in land degradation which affected arable lands. Thus, reducing land for agricultural production which further led to low productivity and increased the prices of food items in the area. As a result of the degradation, land became scarce for everyone, both able-bodied persons and persons with disability. This confirms a study by Aubynn (2003) that mining activities results in the isolation of local communities because they lose contact with their farmlands. But, the situation was worse for some persons with physical disability as they had to trek for long distances to get arable land, which was problematic due to their physical disability. The scarcity of arable land, coupled with the long distances they had to cover to find land, as well as the limited financial base of persons with disability (Ozawa & Yeo 2006; World Health Organization, 2011) impact their chances of getting arable land which could further worsen their situation. The situation could be worse for women with disability, who experience double discrimination (on account of gender and disability), since women in general have difficulty in accessing land due to gender based discrimination (Naami & Naami, 2017).

Study findings also suggest that the degradation of the land resulted in low productivity of farm produce and, thus, increased the prices of food stuffs which impacted everyone in the area. This is
in conformity with a study by Tenkorang and Osei Kuffour (2013) which indicated that land scarcity resulted in less food and higher prices. Persons with physical disability could be affected more due to their already limited financial situation.

Similarly, the study discovered that not only did the prices of food increase but prices of other basic necessities as well. This is as a result of mining activities in the area and the trading of gold. The perception for the rise in prices was that people who work in the mines and those who trade in gold earn more money and could afford higher prices and indeed, this study confirms that some people could actually patronize the high prices without complain. The study found that rent was high; supporting a study by Tenkorang and Osei-Kuffour (2013), which indicated that landlords raised their rent in order to make more money in mining areas. Higher rent impacted persons with physical disability more due to their “economic immobility.”

Another study outcome was water pollution. Water pollution according to this study means the inability to use water to bath, wash and cook as a result of mining activities such as the pouring of cyanide, mercury and dust in the water resulting from both legal and illegal mining. This is in line with a study by Yeboah (2008) whose findings revealed that mining activities have been a key source of surface and underground water pollution. This affected the people in the area since they had to travel longer distances and spent much time to fetch water. The study suggests that the situation could be worse for some groups of persons with physical disability, especially, those with visual and mobility disability, given the undulating nature of the area as a result of land degradation and the long distance they had to travel to get water.

The study also indicates that, although AngloGold Ashanti had provided boreholes for some communities as a means of providing alternative water due to the pollution of their water bodies,
the accessibility of these boreholes is dependent on the type of one’s disability. Especially, some persons with mobility disability who crawled, used clutches and wheelchairs could not use the boreholes because they had challenges pumping water from the boreholes. These persons with disability who could not fetch water from the boreholes indicated that they hired people to fetch water for them from their already limited resources; increasing their financial burden.

Also, the study findings indicate that resettlement and relocation is a social consequence of mining in Obuasi Municipal area. Due to AngloGold Ashanti’s extensive mining concession, certain communities in Obuasi Municipal area had to be relocated to new places for gold mining to take place. Hence, they had to start a whole new life in a new settlement area leaving behind some of their things in the old settlement. This finding supports a study by Terminski (2012), that a negative effect of mining is the compelling of thousands of people to leave their old dwellings. Although, relocation and resettlement affects everyone, study findings suggest that the means of livelihood of persons with physical disability was affected since some of them lost the basic necessity that they used to get, such as food from their gardens and from friends and loved ones.

Additionally, the study suggests that the resettlement camps built by AngloGold Ashanti neglected the needs of persons with physical disability in the sense that the buildings were not accessible. This is because almost all the resettlement camps had stairs with no ramps which made it difficult for persons with mobility disability such as those who crawled on the floor, with wheelchairs and crutches to use those stairs. It is important to note that these resettlement houses were built in 2011, five years after the passage of the Persons with Disability Act (715) which stipulates that all public buildings should be made accessible to persons with disability. Thus, AngloGold Ashanti
contravenes the (2006) Persons with Disability Act (Act 715) which states under section seven (7) that “a person who provides service to the public shall put in place the necessary facilities that make the service available and accessible to a person with disability” (Republic of Ghana, 2006). Also, the challenges persons with physical disability face with regards to resettlement is contrary to the International best practice and the philosophy of sustainable development which orders that a community should be maintained in an equivalent or an enhanced level when they are resettled (Catholic Commission for Justice and Peace, 2014). However, in this instance there was no empowerment of socially disadvantage group like persons with physical disability (Catholic Commission for Justice and Peace, 2014).

Again, the findings of the study point to the scarcity of housing units for rent in Obuasi Municipal area, which affected everyone in the area in terms of increased rent. But, persons with physical disability, in addition to the unaffordable housing, had to put in a lot of efforts to maintain their apartments due to disability based discrimination.

Furthermore, the findings of the study show that there were only few persons with physical disability who were employed by the mining companies, supporting a study by WHO (2011), that persons with disability are less likely to be employed compared to their able-bodied counterparts. These few persons with disability who had worked in the mines were employed by AngloGold Ashanti. This is because, according to the small scale mining companies, they did not employ persons with disability unless the person was incapacitated during working hours.
While some participants ascribed the unemployment of persons with physical disability in the mining sector to lower educational attainment (e.g., eight of the 16 participants had only JHS education), which supports a study by World Health Organization (2011), that inadequate educational attainment is a cause for the unemployment of persons with disability. Others on the other hand believed the job is more labor-intensive and physically demanding. Others still believe that there are certain types of jobs (e.g., administration work) that persons with physical disability could do which are not labour-intensive. But discrimination served as a key barrier to the employment of persons with physical disability in the mines, given that six of the 16 participants had tertiary education. This is in conformity with a study by O’Reilly (2003), that there is an existing mentality that persons with disability were not considered potential members of the workforce.

It is interesting to note that the few persons with physical disability who had worked in the mines were all males; however, they were laid off due to the redundancy policy of AngloGold Ashanti which started in 2014. Females with physical disability were not employed in the mines, confirming studies which indicated that females with disability are less likely to be employed compared to their male counterparts (Naami, 2015, Randolph & Andresen, 2004).

In regards to health, this study, like other studies (Stephens & Ahern, 2001) highlights health risks associated with chemical exposure which emanates from mining activities. Although, there was no medical record to such assertion, the study discovered that the chemicals emitting from the gold treatment plant of the then AGC resulted in the visual impairment of a person with visual disability.
The study found that gold mining companies in the Obuasi Municipal area contribute to the wellbeing of people in the area, including persons with disability, through employment and the provision of infrastructure. Persons with disability benefited indirectly through financial support from their family members who were employed in the mining sector. This is in agreement with a study by Akabzaa and Darimani (2001) that one of the most visible profits of the improved mining sector investments accumulating from Ghana’s economic restructurings included the generation of both direct and indirect employment of people. The organization of persons with disability received computers from AngloGold Ashanti and other resource, such as vehicle, for their programmes. Drawing of the building and the initial excavation of the rehabilitation centre for persons with disability was also done by the then Ashanti Goldfields Corporation. The findings regarding the drawing and excavation of the rehabilitation centre promoted the acquisition of educational skills and economic rights of persons with disability. This is consistent with the critical disability theory tenet of promoting the rights of persons with disability. Also, the provision of vehicle to attend disability anniversaries which usually received media coverage, where persons with disability created awareness about disability issues as well as recommendations for decision makers, promoted the voice and language of persons with disability. These findings align with voice, rights and language of persons with disability, all elements of the critical disability theory.

The study also found that AngloGold Ashanti provided many communities in the study area with school, hospital, community centre, water systems and roads. This supports a study by Mensah and Okyere (2014), that mining companies also promoted the growth of their catchment areas. However, not all of these facilities were accessible to persons with physical disability. For example, the school was not pedagogically accessible to persons with hearing disability (since they
did not have sign language interpreters) and those with visual disability (since learning materials were not brailled). Not providing for the needs of persons with hearing and visual disability at school did not promote an all-inclusive education as stipulated in the inclusive education policy objective two; “the policy is to ensure that schools, curricula, assessment procedures and teaching and learning materials are accessible and fair for all,” (Ministry of Education, 2013, p.5). This could affect the contributions that these persons with physical disability could make towards the development and the betterment of their societies and the country as a whole.

The situation with the hospital was not different, it was physically accessible but there were no sign language interpreters to sign for those with hearing disability. They were not able to communicate with the medical practitioners and so their treatment started from where they pointed to or they had to write what the problem was to the medical practitioners.

Neither did the hospital have a braille machine to braille reports and prescriptions for persons with visual disability. In order to support those who could not read brailled materials, the hospital could have gotten a recorder to record the information for those with visual disability but this was not done.

The research found that the community centre was accessible to persons with physical disability and that they held their meetings there without paying any fee. This promoted their social cohesion and the voice of persons with physical disability as they discussed issues that mattered to them.

In relation to the roads, they did not have pavements for the usage of persons with physical disability. Therefore, persons with physical disability, for instance, the mobility and visual disability, are compelled to use the major roads which jeopardize their safety. This collaborates the studies by Naami (2014) and Tijm et al (2011) which states that the lack of access to ramps and sidewalks forced persons with disability to use the major roads despite their concern for safety.
The study also found that the gold mining companies did not consider the peculiar nature and needs of persons with physical disability in the compensation payments. As to whether their disability could permit them to get other alternative jobs or livelihoods when they lost their property. Even if they get alternative jobs or livelihoods, what could the mining company do to support them or promote what they do. This could have been included in compensation payment. But this finding is not surprising given the fact that although Article 74 section (1) (a)-(d) of the Minerals and Mining Act, 2006 (Act 703) states the principles of compensation (Republic of Ghana, 2006), the law did not include the state or the nature of persons with disability in compensation payment. A study by Tenkorang and Osei-Kuffour (2013) stated that compensation payments were usually not hinged on the loss of the “sufferer” of impact, but most frequently, the assessment of compensation was fashioned by what the mining firms could offer. This puts persons with disability at a disadvantage whenever they lost their property and received compensation. Since the compensation did not cover the extent at which they were losing their property, it resulted in inadequacy and the inability to fully cater for themselves in the long-term.

Also, according to Article 20 (2) (a) of the constitution of Ghana, when people lose their property they are supposed to receive prompt, fair and adequate compensation (Republic of Ghana, 1992). Usually, there are negotiations between the affected community and the mining companies and so the community members select people who negotiate on their behalf with the mining companies. The study findings reveal that men with physical disability participated in the compensation negotiations in addition to women without disability, but not women with physical disability. Therefore, their views were not captured in the negotiations, thereby relegating women with
physical disability to the background when it comes to compensation negotiation. Thus, their voices were not heard and it did not promote the voice of women with physical disability, one of the key tenets of the critical disability theory, though the voices of their male counterparts were represented in compensation negotiations. This study found that women with disability were not represented in compensation negotiations unlike a report by Akabzaa and Darimani (2001) which indicated that women were part of committees that were set up to negotiate compensation payment with some mining companies in Tarkwa but did not state whether those women had disability or not. Again, although, Akabzaa and Darimani (2001) reported that the women complained of unfair treatment in regard to compensation payment since the money was usually given to the men because they were regarded as heads of the families. The current study found that females with disability who owned lands were given compensation just that the money they received was inadequate and they were not part of the negotiations.
CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

The study sought to explore the experiences of persons with physical disability in the Obuasi Municipal area. The objectives of the study were to ascertain the social, health and environmental issues of gold mining that persons with physical disability faced, identify the contributions of mining operations towards the wellbeing of persons with physical disability in the Obuasi Municipal Area, to ascertain whether there were gender differences in the experiences of persons with physical disability regarding the outcome of mining activities and to find out whether persons with physical disability were involved in compensation negotiations and payment. An interview schedule with themes was used to conduct in-depth interviews for twenty one participants. The twenty one participants, five were purposively sampled whilst the remaining sixteen were sampled through snowball technique. Creswell’s (2009) thematic analysis was used to analyze the data. The study was conducted through the lens of critical disability theory. The elements of the critical disability theory used for the study were the rights of disability, voice of disability and language of disability.

5.1 Summary of Findings

- Land degradation and water pollution were some of the environmental issues of gold mining that persons with physical disability faced in the Obuasi Municipal Area. Land degradation led to less land for farming, inability to access long distance farms and high food prices.
• Water pollution resulted in persons with physical disability having to travel for long
distances to fetch water and using their meagre income to pay for other sources of water
which increased their financial burden.

• Also, there was high cost of rent for houses in Obuasi Municipal area and it affected
persons with physical disability economically.

• Some participants with physical disability lost their livelihood as a result of resettlement
and relocation and the various needs of persons with physical disability were not factored
in the construction of resettlement camps.

• Housing was a problem in terms of its availability and there was acute shortage of housing
for persons with physical disability due to the negative perception people had about
disability.

• Moreover, few persons with physical disability were employed by the mining companies.
More so, there was no female with a physical disability who had been employed in the
mines neither in the large scale nor the small scale.

• Furthermore, participants with physical disability benefitted from the employment of their
family members in the mines as well as received donations and other benefits from
AngloGold Ashanti and the then Ashanti Goldfields Corporation.
- In relation to the infrastructure, the school, hospital, boreholes and roads provided by AngloGold Ashanti, were not accessible to some persons with physical disability. However, the community centre was accessible to persons with disability.

- Finally, compensations paid by mining companies did not factor in the different and peculiar needs of persons with physical disability. Also, females with physical disability were not part of the people selected to negotiate with the mining companies during compensation negotiations.

5.2 Conclusion

The study concludes based on the above findings and discussion.

In conclusion, gold mining in the Obuasi Municipal Area affected everybody. In terms of the environmental, social and health issues, the contributions to their wellbeing and compensation issues. These however, affected the livelihoods and the wellbeing of persons with physical disability in a unique way aside what the general population experienced. These prevented them from benefitting equally from the provisions of mining, despite efforts from AngloGold Ashanti and the then Ashanti Goldfields in making some donations and giving some support to the disability community.
5.3 Recommendations

The following recommendations are made based on the findings of the study.

- The study recommends that workshops should be organized for public service delivery institutions by the disability community or by Non-Governmental Organizations to raise awareness on disability issues. Training in basic sign language could also be organized for public service providers to boost the communication with persons with hearing disability. Also, information should be brailled for persons with visual disability.

- The researcher recommends a regulation by the Minerals Commission to mandate the mining companies to have at least three percent of their employees to be persons with disability. These opportunities could enable them to contribute meaningfully to the mining sector and the economy as a whole.

- Also, there is a need for an amendment to the Minerals and Mining Act (703) to consider the unique needs of persons with various forms of disability in compensation payment. So that persons with disability will be restored back to their livelihood after losing their property.

- Also, there is a need for the Minerals Commission to ensure that females with disability are involved in compensation negotiation committees, just like their male counterparts.
This can be done by making sure that they mandate communities to select equal representation of the people mining affect.

- The minerals commission must ensure that the needs and welfare of persons with disability are factored into all provisions of corporate social responsibility such as the provision of schools, hospitals, roads, boreholes, community centres and others. These can be done by conducting impact assessments and regulating mining companies to comply with the Persons with Disability Act (715) section 7.

- Similarly, the needs of persons with disability should be factored in resettlement and relocation policies. The minerals commission must compel mining companies to ensure that the design, structure, and facilities provided as well as economic opportunities are available and accessible to persons with disability. These will provide better alternative livelihood for them so that they do not become more vulnerable when they are resettled or relocated.
5.4 Implications of the Findings for Social Work Practice and Education

- Social workers should educate the general public through the use of seminars, workshops, and public fora on the effects of mining on persons with disability.

- Social workers should advocate for an amendment of the Article 74 section 1 (a-d) of the Minerals and Mining Act 703, which in its current state does not include the unique needs of persons with disability in the principles of compensation. This should be done to help restore persons with disability back to their livelihood other than just receiving monetary compensation without any increment or special incentive.

- Social workers should research into why persons with disability are not often employed in the mines. Especially, females with disability who have least employment and find out what should be put in place to make sure that they are employed in mining companies as their male counterparts and other females without disability.
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APPENDICES

APPENDIX A

INTERVIEW SCHEDULE FOR PERSONS WITH PHYSICAL DISABILITY

Demographics

1. What is your name?
2. How old are you?
3. How many children do you have?
4. Are you married?
5. Where do you stay?
6. What work do you do?
7. What is your educational status?
8. What type of disability do you have?
9. Have you ever received compensation from any mining company? If yes how much? If no why?

Social issues of gold mining faced by persons with physical disability

10. Have the mining activities increased the cost of items in this area? If yes how?
11. Do you think there has been resettlement and relocation in this area? If yes how did it happen? How has the resettlement and relocation affected the family system?
12. What is the housing situation for the people in this community and how does it affect you?
13. Does the mining company employ persons with disability and if yes which area do they specialize in? And if no why?

14. Do persons with disability receive income as a result of the mining activities? If yes how?

The environmental issues of gold mining faced by persons with physical disability

15. Do you perceive any changes in the environment due to mining operations? If yes explain.

16. What kind of shaking do you experience during blasting?

17. You as a person with disability what kind of noise pollution affects you?

18. Do you think the water system has been affected by the mining activities? If yes how? (Are there any traces of chemicals in the water you drink? If yes how do you identify it?)

The health implications of gold mining on persons with disability

19. In what ways have the mining activities affected your health?

Contributions of gold mining operations towards the wellbeing of persons with physical disability

20. In what ways have the mining activities contributed to your wellbeing? Infrastructure development (schools, hospitals, roads, pipe borne water, community centres) Are they accessible to you?
Compensation

21. Do persons with disability engage in compensation negotiations? If yes how?

22. Are those who received compensation satisfied with it? If not why?

23. Whom was the money paid to and why?

24. How did they use their compensation?
APPENDIX B

QUESTIONS FOR MINING COMPANIES BOTH LARGE SCALE AND ARTISANAL (SMALL SCALE)

Demographics

1. What is your name?
2. How old are you?
3. How many children do you have?
4. Are you married?
5. Where do you stay?
6. What work do you do?
7. What is your educational status?
8. What position do you hold?
9. How long have you worked there?
10. Have you had any contacts with persons with disability in your line of work?
11. Have persons with disability received any compensation? If yes how much?

Compensation

12. Do persons with disability engage in compensation negotiations? If yes how?
13. Are those who received compensation satisfied with it? If not why?
14. Whom was the money paid to and why?
Contributions gold mining companies make towards well-being of persons with physical disability

15. Who provided the infrastructure in the community?

16. In what ways have the mining activities contributed to the wellbeing of persons with disability? Infrastructure development (schools, hospitals, roads, pipe borne water, community centres) Are they accessible to persons with disability?

Environmental issues of gold mining faced by persons with physical disability

17. Do you perceive some changes in the environment due to mining operations? If yes explain.

18. What kind of shaking do the people experience during blasting?

19. Do you think the water system has been affected by the mining activities? If yes how? Are there traces of chemicals in the water the people drink? If yes how do you handle it?

Social issues of gold mining faced by persons with physical disability

20. Does the mining company employ persons with disability? If yes which area do they specialize in and if no why?

21. Do you have any programme that persons with disability can benefit from? If yes what are they? And if no why?
Health implications of gold mining on persons with physical disability

22. What are some of the health implications of mining and how do they affect the people especially, persons with disability?
APPENDIX C

QUESTIONS FOR MEMBERS OF EPA AND MINERALS COMMISSION

Demographics

1. What is your name?
2. How old are you?
3. How many children do you have?
4. Are you married?
5. Where do you stay?
6. What work do you do?
7. What is your educational status?
8. How long have you worked there?
9. What is your position?
10. Have you had contacts with persons with disability in your line of work?
11. Have persons with disability received any compensation? If yes how much?

Environmental issues of gold mining faced by persons with physical disability

12. What are some of the regulations that you use to guide the operations of the mining companies regarding their impacts on the environment?
13. What kind of shaking do the people experience during blasting?
14. What chemicals do the mining company use for the mining and what are the negative effects of those chemicals on the people, animals and the environment?

15. Do you think the water system has been affected by the mining activities? If yes how? Are there traces of chemicals in the water the people drink? If yes how do you handle it?

**Social issues of gold mining faced by persons with physical disability**

16. Do you have any guideline on how the needs of persons with disability should be met by the mining companies? If yes how do you ensure that the mining companies follow it and if no why?

17. Do you ensure that information given to the people concerning a warning of whether or not to use a resource due to its contamination by mining activities reach persons with disability? If yes how? If no why?

**Compensation**

18. Do you have any representation in compensation negotiations? If yes how many? If no why?

19. Do persons with disability engage in compensation negotiations? If yes how? If no why?

20. Are those who received compensation satisfied with it? If no why?

21. Whom was the money paid to and why?
Health implications of gold mining on persons with physical disability

22. What are some of the health implications of mining and how do they affect the people especially, persons with disability? Have you received any report on how mining negatively affects the health of persons with disability? If yes what did you do about it?

Contributions gold mining companies make towards the well-being of persons with disability

23. In what ways do you ensure that the mining activities contribute to the wellbeing of persons with disability? Infrastructure development (schools, hospitals, roads, pipe borne water, community centres) Are they accessible to persons with disability?
APPENDIX D

QUESTIONS FOR THE REPRESENTATIVE FROM THE MINE SCHOOL

Demographics

1) Please what is your name?
2) Please how old are you?
3) Please are you married?
4) Please do you have children and how many are they?
5) Please where do you stay?
6) Please what work do you do?
7) Please what is your educational status?

Accessibility of the school to persons with disability

8) Please is the school disability friendly?
9) Please why isn’t it disability friendly?
10) Please do you intend to bring in interpreters to sign for the hearing impaired and braille machines to braille the educational materials for the visually impaired in case you intend to add persons with disability to your target population?

11) So please would you expand your territories to wait for persons with disability to come or only when they come knocking at your doors that you would provide such facilities for them?
**APPENDIX E**

**DEMOGRAPHIC TABLE FOR FEMALES AND MALES WITH PHYSICAL DISABILITY**

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### APPENDIX F

**DEMOGRAPHIC TABLE FOR KEY INFORMANTS**

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