ASSESSING FEMALE LABOUR FORCE PARTICIPATION RATE IN THE CONSTRUCTION INDUSTRY.

By

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A thesis Submitted to the Department of Managerial Sciences, Kwame Nkrumah University of Science and Technology (KNUST), in partial fulfillment of the requirement for the degree of

MASTER OF BUSINESS ADMINISTRATION

(HUMAN RESOURCE MANAGEMENT-OPTION)

(Faculty of Arts and Social Sciences, School of Business)

JULY, 2014

DECLARATION

I hereby declare that this piece is my work towards the award of Master of Business Administration (Human Resource Management-Option) and that, to the best of my knowledge, it contains no material previously published by another person or material which has been accepted for the award of any other degree of the university except where due acknowledgement has been made in the text.

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ABSTRACT

Gender equality has been the topic of discussion on many international, intra-national and governmental platforms since the Beijing conference in 1995 with recent efforts towards equality being the subscription to the achievement of millennium development goals by nations all over the world. With all these efforts and discussions, gender inequality still persist in the everyday life of people particularly in the recruitment and employment efforts of industry players. This study assessed female labour force participation rate in the construction industry. Various studies found that female participation in the construction industry is generally low. This study identified several causes and challenges including lack of interest, poor image and sexual harassment as factors hindering female participation in the industry. To complete this study, a sample of 40 respondents comprising 30 construction workers and 10 contractors were drawn from Consar Construction Ltd. for the study. Two different types of questionnaires were developed to solicit data from the two main types of respondents used for the study. Data gathered was analyzed using statistical package for service solution software. The results of analyzed data revealed that males dominate the construction industry by 57 percent whilst females constitute 43 percent. Also, the study revealed the females' lack of interest in construction related jobs, lack of exposure of females to opportunities in the construction industry, male domination of construction related training and education are among challenges hindering female participation in the construction industry in Ghana. The study revealed that employers in the construction industry require that females possess two main types of skills-construction specific and construction supporting skills to be employable in the construction industry. The study therefore recommended that the technical schools, colleges and universities in conjunction with the Ghana Education

Service develop female friendly construction related courses and training programmes to help develop the capacities of females in construction, promote female interests to increase the number of females in the construction sector.

DEDICATION

I dedicate this work to the Al-mighty Allah for the strength given me and my family as well as Madam Annelies Kaanders, Madam Jayne Adkins and Kai Spreckelmeyer for their financial and moral support to me throughout my education.

ACKNOWLEDGEMENTS

I acknowledge Mrs. Rosemary Boateng Coffie of Kwame Nkrumah University of Science and Technology for her corrections and guidance in ensuring successful completion of this study. I say thank you for the support, supervision, motivation, constructive criticism and guidance and for spending valuable time and energy in re-organising my ideas to come out with this work.

I also wish to express my profound gratitude to Mr. Bernard Senanu Klove for his immense support.

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CHAPTER ONE

INTRODUCTION

1.0 Background of the study

Over the past couple of years, governments, women wings, labour unions among other gender activists began talking about gender equality in all sectors of the economy and the construction industry is no exception. Just after the Beijing Conference in 1995, countries across the world started the gender awakening programmes and the search for tools to bring about gender equity in all sectors, be it in politics, sports, industry and management among others. The influences of this conference have had an impact on the quality of life of workers in general and women in particular. Gender differences are prevalent in the labour force in Ghana and in the formal sector as well as the informal sector. Ghana's labour market is said to be male dominated because employment in that sector is contingent on the person's education and skill acquisition. This dominance of males to the neglect of females is characterized by the construction industry's culture as constituting: male domination, crisis, aggression and conflict, gallant behaviour and traditional attitudes (Gale and Cartwright, 1995).

The construction industry in Ghana is one of the informal sectors that is more important and core to the nation's economy and is the second highest contributor to the country's Gross Domestic Product (GDP) (Ghana Statistical Service, 2012). The construction industry is seen to be a great contributor to the economy of Ghana with majority of its employees being illiterates and at the same time unskilled. In most

West Africa countries, the industry contributes greatly to their Gross Domestic Product (GDP).

Traditionally, the construction industry being an informal sector shows an under representation of females as in the case of Ghana and other West African countries as well as other developed countries**.** The construction industry is the core of Nigeria's economy and a major indicator of the country's wealth in social and economic terms. The industry is responsible for about 70 percent of the fixed capital formation and contributes 3 percent to the Gross Domestic Product (GDP). Since construction outputs are investment goods, all the economic activities in Nigeria revolve around it and it is estimated that over three million people work in the industry in various capacities as professionals, administrative staff, operatives and labourers (Hillebrandt, 1985).

Currently, women comprise fewer than 4 percent of the membership of the UK's construction-related professional bodies **(**Davey et al 1998). This makes it the most male dominated of all major UK industrial sectors. However, throughout the 1990s, a business case has been developed for attracting women to the sector. This essentially rests on two premises: first, that the economy is underutilizing the full range of skills and talents in the population because of continuing unequal opportunities for some groups within society; and second, that it should be possible for organizations to increase their efficiency and effectiveness by projecting a more pluralistic self-image, and thereby widening their pool of potential customers (Bagilhole, 1997).

Despite this considerable success in increasing the representation of females within the construction industry, these initiatives have not been based on good empirical

evidence that females will have the opportunity to progress their careers in parity with their male colleagues once they have entered it. There are problems that females encounter at their workplace and anecdotal evidence has pointed towards the construction workplace presenting a problematic environment for women to develop their careers (Hanson, 1995).

1.1 Problem statement

Over the past couple of years, there has been low female participation in all sectors of the economy (Amu, 2005). The construction industry in the United Kingdom for example employs less than 4 percent of women and make the construction industry a male dominated one (Davey et al 1998). These characteristics that prevail in the United Kingdom are prevalence in Ghana as the construction industry is dominated by males to the detriment of their female counterparts (Amu, 2005; GSS, 2013).

Looking critically at the construction industry in Ghana, many females are relegated into the background in terms of employment forcing women who could not get employment in other sectors to engage in social vices such as prostitution, armed robbery and other menial jobs as a means of survival (Amu, 2005). This social cancer of unemployment has created a lot of hardships for many females further resulting in unwanted pregnancies, contracting sexually transmitted diseases just to mention a few. The study therefore seeks to examine female labour force participation rate in the construction industry in Ghana with a case study of Consar Construction industry.

1.2. General objective

The study seeks to find out female labour force participation rate in the construction industry.

1.2.1 Specific objectives

Based on the background and the statement of the problem of this study, the specific objectives are:

- To determine the skill requirement of females to participate in the construction industry.
- To determine the criteria used by contractors to employ workers.
- To find out the challenges that prevent more females from entering into the construction industry.
- To ascertain the level of female participation in the construction industry and the factors that account for this level.

1.3 Research questions

- What skills are females required to possess before they can be employed in the construction industry?
- What criteria do contractors use to employ workers?
- What are the factors that hinder females' participation/employment in the construction industry?
- What is the level of female participation in the construction industry and what factors account for this level?

1.4 Justification / Significance of the study

The study on female labour force participation rate in the construction industry is very important given the role the construction industry has been playing as an informal

sector in the development of the economy as well as its great contribution to the Gross Domestic Product.

The study will help other branches of Consar Construction Limited as well as other construction industries to put in place adequate and well defined measures to solve the issue of low numbers of females in the construction industry.

The researcher's knowledge will be widened after the study and this will motivate him to study or investigate into new areas or aspects in the construction industry.

More so, outcomes of this work or study will be of great importance to the academia since it will serve as a written document to already existing literature worldwide on this particular study. The study will be of use to researchers, students, academics and all who are stake holders or have interest in the affairs of the construction industry.

1.5 Methodology

The target population of the study comprised of employees and employers in Consar Construction Limited within Kumasi. The study relied on both primary and secondary sources of data. Secondary sources of data included literature sourced from journals, textbooks, manuals, reports, and publications and articles from the internet. The primary source of data included questionnaires which were administered to employees and management of Consar Construction Limited. The sample for the study was forty (40) respondents which is made up of thirty (30) workers (employees) and ten (10) contractors (employers). Purposive sampling technique was used to select employee respondents as well as employers or contractors. Data was analysed using Statistical Package for Service Solution (SPSS) and qualitative analysis was also done.

1.6 Scope of the study

The study is limited to Consar Construction Limited in Ghana. For easy access and acquisition of information by the researcher, focus is mainly on the Kumasi Branch in the Ashanti Region of Ghana. The study is focused on assessing female labour force participation rate in the construction industry although there may be other aspects or areas in the construction industry that could be investigated. The study is focused only on females and did not attempt comparing females to males' participation and issues relating thereof. Even though the findings from the study of female labour force participation rate in Consar Construction Limited in Kumasi will be generalized, it is limited to only the activities in the Kumasi branch that is researched into.

1.7 Limitations of the study

The study is hindered by lack of information or data specific to the Ghanaian situation. The study therefore relied on information from other countries in Africa and beyond to carry out the study. Nevertheless, the study used data collection instruments that helped elicit large amount of data on the Ghanaian situation to fill the void in the literature review.

1.8 Organization of the study

The study is organized into five chapters. Chapter one, which is the introduction deals with the background of the study, statement of the problem, objectives of the study, research questions, significance of the study, methodology, scope of the study, limitations of the study, and organization of the study. The second chapter presents a detailed literature review of previous studies conducted. Chapter three presents the details of the research method which entails, sample size and techniques and method

of data collection and analysis. Chapter four entails data presentation and analysis. The final chapter covers the summary of findings from the study, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter attempts a critical review of literature on the subject matter under considerations. The chapter will be broken down under the following headings: concept and definition of labour force; level of female participation in the construction industry and factors that account for this level; skill requirement of females to participate in the construction industry; recruitment and selection practices in the construction industry; challenges that prevent more females from entering into the construction industry and criteria used by contractors to employ workers.

2.1 The concept and definition of labour force or workforce

Labour force or workforce is often referred to as all the people who are employed or are able to work in a country etc. (Encarta, 2009). Schuetze (2005) employing the income-leisure choice model (neoclassical theory) defined Labour force participation as involving the decision to engage in labour market activities rather than "leisure". The definition suggests that there exist an eligible population who decides to engage in labour market activities such as being employed, unemployed and searching for job. He categorized the eligible population to comprise of people who are civilians, non-institutionalized and people who are 15 years old or older (Schuetze, 2005).

Furthermore, Cain (1978) opined that labour force comprised of a population defined as eligible to be in the labor force; briefly the adult population, aged 16 and over, that is not institutionalized; an employed component, which is defined to be working for

pay or profit during the specified survey week; an unemployed component, which is defined as not working but "looking for work" during a specified four-week period prior to and inc1uding the survey week (Cain, 1978).

Similarly, Ghana Statistical Service (2013) defined labour force as the proportion of a country's working-age population that engages actively in the labour market, either by working or looking for work. Similarly, Brown (2013) reported that labour force comprises all those who work for gain, whether as employees, employers, or as self-employed, and it includes the unemployed who are seeking work. The definitions provided above give the indication that one must attain the working age, must be working or looking for work in order to form a part of the labour force of a country or region among others. However, these definitions failed to identify the availability, ability and the mental well-being of people as important prerequisite people must possess in order to be regarded as a part of the labour force.

The mere mention of age limit and a general use of words such as 'engages actively', 'seeking for work', and 'unemployed or employed' though may be suggestive that people must be qualified; physical and mentally well, do not entirely describe who is and who is not qualified to be a part of the labour force.

The lack of specific age limit in the definitions may also give rise to the problem of child labour as being employed or seeking for job does not make one qualified age-wise to work. Nonetheless, the definitions pointed out that the age limit necessary for one to qualify as a member of the labour force is subjective and different from one state or country to the other. The disparity in the age specific qualification in different jurisdictions the world over accounted for the lack of specific age in the definitions provided.

This study therefore as working definition, describes labour force as comprising of all people both employed and unemployed, who attain the requisite age limit, preferably 16-65, are in the right frame of mind, physically fit and are willing, able and available to work for gains either in wages or salaries

On the other hand labour force participation rate is defined as the proportion, ratio or percentage of working-age people, who are employed, and unemployed but looking for job (Brown, 2013; Ghana Statistical Service, 2013; Wikipedia, 2013). Besides, Tansel (2003) defined female labour force participation rate as the ratio of female labour force (employed and unemployed but seeking work) to the female population. According to him, this rate refers to the probability that a female works (Tansel, 2003).

According to the United Nations Center for Human Settlements (UNCHS) (1990) and Gurjao (2006) women's labour market participation has increased over recent years and their employment rates have risen, whereas men's participation in the labour market has declined slightly. UNCHS (1990) reported that women labour participation rate and female activities are expected to rise more quickly than that of men in Europe, Northern Africa, Southern Africa, Western South Asia and South America, and to increase at about the same as male rates in the Caribbean, Central America, East Asia and Oceania. They however reported that female participation rate will still lag behind male activity rates.

Again, women workers, particularly in developing countries, are underestimated in statistics, largely because they are concentrated in the informal labour markets and in agriculture (UNCHS, 1990). Elborgh-Woytek (2013) observed that whiles women represent 40 percent of the global labour force; female labour participation rate

hovered around 50 percent for the past two decades with an average rate of 21 percent with significant cross-regional differences. For example, Elborgh-Woytek (2013) reported female labour force participation rate of some regions including 21 percent in Middle East and North Africa; 63 percent in East and Pacific Asia and Sub-Sahara Africa.

In Ghana, Amu (2005) found that although women make up almost half of the economically active population, they are mostly in the lower echelons of economic activity especially the private informal sector where women are predominantly entrepreneurs of small and medium scale businesses.

Subsequently, in relation to female participation in the construction industry Gurjao (2006) noted that in spite of constituting nearly 50 per cent of the population, more than 46 per cent of the labour market, and more than 50 per cent of the entrants into higher education, women account for just 10 per cent of the construction workforce. Clarke et al (2005) reported that women participation in the construction industry represent less than one percent in most countries due to scarce or nonexistent data. Similarly, The Ghana Living Standards Survey (2013) found that only 0.1 percent of labour force employed in the construction industry is females, thereby corroborating the findings of Clark et al (2005).

2.2 Level of female participation and factors that account for the level of female labour participation

Studies over the years reported conflicting female labour participation rates. Thus, whereas some studies reported rising female participation rates others reported increasing rates. According to Tansel (2003) female labour participation rate has

witnessed increasing rates in developed countries in recent years whereas female labour participation rates in Turkey and developing countries female labour participation rate is declining. OECD (2004) reported that female labour participation is low compared to that of men's in many countries. Similarly, the Executive Office of the President of USA, reported (2014) since the year 2000, labour force participation for both males and females has been declining. In addition, Wijaraweera (2012) reported that male labour force participation rate in Sri Lanka is double the rate for female participation.

According to OECD (2004), factors that account for the low level of female labour force participation rate to a large extent include the level of female education, overall labour market conditions and cultural attitudes. They also enumerated that government policies promoting the flexibility of working-time arrangements, the system of family taxation, and the support to families in the form of childcare subsidies, child benefits, and paid parental leaves are greatly affecting female labour force participation rate (OECD, 2004).

Yet, Wijaraweera (2012) identified factors such as gender segregation; narrow range of skills acquired by females; multiple roles for women (family commitment) and the demand for low cost female labour as some of the factors accounting for female labour participation rate.

Specific to the construction industry, the following comprised the reasons why males dominate the construction industry where rate of participation of females is relatively low and often almost negligible.

One of the commonly cited causes of low participation of women in the construction industry is the image of the industry (Gale, 1994a; Fielden et a1 2000; Fielden et al 2001; Bennett et al 1999, Amaratunga et al 2006). They explained that the construction industry is seen as male dominated and often characterized poor working conditions. Agapious (2002) observed that the male dominated image signifies an industry which requires brute strength and a good tolerance for outdoor conditions, inclement weather and bad language. This Amaratunga et al (2006) observed is the principal reason women are uninterested in the construction industry. Nevertheless, Bennett et al (1999); Fielden et al (2000) and Amaratunga et al (2006) reported that the image problem of the construction industry does not only make women reluctant or uninterested in the industry but also men. In addition, the image of the construction industry is typically portrayed as promoting adversarial business relationships, poor working practices, environmental insensitivity and a reputation for under performance (Construction Industry Board (CIB), 1996).

Subsequently, Fielden et al (2000) and CITB (2003) reported that career knowledge with regard to the construction industry is limited thereby accounting for low female participation in the industry. Fielden et al (2000) observed that there is a general lack of knowledge and information about the industry, career opportunities it can offer and the qualification required. On the other hand, Construction Industry Training Board, CITB (2003) found that parents, teachers and school children believe that the jobs in construction industry were limited to bricklaying, joinery, and painting and decorating. Parents, teachers and career advisors therefore have only vague and superficial knowledge about the industry (Amaratunga et al 2006).

In Ghana, the lack of knowledge and information culminating into wrong perception of the construction industry is further compounded by schools, school heads and admission boards of the various schools. The schools, heads and admission board particularly at the Senior High level, often admit only males into programmes such as building and construction, building and technology; and carpentry and woodwork among others whilst reserving secretarial and other non-construction related courses for females. The effect of this is not only the lack of knowledge and skills as well as lack of awareness of opportunities in the construction industry by females but the continuous perpetuation of a male dominated construction industry where females have little or no role to play.

In addition, Amu (2005) reporting on the limited participation of Ghanaian women in the construction industry identified lack of higher specialization as one of the causes of low participation. She reported that jobs in the electricity and gas, mining and construction sectors require specialization, which means prolonged period of education, which most women do not have. She thus reported that most women are automatically cut off from jobs that require higher and specialized education, such as jobs in construction (Amu, 2005).

Again, Gale (1994b) found that culture and the environment of the construction industry also deter female participation in the sector. He observed that the construction industry displays a macho culture where relationships are characterized by argument, conflict and crisis (Gale, 1994b cited in Bagilhole et al 2000). Bagilhole et al (2000) noted that the extremely macho culture that dominated the industry is often hostile and discriminatory towards women. According to professor Michael Romans, a past president on the Chartered Institute of Building, the construction

industry is characterized by “a boy’s own culture” which is overtly fostered through language and behaviour (cited in Amaratunga et al 2006).

Amaratunga et al (2006) reported that the male dominated culture can be especially destructive for women entry, career development and retention in the construction industry since women will have to adopt the male culture in order to be successful, leave the industry if they are unable to adopt or remain in the industry and occupied unimportant positions.

More so, other authors reported family commitments as the other factor that hinder the participation of women in the construction industry. The conflict between work and family obligations, that many construction professionals experience, is more acute for women than for men (Amaratunga et al 2006).

This is often because of the male-dominated values such as long hours of work, competition, independence, full-time working and that rewards and the expectations for career achievement are paramount (Davey et al 1999). These values make females in the construction industry struggle to cope with other obligations such as home life, child bearing and domestic duties.

Furthermore, Greckol (1987) reported that work in the construction industry involves travelling substantial distances and/or long periods away from home, a situation which can present serious difficulties in terms of transport and child-care (Greckol, 1987). These factors demand that women construction workers adopt an either or approach to family or career (Lingard and Lin, 2004) and many of them end up choosing family hence their limited participation in the industry. Other factors that account for the low female participation include lack of female mentors; biased recruitment practices and male dominated training courses among others.

2.3 Skill requirement of females to participate in the labour force

In order to qualify to work in a particular sector one must possess the requisite skills and knowledge and construction sector is no different. This section attempts to identify the skills needed by females in order to be employed in the construction industry.

The Construction Sector Council (CSC) (2010) reported that many employers indicated that women have aptitudes and abilities that suit them best to professions such as engineering, to the lighter construction trades, and to occupations that involve customer relations, human relations, communication, and organizational skills such as project management, site inspection, and health and safety.

The above mentioned subsectors require skills, knowledge and experiences and requires the individual employees to possess traits such as tactfulness, conscientiousness, empathy, good interpersonal and communication skills rather than the reliance on strength. These, women possess and are therefore better placed to perform job roles that demand these skills and traits than do men.

It is not surprising therefore, that employers in the Canadian Construction industry are willing to recruit and select women or females with such knowledge, skills, and experiences in order to increase the participation rate of women in the construction industry (CSC, 2010). Similarly, CSC (2010) reported that many High School girls or women indicated that they lack the intelligence and ability for science, trades and technology careers but possess skills, aptitude and ability to pursue career in construction in such areas as Health and safety inspection, Human relations, project management, HRM and customers relations among others.

The United Kingdom Commission for Employment and Skills (UKCES), (2012) observed that with increasing environmental consciousness and the consequent environmental regulations requires not only skills in using green materials and methods in construction but also with managing construction sites in order to reduce carbon footprints.

Similarly, they reported that increased use of pre-fabrication and automation in construction requires managerial skills to manage the different mix of labour on site as well as management of significant workforce off-site (UKCES, 2012). This is to suggest that for females to participate in modern construction industry, they need to possess skills in using green materials and methods, possess managerial skills that would help in managing off and onsite workers.

Again, UKCES (2012) stated that globalization and increased international competition has led to a situation where employers in the construction industry require employees whether male or female to possess such skills as language; diversity management skills and other managerial skills in order to operate successfully in overseas markets, collaborate with international partners and compete with international companies in the domestic market.

2.4 Recruitment and selection practices

Rioux and Bernthal (1999) defined 'recruitment as the process of identifying and attracting potential candidates from within and outside an organization to begin evaluating them for future employment'. Also, Recruitment 'includes those practices and activities carried out by the organization with the primary purpose of identifying and attracting potential employees' (Breaugh and Starke, 2000). Bratton and Gold

(2003) defined recruitment as 'the process of generating a pool of capable people to apply for employment to an organisation'. Aseidu-Appiah et al (2013) reported that 'selection is an opportunity for companies to choose candidates that they believe are most suitable for the job' (p. 177).

Armstrong (2006) reported that the overall purpose of recruitment and selection is to obtain at minimum costs the requisite quality and quantity of employees required to fulfill the human resource needs of a company. ACAS (2006) reported that the 'success of an enterprise is dependent on having the right number of staff, with the right skills and abilities' achieved through effective recruitment and selection process. Aseidu-Appiah et al (2013) supported the assertion made by ACAS and opined that obtaining the right quality and quantity of employees through effective recruitment is the bedrock of organisational success. Effective recruitment and selection promotes organisational success through the reduction or elimination of high labour turnover, costs to the organisation and improves morale as well as motivate the workforce of the organisation (Mullins, 2005: Armstrong, 2006: ACAS, 2006). However, Keeps and James (2010) reported that the effect of recruitment and selection on organisational success is often overhyped. They reported that in many cases effective recruitment and selection is hampered by the conditions of the labour market such that organisations settle for the quality and number of candidates available in the labour market rather than the ideal quality and quantity they want or need. This is suggestive that in cases where the labour market leads an organisation to recruit sub-standard people would result in sub-standard organisational performance. Similarly, CSC (2010) reported that the recruitment and selection of women to participate in the construction industry is hampered by inadequate supply though firms have developed

recruitment and selection models to incorporate women participation in the industry. Nonetheless CSC (2010) found that recruitment and selection efforts in the construction industry in Canada are focused on the recruitment of youths.

Several researchers and authors reported that effective recruitment process includes: job analysis, job description and person specification (Mullins, 2005; Armstrong, 2006, Foot and Hook, 2010). Mullins (2005) nonetheless pointed out that effective recruitment process starts with effective Human resource planning, a concept that deals with the acquisition, utilization, improvement and retention of organization's human resources. Richardson (2005) identified the stages in the recruitment process to include: the development of retention policy; human resource needs assessment to determine the level of demand; identification of best sources of supply of human resources (internal or external); job analysis; assessment of qualification profiles and the development of job description; determination of the firm's ability to pay; and identification and documentation of actual recruitment process.

The process identified by Richardson (2005) appears to be the more comprehensive unlike the process suggested by Mullins (2005), Armstrong (2006), and Foot & Hook (2010) among others which started in the middle of the stages proposed by Richardson (2005). Further, the recruitment process identified by Richardson (2005) indicated that the recruitment process goes beyond and not limited to job analysis, job description and person specification. Richardson stages of recruitment process also stressed the two main sources for recruitment and selection, internal and external recruitment sources. Richardson (2005) pointed out that documentation of the recruitment process satisfies procedural transparency that enables organisational audit and serves as reference point for future recruitment efforts.

On the other hand, Armstrong (2006) proposed that to complete the recruitment and selection process there must be methods (such as advertising, using agencies and consultants) of attracting candidates and methods (such as sifting applications, interviews, testing among others) to select candidates, in addition to job analysis, job description and person specification. Bazagi (2011) found that the recruitment process include two sub-processes-job vacancy advertisement and selection process.

Bazagi (2011) found that the selection process is done to appraise and select applicants to fill the job opening identified at the job analysis stage. Rioux and Bernthal (1999) found that the selection process include collecting, measuring and evaluating candidates' information with the view to increasing the likelihood of hiring the best individuals to fill job openings. ACAS (2006) stressed that an effective recruitment and selection system is one that exhibit the following characteristics: efficient; effective and fair.

Several recruitment strategies are available for use by firms in industries the world over. These strategies include employee referrals; job posting; agencies or services; advertisement; college/university recruitment; professional associations; walk-ins; internet and outsourcing (Rioux and Bernthal, 1999: Richardson, 2005; Lockyer and Scholarios, 2007). These strategies can be broadly divided into internal and external recruitment sources. External recruitment strategies include advertisement; college/university recruitment; professional associations; internet and outsourcing. Whilst internal recruitment strategies include employee referrals; walk-ins; and job posting (Rioux and Bernthal, 1999).

Rioux and Bernthal stressed that the use of internal strategies are relatively easy, inexpensive, provide opportunity for promotion and minimizes complaints of unfair

treatment and discrimination by employees. They concluded that effective recruitment strategies are strategies that incorporate benefits, salary, and corporate culture (Rioux and Bernthal, 1999).

Lockyer and Scholarios (2007) reported that in the construction industry the trial process of recruitment and selection methods are used rather than best practice models of recruitment and selection due to the uncertainty that characterizes this industry. Moir et al (2011) articulated the findings of Lockyer and Scholarios (2007). They found that firms adopt apprenticeship and pre-apprentice training strategies, forms of trial methods, in recruiting and selecting women to participate in the construction industry (Moir et al 2011).

Furthermore, Moir et al (2011) construction firms use professional associations, a form of external recruitment strategy, in recruiting employees particularly women. They explained that professional associations such membership of construction labour unions provide both candidates and employers connections with the unions serving as intermediaries (Moir et al 2011). They noted that the use of construction unions provide women the apparatus that could facilitate women entry into the industry.

Lockyer and Scholarios (2007) found that in the construction industry, many firms are reacting to recruitment challenges by adopting outsourcing strategies. The use of outsourcing strategies includes outsourcing the construction work (Lockyer and Scholarios, 2007), outsourcing the recruitment process or sourcing for the requisite personnel from agencies and consultants.

Wells (2008) expressed that the practice of employing labour through outsourcing has been well established and widespread in the construction industry of developing and developed countries. Wells (2008) reported that though intermediaries in recruitment

perform several functions, their main function is that 'they bring labour to the construction site when it is needed and take it away when it is no longer required'. It is reported that the use of outsourcing in recruitment reduces costs, greater capacity for flexibility in technology, process expertise, increase management attention, and focus on core competence among others (Quinn et al 1990; Quinn, 1992; Harrison, 1994; Dess et al 1995; Sang 2010).

Wells (2008) reported that though outsourcing in the construction sector may have its advantages, it is often regarded as exploitative (2008). Wells and Jason (2010) reported that the practice of recruiting through the use of outsourcing or the use of intermediaries in the construction sector limits the ability of trade unions to organise workers. Bettis (1992) reported that the use of outsourcing can lead to loss of overall market performance. Whilst Mitchell et al (2007) reported that outsourcing can lead to lack of cooperation between consultants and contractors.

Construction Sector Council (2010) reported that most firms in the construction industry engage in good hiring and employment practices such as pre-apprenticeship programmes that support women apprentices beyond training through to hiring and retention.

Asante (2012) observed that in the construction industry of Ghana, firms such as Atala limited developed recruitment plan that aid them in their recruitment efforts. He found that there are no well laid down recruitment and selection procedures in the Ghanaian construction industry. He therefore proposed a recruitment and selection framework that follows a cyclical approach (Asante, 2012). The elements of the frame work include: job analysis; job description; sourcing; short-listing; interview; tests

and references and background checks to form the recruitment and selection plan (Asante, 2012).

2.5 Challenges that hinder female participation

Numerous challenges abound that limit the participation of women or females in the construction industry the world over. These challenges may be external to the individual comprising of poor educational system; stereotype; and rigorous recruitment criteria among others or internal such as personal attributes and preferences or a combination of both. Some of the prominent and common challenges are enumerated below.

Construction Sector Council (2010) attributed the challenges of recruiting young women to careers in construction and specifically to trades apprenticeships largely to limited interest by High School girls in these careers and professions. The lack of interest in construction industry exhibited by women especially girls arise largely from lack of systematic exposure of students to these areas of work.

A Canada Millennium Scholarship Foundation Secondary School Survey reported that many students aimed to earn a university degree or a college credential with only few minorities of these identified an interest in pursuing training in a skilled trade (CSC, 2010).

In Ghana this problem is made worse by the almost abandonment and neglect of vocational and technical schools by both educational institutions and governments over the years as these do not only deprive students of such technical skills but also reduce interest in such professions and careers.

Also, Gale (1994a) reported that mainstream construction courses and training provided by colleges, training organizations and employers create a whole host of problems for women arising from the male-dominated environment and masculine culture (Gale, 1994a). These courses are mostly male specific and tailor made to suit males and therefore females who venture into such courses or training programmes are either regarded or feel like outsiders who are unwelcome. After enduring these training courses and programmes, Clarke et al reported that women need to prove their competence despite their qualifications and experiences if they are to enter gender segregated occupations such as construction (Clarke et al 2004), an ordeal which their male counterparts do not experience.

Amaratunga et al (2006) observed that not only are training courses and programmes male dominated but general access to high profile development opportunities is often gained through informal networks and mentors. An access that is mostly not available to females. The consequence of this for female participation in the construction industry is that females would not have the requisite skills and know-how and therefore will only qualify to occupy at best, entry-level positions. The greater challenge from this is that females are likely not to receive better and proper remuneration as well as good working conditions which may serve as disincentive or deterrent to participation in the construction industry.

Authors such as Cumming (1997); New Zealand Council for Education Research (2008); and Thiessen (2002) attributed the lack of interest in construction careers by female to the fact that girls continue to associate work in many of the skilled trades with dirt and risks to physical safety (CSC, 2010). CSC (2010) pointed out that the limited interest is not caused by a single factor but a multitude of related factors, such

as the influence of parents, teachers, and counselors, negative images of the trades, limited information about them, and the availability of role models and mentors among others.

Wangle (2009) identified exposure to health risks as one of the factors militating against women participation in the construction industry. Aulin and Jingmond (2011) observed that women run a greater risk than men of work-related musculoskeletal disorder. They also recounted that women were twice as likely as men to leave the industry because of complaints of pain and injury (Aulin and Jingmond, 2011).

This may also be linked with low job-control and high job-demand which can lead to Musculoskeletal Disorder (Wangle, 2009). Aulin & Jingmond (2011) observed that high job demand leading to over working with the resultant effect of injury and musculoskeletal disorder stem from women trying to prove themselves worthy in order to avoid stereotype by their male counterparts. In addition, Aulin & Jingmond (2011) observed that poor and temporary sanitary facilities which are often unisex and unclean do not only cause diseases such as urinary tract infections in women but also impede privacy, one that women are mostly not comfortable with therefore avoid working in the industry.

More so, Occupational Safety and Health Administration (OSHA) (2004) reported that most construction workers are exposed daily to lead. The observed that in the construction industry the chemical Lead is used frequently for roofs; cornices; tank lining; electrical conduit and soldering of tinplate and copper pipe joints in plumbing works and these result in massive exposure by workers. They identified iron workers; painters; lead paint abatement workers; demolition workers; plumbers; air condition repairers; carpenters; renovation and remodeling workers and welders (OSHA, 2004).

They opined that exposure to lead by construction workers can damage the central nervous system; cardiovascular system; reproductive system; hematological system and kidneys (OSHA, 2004). OSHA (2004) further reported that lead exposure do not only affect construction workers but also negatively affect their children's development as children born to exposed parents suffer from birth defects; mental retardation; behavioral disorders or death within the first year of birth.

They explained that short term exposure can cause also acute encephalopathy, a condition affecting the brain that develops quickly seizures, coma and death from cardiorespiratory arrest. Females exposed to lead are likely to suffer from miscarriages and stillbirths. These health risks serve as a challenge that hinder the participation of females in the construction industry of Ghana, since children and reproduction seems to be major concern for females in this our part of the world. Moir et al (2011) found that the lack of child care is one of the reasons women turn down jobs in the construction industry and is often cited by employers as the reason they do not recruit women into the industry. They also noted that sexual harassment and hostile work environment serve as barriers to women participation in the construction industry (Moir et al 2011).

2.6 Criteria for female recruitment

Recruitment and selection criteria are often almost the same in every industry. Nonetheless there may be variations in the recruitment and selection criteria particularly of women in the construction industry. Lockyer and Scholarios (2007) reported the construction industry recruitment and selection practices tend to be

different from other industries mainly because of the nature and structure of construction works.

Effective recruitment methods or criteria are necessary to attract, and more importantly, to retain a quality and diversified workforce in an organization and this can be achieved if the recruitment process can be made more objective and formal (Wood and Manwaring, 1984). The benefits of an effective recruitment criteria and methods help organizations to comply with equal opportunity law, reduce costs, engender employee satisfaction; increased productivity through properly matched skills and jobs among others.

Dainty et al (1999) noted that women in the construction industry face rigorous and discriminatory selection process and this creates problematic working environment for them. Dainty et al (1999) explained that the rigorous and discriminatory selection process or criteria women go through is facilitated by lack of formal recruitment guidelines in the UK construction industry. They further reported that unlike men, female construction workers are not attracted to the industry by role models or advice from family and friends but rather are attracted by targeted recruitment campaigns or had read literature aimed specifically at attracting them into the industry (Dainty et al 1999).

Adeyemi et al (2006) noted that the selection criteria for women to participate in the Nigeria construction industry is often based on normal recruitment factors such as work experience; academic qualification; potential for high productivity; and physical strength. They observed that whilst most women possess all these requirements; they often lack the physical strength and therefore are outnumbered by men during the

recruitment and selection process because they are often pitched against men in order to ensure equal opportunity for all (Adeyemi et al 2006). They also explained that women are often outnumbered and outstripped by men due to age long tradition that regard men as having better work experience and are naturally more productive on site most especially under bad climatic weather conditions (Adeyemi et al 2006).

Furthermore, Adeyemi et al (2006) reported other recruitment factors such as ability to supervise, decision making skills and marital status are used to recruit entry level workers both males and females. They reported that though there is no discrimination based on marital status, most married women are reluctant to take those jobs because they do not want to move or relocate to construction sites far away from their family (Adeyemi et al 2006).

Keep and James (2010) observed that some employers in the construction industry adopt the work trial procedure in their recruitment and selection efforts. They explained that the work trial procedure involves candidates being given the job to do for a period of time and their performance is observed in terms of quality and speed of execution upon which the candidate is either selected or rejected (Keep and James, 2010). Authors such as Windolf and Wood, (1988); Lockyer and Scholarios, (2004); Lockyer and Scholarios, (2007) argued that in uncertain environments such as construction, a trial process rather than a best practice model of recruitment and selection may tend to apply more frequently and make better sense.

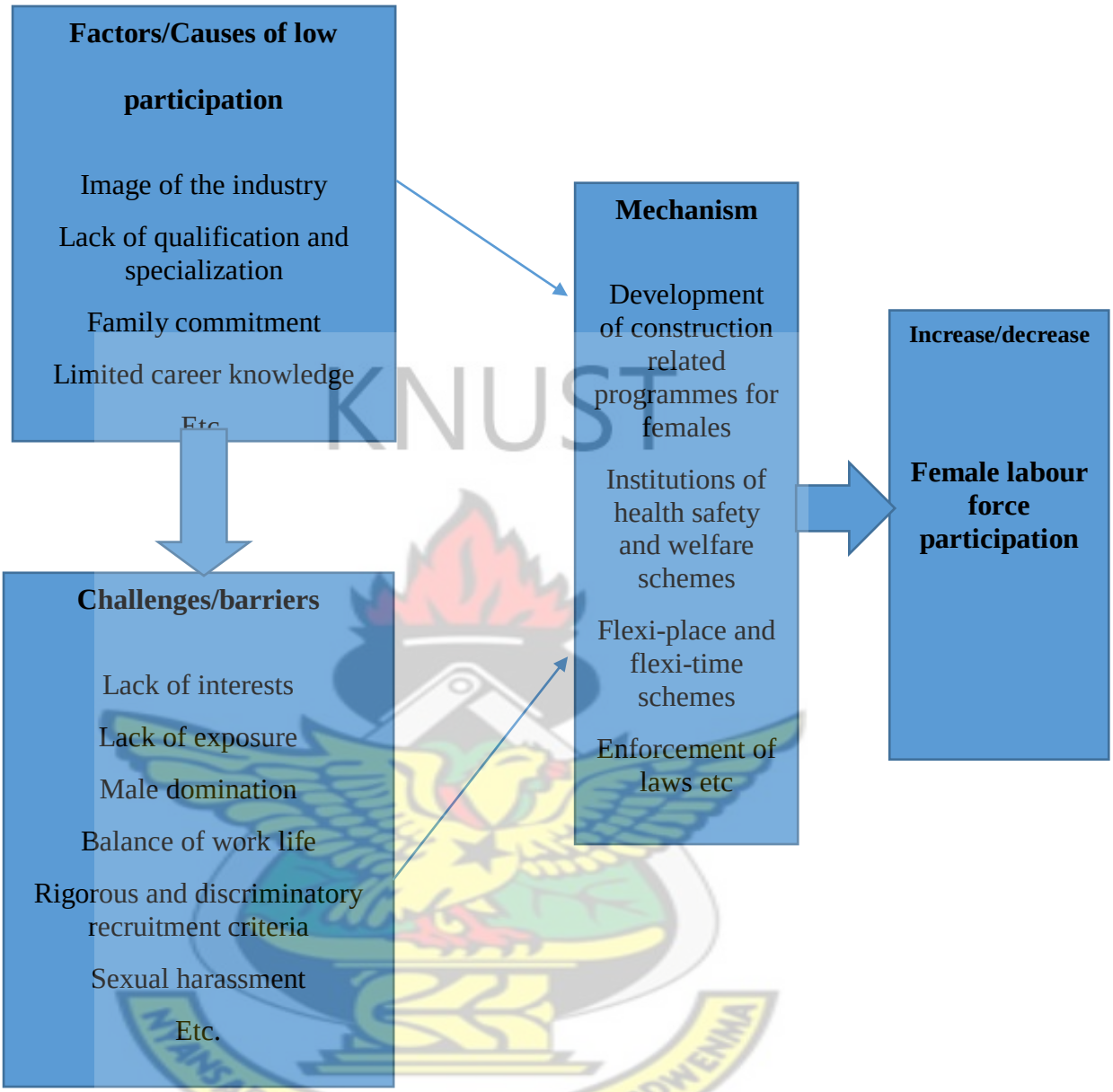
The work trial recruitment and selection criteria will allow fairness and equity as well as eradicate stereotype and discrimination by allowing employers to base candidates' skills; abilities; experience; capabilities and knowledge on the job rather than the adoption of some abstract criteria. Furthermore, using the work trial will allow

women or females who are equally qualified as their male counterparts to be selected as part of construction labor force. Again, work trial or apprenticeship provides candidates with on the-job training and real-life job experience, making them more aware of the needs and expectations of the industry as well as making them more employment ready (Ballinger and Lalwani, 2000).

Similarly, some construction owners reported that because many candidates particularly women lack the requisite skills and experience; they must undergo apprenticeship in order to qualify for recruitment and selection in their firms. Angus (2009) reported that about a quarter of construction industry players reported lack of skills whilst more than a quarter reported experiencing difficulties in recruiting qualified and suitable craft people. They therefore recommended modern apprenticeship experience as criteria for recruitment and modern apprenticeship program as a requisite training program for new recruits to enhance their current and future skill needs (Angus, 2009).

Subsequently, CSC (2010) reported that most construction owners are using quota as a criteria for the recruitment and selection of women into both the construction sector and into construction related training and apprenticeship programs. They however, reported that though 'fewer female apprentices reported difficulties in securing an apprenticeship, more reported a barrier in hiring, with 90% of those who had difficulty saying that the biggest obstacle was that no one was hiring apprentices, compared to two-thirds of male apprentices who had had difficulty.

2.7 Conceptual framework on female participation



Source: Author's construction, 2014

The study takes female labour participation to represent all females who attained the legal working age that are employed or searching for job. To this end the influence of leisure time and fertility among other factors that affect the supply of labour force and hence affecting participation in the labour force are held constant assuming that all

females are ready and willing to offer their services and skills in the labour market for the going wage. The conceptual framework determines that factors such as image of the construction industry where people perceived the industry as macho-like and characterized with poor sanitary conditions; poor health, safety and welfare as well as long hours of work; lack of knowledge and information about the construction industry and lack of qualification and specialization among others may hinder female labour force participation in the industry.

The framework further shows that causes/factors of low female participation can directly hinder their participation in the labour force or lead to other barriers or challenges including lack of exposure, lack of interests, male domination of the construction industry and rigorous and discriminatory recruitment methods/criteria that hinder female labour force participation rate in the construction industry.

In addition, the framework demonstrates that it is only when the challenges to and causes of low female labour force participation remain unchecked that the rate of female participation decreases. However, the framework suggests that if mitigating factors or mechanisms such as enforcement of laws including labour laws and equal opportunity laws; development of female friendly construction programmes and courses in colleges and Universities; institution of health safety and welfare mechanisms as well as flexi-place and flexi-time schemes among others are implemented would see female labour force participation rate rise in the construction industry.

2.8 Conclusion

Labour force participation rate is generally regarded as the proportion of a county's working-age population that engages actively in the labour market. Studies such as Gale (1994a, 1994b), Agapious (2002) and Amaratunga el al (2006) noted that males dominate many sectors of the economy including the construction industry. These studies identified several factors including the culture and the environment of the construction industry, image of the industry, family commitment, and biased and discriminatory recruitment criteria among others as the causes of low female labour force participation rate in the construction industry. Challenges to female participation in the construction industry were also identified. The chapter concluded with a conceptual frame work that demonstrates that causes of low female labour force participation act directly or indirectly as barriers to female participation in the construction industry. However, with the implementation of mechanisms such as health, safety and welfare schemes; enforcement of laws and the introduction of flexi-place and time should see female labour force participation increase in the construction industry.

CHAPTER THREE

RESEARCH METHODOLOGY AND PROFILE OF THE STUDY AREA

3.1 Introduction

This chapter presents the methodology for the study. The methodology describes the methods, processes and procedures use in data gathering. It also specifies relevant statistical analytic tools used in data processing and presentation of results. The chapter includes: research design; population and sample; sampling technique; data collection methods; sources of data; data analysis and research ethics.

3.2 Research Design

Smith and Albaum (2012) described research design as a plan or framework for conducting the study and collecting data. They defined research design as the specific methods and procedures the researcher uses to acquire the information needed (Smith and Albaum 2012). The study is a descriptive research and has adopted questionnaire in gathering data in order to produce quantitative responses. The quantitative research design was used to provide quantitative data which served as basis for the description of findings of the study. Quantitative approach was used to determine the generalizability of the information gathered for female participation for the construction industry in Ghana. It was also used because it provides a basis for easy analysis.

3.3 Population and sample size

The population for the study includes construction workers employed at Consar Construction Limited. This includes construction workers of Consar particularly employees, staff and management. The estimated population at Consar construction is 65. Out of the estimated population, fifty (50) construction workers were selected purposively to form the sample for the study. Fifty (50) questionnaires were issued out, however, only 40 responded comprising 30 employees (workers) and 10 contractors (employers) generating a response rate of 80 percent. The sample size though small according to business research standards has helped to ensure balance between precision and cost of data collection.

3.4 Sampling technique

The sampling technique used in this study is purposive sampling, a type of non-probability sampling technique to determine the sample size for the study. The distribution of questionnaires to participants has been done using convenience sampling technique at the data gathering stage of the study. Convenience sampling technique is used in questionnaire distribution at the data gathering stage due to the ease of access it creates to participants.

3.5 Sources of data

Two main sources of data were used by this study. These include primary and secondary data. Primary data are raw data collected by the researcher through the administration of questionnaires to respondents. The administration of questionnaires helped provided written responses as primary data for the study. Questionnaires designed for primary data gathering were based on gaps identified in the secondary

data and therefore helped in finding answers and solutions to the research problem and questions.

Secondary data includes data collected from other researchers. Secondary data was collected from printed and electronic sources such as the internet-through the use of search engines; journals; articles; published and unpublished theses; and text books. Secondary data was collected through regular surfing of the internet; resource databases; and reading of course text books; handbooks; journals and articles among others. Secondary data was mainly collected and used for critical literature review for the study.

3.6 Data collection methods

Primary data has been collected through the administration of questionnaires to participants conveniently. The questionnaires for data gathering have been administered by the researcher in a personal and investigative manner. This method of data collection is most favoured by the researcher because it is less expensive; free from interviewer bias; provide adequate time for participants to answer questions; and allows the researcher to conveniently reach participants who are not easily approachable (Kothari, 2004). The use of questionnaire is also ideal because majority if not all respondents are literate and therefore can read and write. Nevertheless, the use of questionnaires is known to produce ambiguities and omissions in reply. This deficiency is dealt with through the provision of easy to understand but standardized questions with clarity of expressions that has engendered clear and unambiguous replies from respondents.

3.6.1 Questionnaire design

A set of questionnaires have been developed for all participants or respondents of this study. Each questionnaire contains five main sections. These sections include: demographic and background data of respondents; level of female participation in the construction industry and factors that account for this level; skill requirement of females in the construction industry; challenges that prevent more females from entering into the construction industry and the criteria used by contractors to employ workers. Two main types of questions were used. These include open-ended and close-ended questions. Open ended questions are included to solicit respondents' views on criteria of employment; challenges to participation and reasons for the level of participation in the construction industry. The use of open ended questions provide participants the opportunity to express their view, provide explanations to answers provided for closed ended questions and provide ideas that have ensured the quality of the study.

Closed ended questions were used because they are easy to answer; do not require lot of time to answer and easy to code. The use of closed ended questions also facilitated quick and timely analysis of data.

3.7 Data Analysis

Data collected was cleaned, edited, classified and coded. Classification was done categorizing or collapsing gawky data into meaningful and purposeful groups. Coded data was entered into the Statistical Package for Service Solution software programme. Data verification was done to ensure the quality of data. After which statistical analytic tools such as frequency; and descriptive statistical tools were used

to analyze data. Analyzed data was presented in tables and charts in order to make further analysis and interpretation of data very simple. The editing and verification were done to ensure the quality and reliability of findings and the entire research.

Ethical issues

Daymond and Holloway (2011) reported that ethical considerations are important in every research and that researchers must ensure that they uphold and abide by all ethical issues. They explained that in the collection of data particularly quantitative data, there is the need for trust-base relationship between the researcher and participants and an obligation on the part of the researcher to interact with participants in humane and non-exploitative way (Daymond and Holloway, 2011).

This study has ensured and abide by all ethical principles as much as possible. The study has maintained the principle of honesty by citing sources and attributing contributions to the right authors and authorities quoted or whose ideas were used in this study. The citation and referencing of sources helped the study to avoid omissions, plagiarism and give credit to all works used as well as maintained honesty principle. Interpretation of data collected from the field is done in the most logical, systematic and meaningful way without misinterpretation and misrepresentation.

The study has collected and distributed introductory letter to participants to inform them to gain their free and voluntary commitment to participating in the study and helped provided needed information. The privacy, anonymity and confidentiality of all participants was held in high esteem and ensured. This is mainly due to none solicitation of names of participants, private and secret issues and documents heard or chanced upon by the researcher were not published or used in the study and only research related issues provided by participants were used. Finally, the right chain of

command was followed at Consar in collecting data and helped prevented the gathering of data through the back door.

3.8 Profile of Consar Construction Limited

Consar Construction Ghana limited, is a leading and premier building and civil construction company in Ghana. Consar was founded in 1983 and commenced business operations in 1984. Consar secured its first major contract for the construction of SSNIT flats in Kumasi, Ghana.

Consar construction limited has offices throughout Ghana with notable ones being Accra, Kumasi, and Tamale offices. Consar limited specializes in building, civil works and construction attracting and rendering services on oil and gas projects; religious projects; residential projects; plant and equipment; special projects; office projects; health projects; educational projects; bank projects; mining projects and sport facility projects among others.

Consar construction limited also have subsidiary companies including but not limited to SEEPACS engineering limited; Consar Civil engineering limited; Sarcon Quarry limited; Allemar Aluminum Systems limited; modern wood technologies and company limited; Consar stone quarry; and Oropa estates limited among others. Nevertheless, the study used Consar Construction Limited Kumasi branch as a case study.

The company has well-equipped workshops, and engineers; contractors and other resources that support their delivery of services and products to clients. For example Consar Construction has installed a batching plant with a capacity of 80m3 per hour at

its main branch at spintex road, Accra. This plant is installed to provide concrete products for the firm and for the general public at competitive prices.

Consar Construction Limited main competitors include De Simone Taysec Construction Ghana Ltd and Micheletti. In addition to these companies, Consar Limited faces competition from Chinese construction companies that have entered the industry.

Consar Construction Limited also employs a mix of employees in various positions ranging from engineers; contractors; marketers, public relation officers and clerical staff among others. This makes the company appropriate for this study since female labour force participation can be seen in the caliber of staff that are recruited in the firm.

Conclusion

This chapter focused on methods and procedures followed in selecting sample size for the study and primary data collection and analysis. The study adopted quantitative research design and purposive sampling technique was adopted in selecting sample size for the study. Primary data was gathered through the administration of questionnaires to workers and managers of Consar Limited whereas data analysis was carried out using frequency and descriptive analytic tools found in the statistical package for service solutions computer software.

CHAPTER FOUR

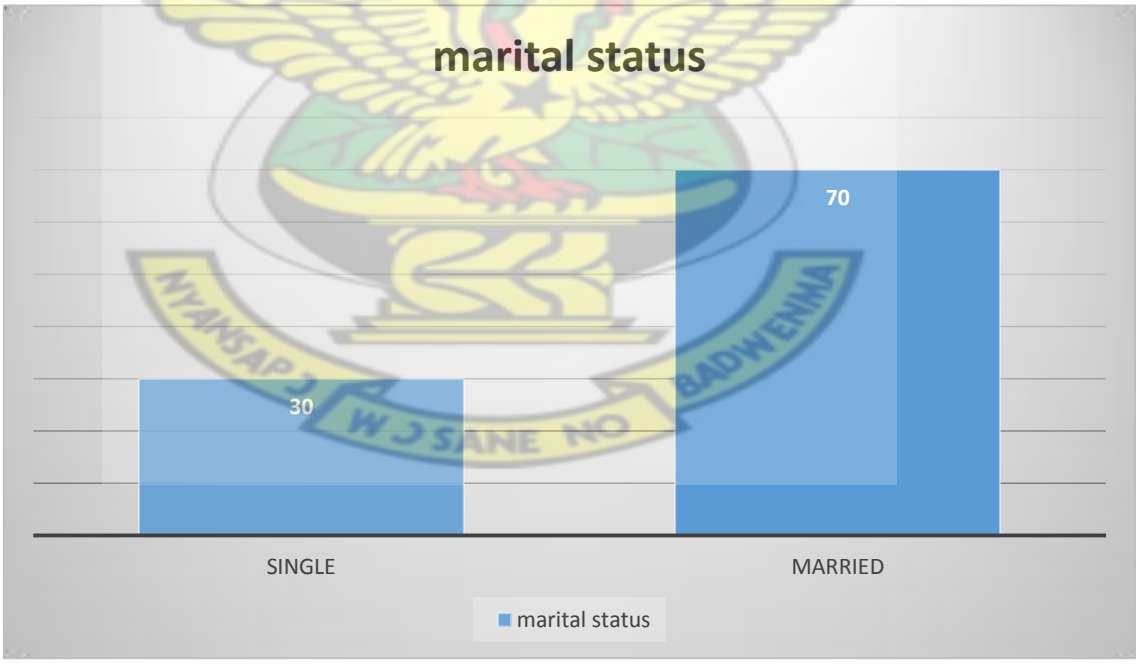
DATA ANALYSIS, PRESENTATION AND DISCUSSION

4.1 Introduction

This chapter deals with data analysis and presentation. The chapter is presented under the following headings: Background of respondents; female participation rate; causes of low female participation in the construction industry; skills requirement of females to participate in the construction industry; challenges that prevent more females from entering into the construction industry and criteria used by contractors to employ workers.

4.2 Background of respondents

Figure 4.1 marital status of respondents



Source: field survey, 2014

The study covered 30 percent of employees who are single whilst 70 percent are married (see figure 4.1 for statistics). The study revealed that out of the 30 percent of employees who are single 16.7 percent are males whilst 13.3 percent are females. The 13.3 percent of females who are single display the independence that most employers in the construction industry require in potential and actual employees.

Table 4.1 Gender and marital status of respondents

Gender	**Marital status**		**Total**
	Single	**married**	
Male	16.7	40.0	56.7
Female	13.3	30	43.3
Total	**30**	**70**	**100.0**

Source: field survey, 2014

Furthermore, out of the 70 percent of employees who are married, 40 percent are males whilst 30 percent are females. The females who are married have increased family commitments but are combining these with work life in the construction industry. This indicates that not all females failed to participate in the construction industry because of difficulty in balancing family commitments with work life (see table 4.1 for details).

Table 4.2 Number of children and gender of respondents

Number of children	**Gender of respondents**		**Total**
	Male	**female**	
1-3 children	36.7	23.3	60.0
4-5 children	6.7	6.7	13.3
None	13.3	13.3	26.7
Total	**56.7**	**43.3**	**100.0**

Source: field survey, 2014

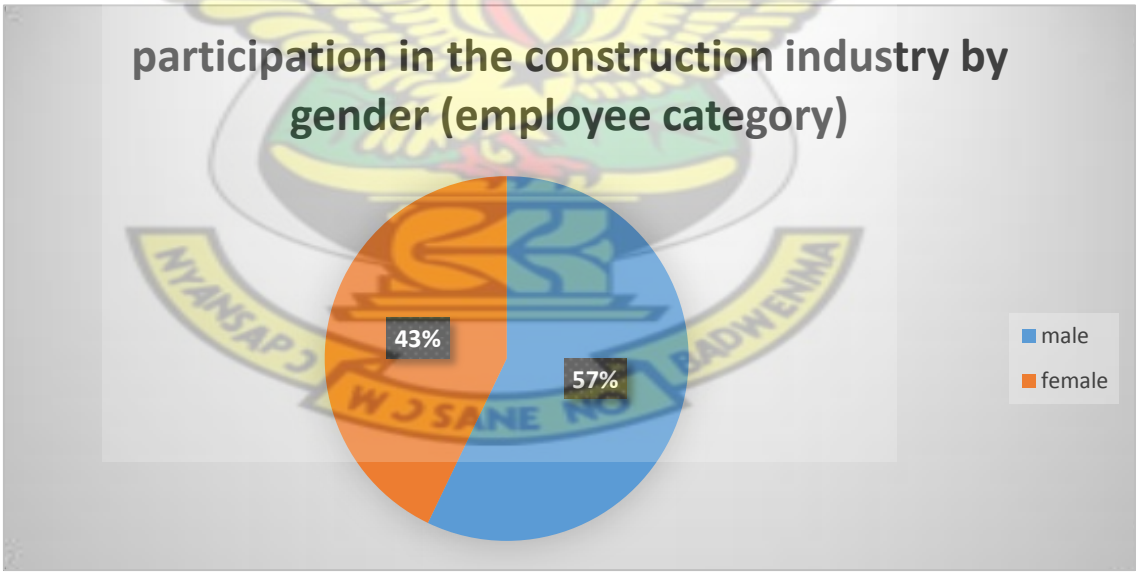
From Table 4.2, the study discovered that of the 56.7 percent of males participating in the construction industry, 36.7 have 1 to 3 children, 6.7 have 4-5 children whilst 13.3 percent have no children. In addition, out of the 43.3 percent of females who

participate in the construction industry, 23.3 percent of them have 1 to 3 children, 6.7 have 4-5 children whilst 13.3 percent have no children (see table 4.2 for statistics).

The 13.3 percent of females who have no children may have less family commitments and are relatively independent thereby meeting the independent criteria so desired by employers in the construction industry. However, the 23.3 percent and 6.7 percent who have 1 to 3 children and 4 to 5 children respectively, may have increased family commitment particularly child care and homemaking but are employed in the construction industry. This finding is indicative of the fact that family commitment such as child bearing and child care alone may not act as barrier to female participation in the construction industry but in combination with other factors.

4.3 Female participation rate in the construction industry

Figure 4.2 female participation in the construction industry



Source: field survey, 2014

Figure 4.3 female participation in the construction industry (contractor category)

Source: field survey, 2014

The study found that female participation in the construction industry is below average. The estimated number of female construction employees is estimated at 43.3 percent whereas that of males is 57.7 percent (see figure 4.2 for details). In addition, the study found that in the contractor category, female participation is zero percent (see figure 4.3 for statistics) which leaves male participation at hundred percent. The study revealed that lack of job opportunities, lack of interests, the nature of construction jobs, and image of the construction industry, sexual harassment, balance of work life and family commitment and rigorous and discriminatory recruitment criteria are responsible for the low level participation of females in the construction industry.

The revelation that female participation in the construction industry is low corroborates the findings of Clarke et al (2005) and the Ghana Living Standard

Survey (2013). However this study recorded female participation in the employee category to be 43.3 per cent and the contractor category to be zero per cent. Whilst Clarke et al (2005) and the Ghana Living Standard Survey (2013) found that the general female participation in the construction industry is less 10 percent of construction workforce and 0.1 percent of the total Ghanaian labour force.

4.4 Causes of low female participation in the construction industry

Table 4.3 Causes of low female participation as enumerated by contractors

Causes of low female participation	Frequency	Percent
Image of the industry	2	20.0
limited career knowledge and information about the industry	3	30.0
lack of qualification and specialization	1	10.0
domination of the industry by male culture	1	10.0
family commitment	3	30.0
Total	10	100.0

Source: field survey, 2014

Studies by different authors revealed that there are several causes of low female participation in the construction industry. This study found the following as the causes of low female participation in the construction. It is reported by 20 percent of contractors and 20 percent of employees that the image of the construction industry accounted for the low participation of females (see table 4.3 for statistics). This is consistent with the findings of Gale (1994a); Fielden et a1 (2000); Fielden et al (2001); Bennett et al (1999); Agapious (2002) and Amaratunga et al (2006).

Employees and managers who enumerated image of the construction industry as part of the causes of low female participation reported that construction industry is characterized by poor working conditions, bad language, and exposure to bad weather as well as work processes requiring brute strength. This finding is consistent with the

assertion of Agapious (2002) that construction activities in the industry require brute strength. These conditions give the industry a bad image that deter females from participating in the industry. In addition, the study found that the Ghanaian culture demarcated and created the impression that some jobs are preserved for males whilst others are for females. The construction industry is labeled as job for males and therefore ladies who venture into this industry are regarded as deviating from the status quo. The outcast or outsider tag is most pronounced particularly for females who venture into line or mainstream construction jobs such as building construction, road construction, and drainage construction, real estate among others. The outsider tag in such jobs deter females from participating in the construction industry.

Nevertheless jobs that are considered as staff jobs such as jobs in marketing construction products and services and the management of construction businesses are regarded as proper for females and therefore the outsider tag is less pronounced. This allow females to venture into jobs such as real estate agency, real estate brokerage, personnel and human resource positions

Furthermore, 30 percent of contractors and 36.7 percent of construction employees reported that limited knowledge of career opportunities and the general lack of information about the construction industry account for low participation of females in the construction industry (see table 4.3 for details). This finding is consistent with the findings of Fielden et al (2000) and CITB (2003) who outlined limited knowledge and general lack of information as being part of the causes of low female participation in the construction industry.

Employees who identified limited career opportunities for women in the construction industry as a cause of low female participation of women, reported that this problem arise because parents, teachers and mentors created the perception that jobs or career opportunities in the construction industry are limited to 'brick laying, , joinery, and painting and decorating' (CITB, 2003). Deducing from the reports of employees, it is revealed that the lack of career opportunities in the construction industry for females is perceived rather than actual. Although just as in other industries or sectors, changing economic conditions have naturally limited career opportunities for all and not only in the construction industry.

It is further discovered that limited information on the industry accounted for the perceived limited career opportunities for women which in turn accounted for the low participation of women in the construction industry. Limited or lack of information on the construction industry is a byproduct of little or no interest parents and teachers display towards convincing their wards or students to venture into careers in construction.

It is noted however that interests of females in construction related courses are rising. This can be viewed in the number of females who are being admitted into programs such as building and technology, planning, architecture, and engineering among others that has accounted for significant increase in female participation in the industry. Nevertheless some students after graduation pick up careers in banking, insurance and civil service in different capacities or pursue master in business administration thereby diverting from the construction industry.

Table 4.4 causes of low female participation in the construction industry as reported by employees

Causes of low female participation	Frequency	%
image of the industry	6	20.0
limited knowledge and information about the construction industry	11	36.7
lack of qualification and specialization	4	13.3
family commitment	6	20.0
lack of interest	3	10.0
Total	30	100.0

Source: field survey, 2014.

In addition, 10 percent of contractors and 13.3 percent employees reported lack of qualification and specialization as the cause of low female participation in the construction industry (see Tables 4.3 and 4.4 for details). They explained that the lack of qualification and specialization of females is caused by the general lack of interest of females to pursue construction related courses or disciplines in educational and training institutions. The effect of this is that many females do not possess construction specific technical skills, knowledge, qualification and specializations and hence are not readily employable in the industry. To further compound this, females are perceived as relatively weak and therefore cannot undertake manual works such as digging of foundations, carrying or and mixing concrete among others and therefore are not preferred for such works.

More so, the study discovered family commitment by females as one of the major causes of low female participation. This factor is reported by 30 percent of contractors and 20 percent of employees of Consar Construction Limited. This factor was also reported by Amaratunga et al (2006). It is explained that because the construction industry is characterized by long hours of work, travelling from one construction site to the other, and the exposure to bad weather conditions increase the responsibilities

of workers or employees. The compounded nature of work in the construction industry coupled with other commitments of female employees make it difficult for them to combine work life and personal life. Amaratunga et al (2006) noted that the conflict between work and family obligations, that many construction professional experiences, is more acute for women than for men. This deter females from picking up jobs in the construction industry. It is also revealed that the nature of construction works particularly long hours of work and frequently travels combine with family obligations such as homemaking, child bearing and child care roles of females create time famine, increase stress and deters females from participating in the construction industry.

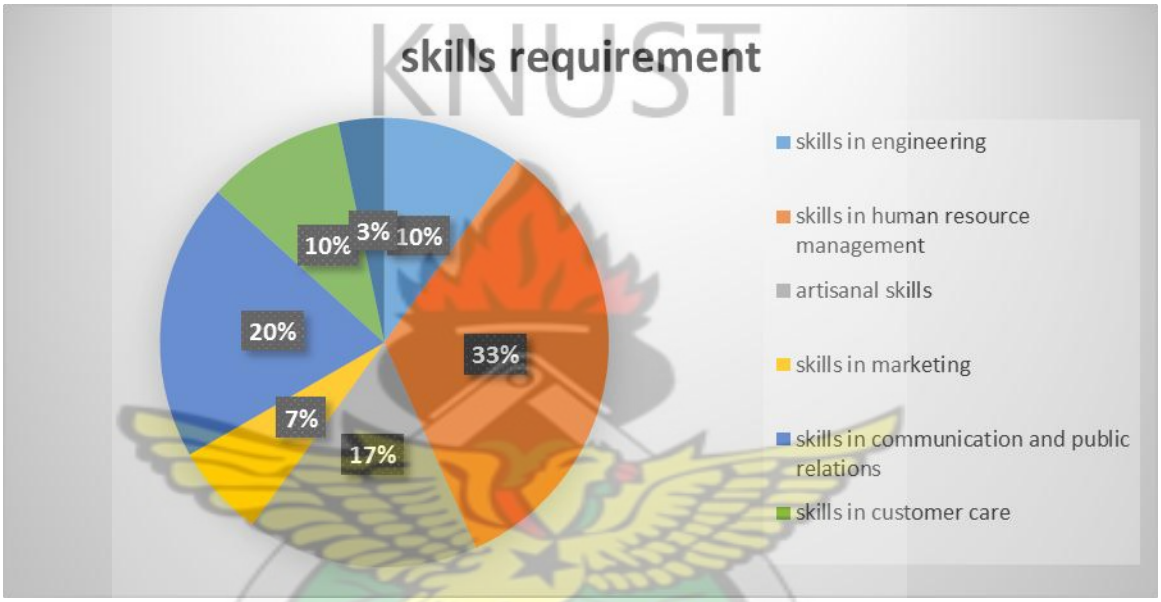
Moreover, 10 percent of contractors and 10 percent of employees reported domination of male culture in the industry and lack of interest respectively as deterrent to female participation in the construction industry (see table 4.3 and 4.4 for details). Contractors reported the long hours of work, the use of bad language, poor working conditions, poor sanitary conditions, competition and macho characteristics create a perceived masculine culture for which many females are unwilling to associate with. The domination of male culture in the construction industry creates boys-only club for which females are considered outsiders and unwelcome.

On the other hand employees cited lack of interest in the construction industry as factors that account for low female participation in the construction industry. It is noted that a combination of factors account for females' lack of interest in the construction industry. It is revealed that the bad image of the construction industry, lack of mentors, domination of male culture, and perception of limited career

transform into females not having the interest to participate in the construction industry.

4.4 skill requirement of females to participate in the construction industry

Figure 4.4 skills requirement of female to participate in construction as identified by employees



Source: field survey, 2014.

Table 4.5 skills requirements of females as identified by contractors

Skills requirement	Frequency	Percent
skills in engineering	1	10.0
skills in human resource management	3	30.0
skills in artisanship	1	10.0
skills in communication and public relations	3	30.0
skills in site inspection and supervision	2	20.0
Total	10	100.0

Source: field survey, 2014.

The study found that contractors and employers in the construction industry require females to possess two main types of skills. These types of skills include construction specific skills and construction supporting skills. Under the construction specific skills, 10 percent of contractors and 10 percent of employees reported that employers in the construction industry expect females to possess skills in engineering. They explained that females are expected to have the ability or skills to plan, design, construct, maintain buildings and machines among others. Contractors and employees reported that females who possess engineering skills are easily recruited to participate in the construction industry. This findings support the findings of CSC (2010) when they found that women or females have the aptitude and abilities that best suit professions such as engineering among others.

Furthermore, 16.7 percent of employees and 10 percent of contractors reported the possession of skills in artisanship as important prerequisite for females to participate in the construction industry. Skills in artisanship such as skills in carpentry, bricklaying, painting, and plumbing, wiring as well as decorating are regarded as construction industry specific skills that females must possess in order to participate in the industry. However, it is discovered that only few females possess artisanal skills, thereby explaining the limited number of females being recruited into the industry (see figure 4.4 and table 4.5 statistics). This finding is contrary to the findings of CSC (2010) and UKCES (2012) among others.

Subsequently 20 percent of contractors reported that employers in the construction industry recruit females based on their possession of site inspection and supervisory skills. They explained that females must be able or demonstrate that they are able to

critically examine the progress of construction works to form judgment and evaluation in order to prescribe corrective actions. It is also noted that females are recruited because they possess skills in overseeing the performance or operations of others particularly contractors and artisans. Site inspection and supervisory skills are considered industry-specific skills because the one evaluating and appraising the works of another must possess requisite skills in such fields or operations.

On the other hand the study identified that employers in the construction industry recruit females based on construction supporting skills such as skills in marketing, communication and public relations, and skills in customer service among others. It is reported by 33.3 percent of employees and 30 percent of contractors that employers in the construction require females to possess human resource management skills before they could the recruited in the industry. They reported that females must possess skills in recruiting, selecting, rewarding and motivating and general management of people. Contractors explained that females are preferred to possess such skills because they are perceived to be more caring, just and supportive therefore are better placed in managing employees or people in the construction sector.

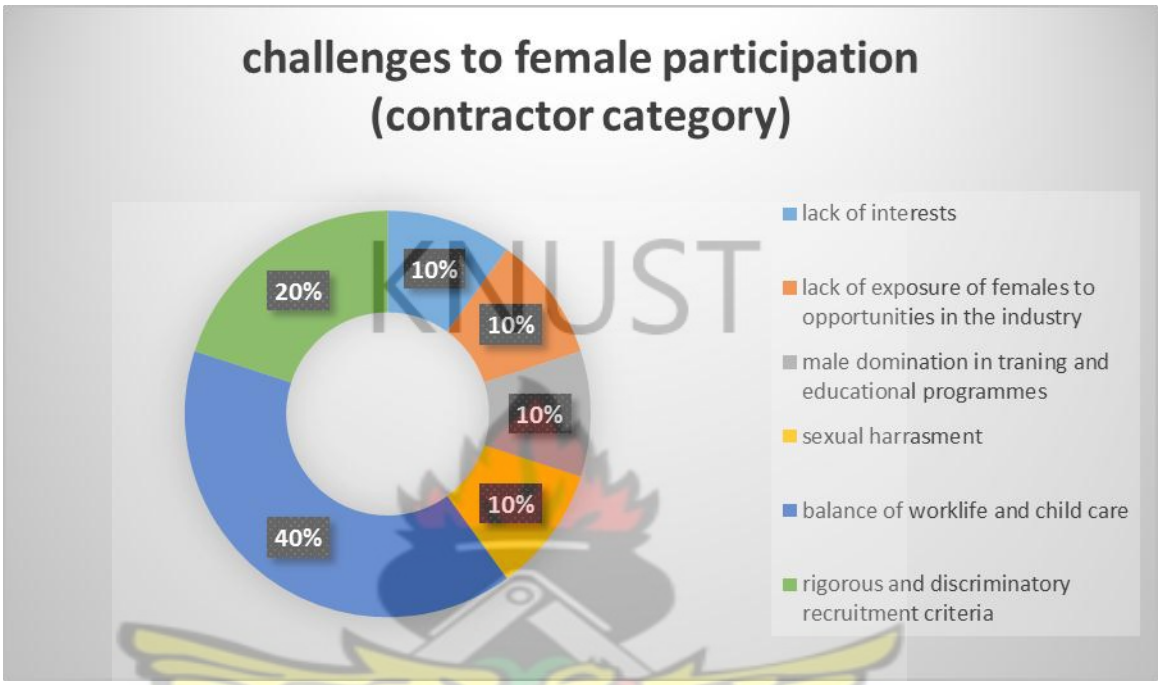
In addition, 20 percent of employees and 30 percent of contractors identified communication and public relations skills (see figure 4.4 and table 4.5 for details) as one of the skills required by females to participate in the construction industry. They reported that females who possess these skills are preferred for positions in the industry because they are relatively better in establishing, maintaining and improving favourable relationship between construction firms, employees and the general public.

Nevertheless, 6.7 percent of employees noted that females who possess marketing skills are considered employable to participate in the construction industry. The noted that females must possess skills in selling, advertising, promotion, positioning and branding among others. Similarly, 10 percent of employees reported skills in customer service and care as requisite skills females must have in order to be employed in the construction industry. Nonetheless, 3.3 percent of employees think that females who possess skills in diversity management and other managerial skills are employable in the construction industry. It is discovered that construction industry is diverse in terms of people involved in the industry. This diversity sometimes result in stereotypes, conflicts and misunderstanding among others which need to be managed to ensure sanity in the industry (see figure 4.4 and table 4.5 for details). United Kingdom Commission for Employment and Skills (UKCES), (2012) expressing similar sentiments noted that the increased use of pre-fabrication and automation in construction requires managerial skills to manage the different mix of labour on site as well as management of significant workforce off-site (UKCES, 2012).

It is revealed that most employers in the construction industry prefer to recruit females who possess construction supportive skills whilst few of them will prefer to recruit females with construction specific skills such as engineering, artisanal skills and site inspection among others. This result is similar to the findings of many authors except CSC (2010) who found that women have aptitudes and abilities that suit them best for professions such as engineering.

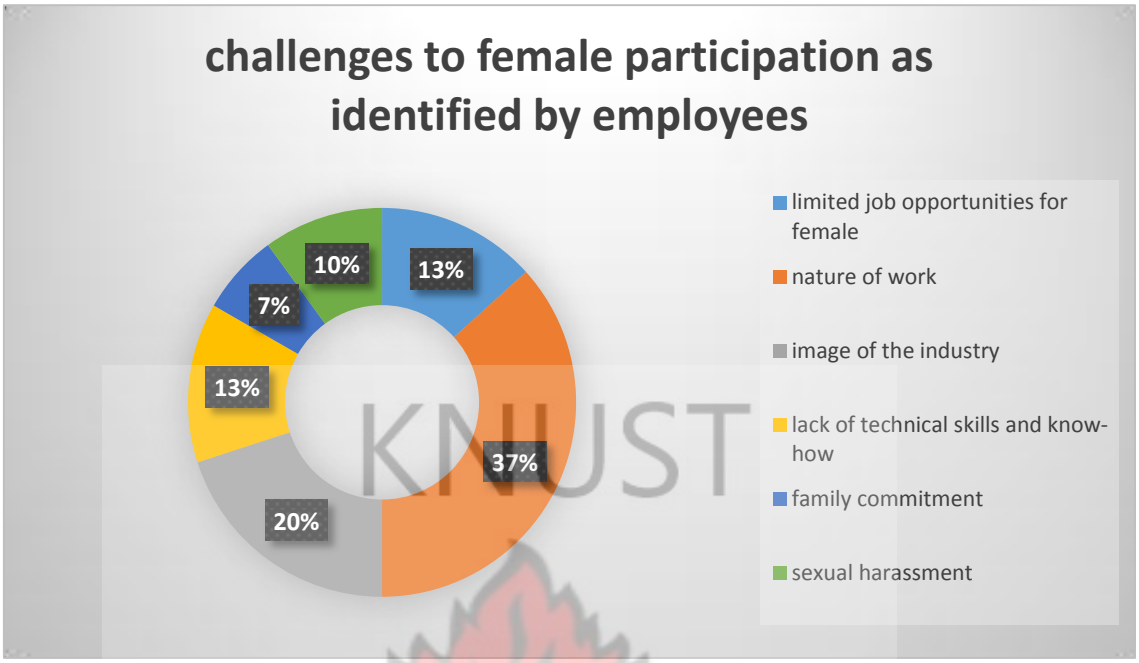
4.4 Challenges that prevent more females from entering into the construction industry

Figure 4.5 challenges to female participation as identified by contractors



Source: field survey, 2014.

Figure 4.6 challenges to female participation as identified by employees



Source: field survey, 2014.

It is revealed that females or women lack of interests in construction related jobs poses a challenge to the ability of construction employers to recruit females to participate in the construction industry. This challenge is identified by 10 percent of contractors and it supports the findings of CSC (2010). Contractors explained that females generally do not have the interest in participating in construction related trades and professions. It is explained that females lack of interest stems from the Ghanaian educational system that failed to encourage females into such trades. It is also noted that the female lack of interest in construction related trades and professions is partly due to the lack of female mentors, lack of knowledge and information on careers in the construction industry by teachers and parents.

The lack of female interest in construction trades and professions translate into females not possessing the requisite skills and knowledge making it difficult for employers to recruit females to participate in the industry. Yet, New Zealand Council

for Education Research (2008); and Thiessen (2002) attributed the lack of interest in construction careers by females to the fact that girls continue to associate work in many of the skilled trades with dirt and risks to physical safety.

Furthermore, 10 percent of contractors and 13.3 percent of employees identified lack of exposure of females to opportunities in the industry as a challenge to female participation in the construction industry. It is explained that because females are not exposed to career opportunities in the construction industry, only few of them respond to vacancy advertisements with the view to filling job positions in the industry. This account for their limited number in the construction industry.

In addition, 10 percent of contractors identify that male domination in the training and education in construction makes it difficult for employers to employ females. It is found that majority of Ghanaian educational and training institutions particularly the technical schools, National Vocational Institutes and some Universities prefer admitting males to females into construction related courses and programmes. The effect of this is that males are more qualified and well-placed to participate in the construction industry. This makes employers recruit males rather than females even if their preference is females, since majority of labour force for the industry are males. This poses a great challenge to female participation. This support the findings of Gale (1994a) who expressed that the domination of males into mainstream construction courses in colleges, training organizations and employers, create problems for women such a male dominated work environment and a masculine culture which make most women uncomfortable to work in the industry.

More so, 10 percent of contractors and 10 percent of employees reported that sexual harassment of females by the male counterparts serves as a barrier to female participation in the construction industry. Moir et al (2011) also reported that sexual harassment and hostile work environment serve as barriers to women participation in the construction industry. It is explained that because of male domination of the construction industry and a masculine culture characterized by bad and foul languages some women feel harassed by their male counterparts. It is also reported that several of the few females recruited in the construction industry complained of receiving several of unwanted sexual advances and unwanted sexual behaviour form male counterparts including colleagues and supervisors. This create bad image for the industry and deters females from participating in the industry. Some contractors/employers also noted that the fear of lawsuits and its consequent compensation that characterized sexual harassment claims make them feel reluctant to employ female employees with the view to avoiding potential sexual harassment claims.

Subsequently, 40 percent of contractors and 6.7 percent of employees identified balance of work with child bearing and child care as well as family commitment as a major challenge to female participation in the construction industry (see fig. 4.5 and 4.6 for statistics). It is discovered that the construction industry is characterized with long hours of work, frequent movement between sites and the use of physical strength. These activities and tasks demand lots of time, energy, devotion and dedication. Combining these activities with family commitments such as home making, child bearing and caring increases the burden on women who are often the chief architects of these tasks in the home.

The increased burden both actual and potential deters females from participation in the industry. Contractors/employers also reported that mostly they require employees who are independent devoid of family commitments. However recruiting females mean granting of leave of absence, and limiting the number of hours females can work among others to allow them to take care of family commitments. They noted that these pose a great challenge since most of their businesses are on contract basis there by having time limits and therefore granting leave of absence to females affect their project completion time. This according to them serves as a great hindrance to recruiting females to participate in the industry.

Notwithstanding, 20 percent of contractors reported that the use of rigorous and discriminatory recruitment and selection criteria serve as a barrier to female participation in the construction industry. They reported that the search for relatively independent candidates automatically eliminates females with family commitments. They explained that though they are aware that this may be discriminatory towards women, because of the contractual nature of their business, time is of essence and therefore potential sources of timewasting must be eliminated. The contractors further expressed that sometime the use of work trial as a form of recruitment criteria that pitch females against males in order to select the fit and qualified candidates may be too rigorous for females since they are perceived as being the weaker of the two sexes.

Also, 36.7 percent of employees reported that the nature of construction works serves as a challenge to their participation in the industry. They reported that works in the construction industry is characterized by climbing of heights, lots of risks, lack of rest

and lack of safety equipment. They reported that employers are reluctant to provide protective wears, insurance cover or implement risk management mechanisms to prevent or at least limit the extent/rate of injuries as well as achieve effective management of the work environment. They explained that these deter not only females but males since the risks involved in the industry are too grave (fig. 4.6 statistics).

Similarly, 20 percent of employees revealed that the image of the industry serve as a challenge to attracting females into the industry. They explained that the industry is characterized by low income, long hours of work, poor safety health, safety and welfare and suppression of career development and promotions to top management. Employees note that because of this image they are unable to convince qualified candidates particularly females to participate in the industry.

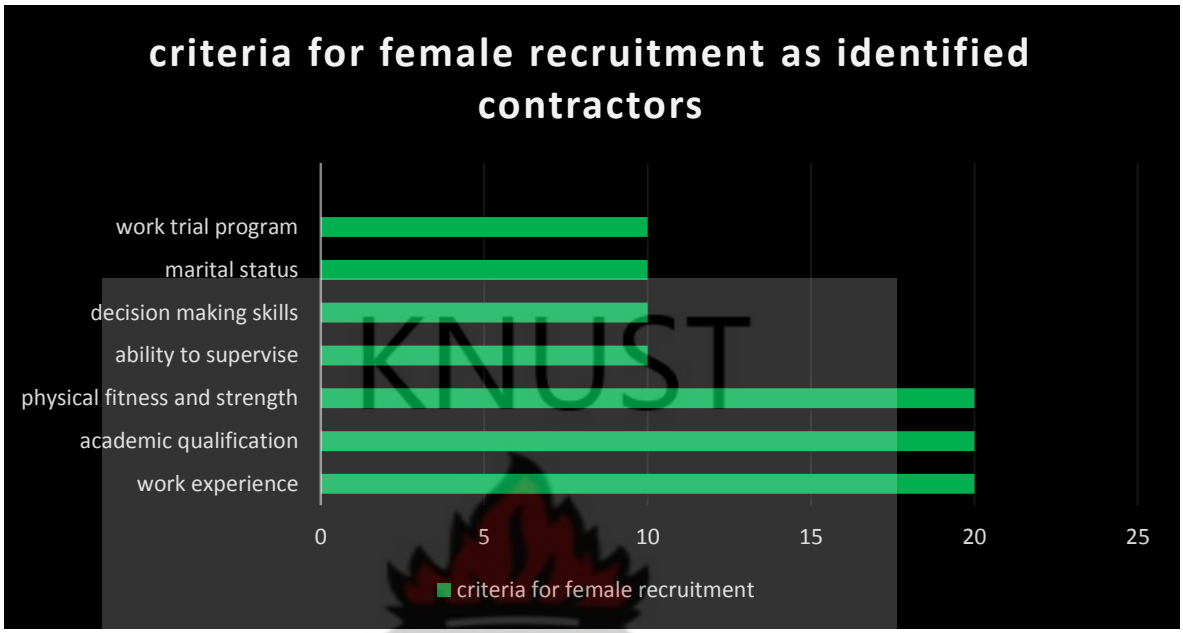
Finally, 13.3 percent of employees identified lack of technical skills and know-how as a challenge to female participation in the construction industry (fig. 4.6 for statistics). They explained that females generally lack interests in pursuing construction related courses and trainings. This is further compounded by the male domination in mainstream construction training courses and programmes in colleges and training organisations.

The effect of these is that only a few women/females possess the needed skills and knowledge in the constructions. This poses a challenge to employers who are seeking a balanced mix of female and male at their work places. In addition lack of technical know-how by females mean that employers are compelled to recruit males to fill jobs that females could better fill and therefore depriving employers' diversity in the

workplace. This supports the findings of Angus (2009) when he reported that about a quarter of construction industry players reported lack of skills as a major challenge.

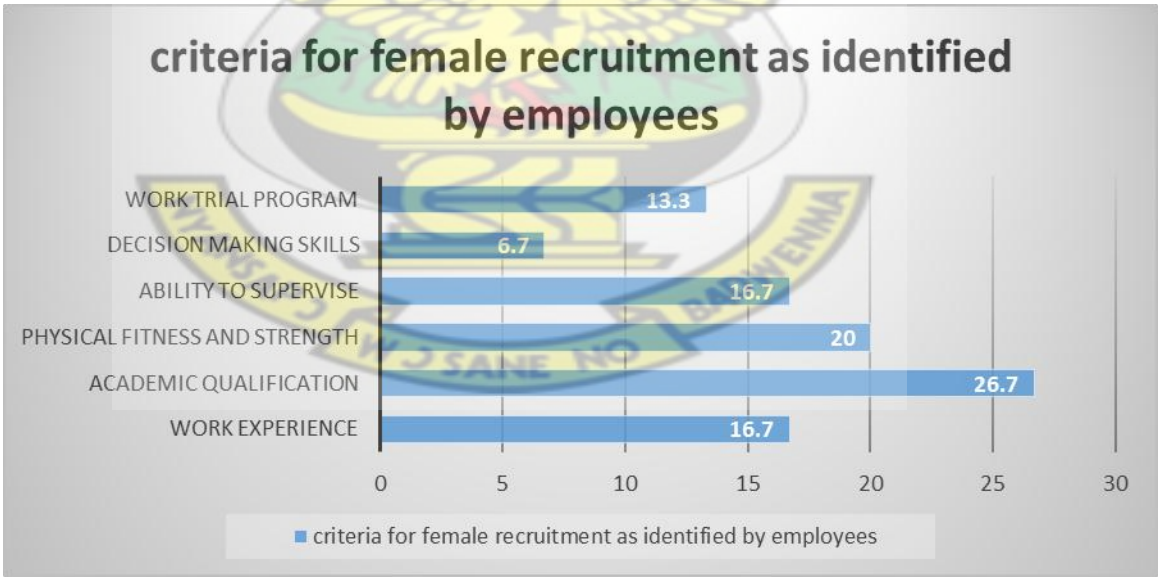
4.5 Criteria used by contractors to employ workers

Figure 4.7 criteria for female recruitment as identified by contractors



Source: field survey, 2014.

Figure 4.8 criteria for female recruitment as identified by employees



Source: field survey, 2014.

It is reported by several HR specialists including Armstrong (2006) that several recruitment criteria are available to employers to follow to recruit and select qualified candidates. The study found that the criteria used by employers to recruit females in the construction industry are the same as any recruitment criteria. These criteria include work experience; academic qualifications; physical fitness and strength; ability to supervise; and decision making skills among others. This supports the findings of Adeyemi et al (2006). The difference between the criteria for selection of females into the construction industry is the marital status and work trial program.

The study found that 20 percent of contractors and 16.7 percent of employees used and identified work experience as one of the most important criteria for selecting females into trades and professions in the construction industry. They explained that potential and actual candidates are expected to possess extensive knowledge and skills gained through being participants in construction related tasks and responsibilities over extended period of time. Contractors further explained that work experience is the best teacher whilst paper qualification is no substitute to real life construction experience.

Adeyemi et al (2006) found that employers in the construction industry adopt work experience as criteria for selecting number of males which surpass the number of females selected to participate in the construction industry. They explained that this is because men are regarded as having better work experience and are naturally more productive on site most especially under bad climatic weather conditions (Adeyemi et al 2006).

Further, 20 percent of contractors and 26.7 percent of employees identified academic qualification as one of the criteria for selecting females into construction jobs. It is revealed that in the construction industry certain specific skills and knowledge are needed for the effective operation of businesses in the construction industry which cannot be obtained through on the job training or to extended work experience. This leads to the demand for academic qualification from females particularly in the areas of engineering, building technology, architecture, and planning among others.

Whereas academic qualification in construction supporting disciplines such as Human resource management, marketing and management are required as a criteria for the selection of females to participate in the construction industry. It is also found that the use of academic qualification as selection criteria is the most common and the most used criteria for the selection of females to participate in the construction industry. This is because academic qualification as selection criteria is also regarded as less discriminatory and offers an equal playing field for both sexes as compared to other criteria particularly physical strength and marital status.

Besides, 20 percent of contractors and 20 percent of employees ascertained that employers in the construction industry use physical fitness and strength as female selection criteria. They noted that because construction works most often demand macho characteristic such as physical strength, courage and aggressiveness employees irrespective of gender are expected to possess a minimum level of physical fitness and strength.

Contractors reported that the use of physical fitness and strength as selection criteria is not only to assess candidates' ability to fulfill their daily duties and responsibilities

but also to meet statutory health and safety standards of the jobs. The use of physical fitness and strength as a selection criteria help employers in the construction industry to recruit medically and physical fit employees that will help reduce medical costs of employees and reduce absenteeism and leave of absence due to sickness and diseases. Adeyimi et al (2006) found that even though most women meet majority of the selection criteria, they often lack the physical strength and therefore are outnumbered by men during the recruitment and selection process.

It is further reported that 16.7 percent of employees and 10 percent of employers established that employers select females to participate in the construction industry based on candidates' ability to supervise. This criterion was also reported by Adeyemi et al (2006) in their study. It is established that females are selected if they demonstrate their ability to lead, monitor, offer direction and oversee others whilst they perform their assigned tasks. This demands that female candidates must have work experience of academic qualification in management particularly focusing on leading, directing, and controlling aspects of management. Ability to supervise is very important especially for candidates who are to occupy middle level management positions especially foremen.

Yet, 10 percent of contractors and 6.7 percent of employees ascertained that employers select using female candidates based on their ability to make decisions whilst 10 percent of contractors identified marital status as criteria. It is determined that employers used marital status as criteria used to determine the level of independence of the candidates, help employers to plan and schedule tasks and activities and also to assign employees to divisions-whether candidates will be office

workers or fieldworkers. Adeyemi et al (2006) noted that though there is no discrimination based on marital status, most married women are often reluctant to take some construction job particularly those that involves moving or relocating to construction sites far away from their families (Adeyemi et al 2006).

Finally, 10 percent of contractors and 13.3 percent of employees noted that employers sometimes adopt work trial as a criteria for recruiting females. Work trial procedure involves candidates being given the job to do for a period of time and their performance is observed in terms of quality and speed of execution upon which the candidate is either selected or rejected (Keep and James 2010). Lockyer and Scholarios, (2007) found that work trial and other trial process criteria are best suited for the construction industry selection than other criteria. This is because it is thought that work trial offer much equality and less discrimination as well as candidates are recruited based on their ability to deliver quality products and services at reasonable time.

Table 4.6 recruitment methods

Recruitment methods	Frequency	Percent
employee referrals	7	70.0
recruitment agencies	3	30.0
Total	10	100.0

Source: field survey, 2014

It is however found that employers in the construction industry often use two main methods to recruit females to participate in the industry. These methods include the use of employee referrals and the use of employment/recruitment agencies. This finding is consistent with the findings of Rioux and Bernthal (1999), Richardson (2005) and Lockyer and Scholarios (2007). Rioux and Bernthal (1999) identified

employee referrals as internal recruitment strategy and employment agencies as external strategy.

At Consar Construction Limited, with regards to employee referral method, existing employees are contacted to recommend qualified females to fill vacancies in the organisation. On the other hand the use of employment/recruitment agencies involves the hiring or the contacting of an organisation that finds people to fill particular jobs. In the case of Consar limited, they used the national labour offices nationwide as a recruitment agency to recruit females to work for them.

The use of employee referral and employee/recruitment agencies as recruitment strategies at Consar limited is not in conformity with the findings of Moir et al (2011) and Lockyer and Scholarios (2007). They found that construction firms adopt apprenticeship and pre-apprentice training strategies, forms of trial methods, in recruiting and selecting women to participate in the construction industry (Moir et al 2011).

Conclusion

This chapter dealt with data analysis, presentation and discussion. The chapter identified poor image of the construction industry, lack of qualification and specialization, domination of male culture and family commitment among others as the main causes of low female participation rate in the construction industry. Besides, the results of analysis also revealed that females are required to possess construction specific skills and construction supporting skills in order to be employable or participate in the construction industry. Nevertheless, the results revealed that factors such as limited job opportunities, nature of construction work and rigorous and

discriminatory among others serve as barriers or challenges to female participation in the construction industry.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

This chapter summarizes the study, presents conclusion highlighting findings and recommendation to inform policy and decision making.

5.1 Summary

The study aimed at determining the female labour force participation rate in the construction industry. The main objectives of the study include ascertaining the level of female participation in the construction industry and what account for this level; determining the skill requirement of females to participate in the construction industry; identifying challenges that prevent more females from entering into the construction industry and determining the criteria used by contractors to employ workers.

Primary data was collected from employees and contractors at Consar Construction limited Ghana. A sample size of 40 respondents comprising of 10 contractors and 30 employees were purposively selected. Questionnaires were administered to employees and contractors to solicit for primary data. Data was analyzed using statistical package for service solution computer software. The results revealed the following:

5.1.1 Causes of low female participation in the construction industry

The study found that poor image of the construction industry, limited career knowledge and information about the construction industry, lack of qualification and specialization, domination of the construction industry by male culture and family

commitment are factors that account for low female participation in the construction industry.

5.1.2 Skill requirement of females to participate in the construction industry

The study revealed that employers in the construction industry require that females possess two main types of skills to be employable in the construction industry. These types of skills include construction specific skills and construction supporting skills. Under construction specific skills employers in the construction industry require female candidates to have skills in engineering, artisanal skills, skills in site inspection and supervision. On the other hand skills that fall under construction supporting skills includes skills in marketing, skills in communication and pubic relations, skills in customer service and customer care, skills in human resource management and skills in diversity management among others.

5.1.3 Challenges that prevent more females from entering into the construction industry

The study also discovered that several factors serve as barriers to female participation in the construction industry. Some of these factors/challenges include: limited job opportunities for females in the construction industry; nature of construction work; and image of the construction industry. Other challenges include: lack of technical skills and know-how; family commitment; sexual harassment; male domination of training and training in construction; and rigorous and discriminatory recruitment criteria.

5.1.4 The criteria used by contractors to employ workers

The study discovered that contractors/employers in the construction industry adopt selection criteria similar to those used to recruit and select employees in other industries. Some of these selection criteria include: work experience, academic qualification, physical fitness and strength; ability to supervise and decision making skills. However, the difference in the selection criteria between those used in construction and other industries is the stress on marital status and the use of work trial and other trail processes as recruitment and selection criteria.

5.2 Conclusion

Over the past couple of years gender equality has been the fundamental problem that many governments and private organisations seek to resolve. Their quest is to achieve gender equality by removing impediments, challenges and factors that perpetuate discrimination and inequality in governance, employment and other aspects of human life. However, gender inequality in employment particularly in the construction industry exist. This study found that gender inequality in the construction industry manifest itself in the form of low female participation. The study further found that there exist fundamental causes of low female participation. Notable among them are: limited career knowledge and information about the construction industry, lack of qualification and specialization, domination of the construction industry by male culture and family commitment among others account for the low participation of female in the construction industry.

5.3 Recommendations

The study found that the nature of work in the construction industry is characterized by long hours of work, exposure to bad weather, high risks and poor health and safety standards as one of the major challenges preventing females from participating in the construction industry. The study therefore recommends that employers undertake effective planning and scheduling as well as the provision of break time to ameliorate the long hours of work. It is envisioned that when these are done, it will help reduce the negative image that characterized the construction industry thereby making it attractive for females to participate in the industry.

In addition, it is recommended that employers provide protective clothes and wears, follow laid down health, safety and welfare protocols as well as insure employees to reduce the level of risks that employees are exposed to. It is envision that once these mechanisms are put in place, female participation in the construction industry will increase.

It is found that one of the causes of low female participation in the construction industry is the lack of technical skills by females. It is recommended that the technical schools, colleges and universities in conjunction with the Ghana Education Service develop mentorship and counselling programmes that are geared towards whipping the interests of females to take up the many construction related courses and training programmes available in these institutions to help develop the capacities of females in construction. This will help improve the skills set and knowledge of females in construction related trades and professions thereby providing employers with a pool

of diverse labour force to choose or select from whilst increasing female participation in the construction industry.

Finally, it is recommended that a further study be done on the same topic but using multiple construction firms, preferably from all the regions, to reflect a nationwide context of female participation, causes of female participation and challenges to female participation in the construction industry.

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APPENDICE.

Appendix 1: Questionnaire for contractors

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF BUSINESS. DEPARTMENT OF MANAGERIAL SCIENCES

This study is a requirement for partial fulfillment for the award of master of business administration degree. Information provided will be used for academic purpose only. Respondents are guaranteed confidentiality and privacy. Please fill the questionnaire with your utmost precision.

Section A: Demographic characteristics of respondents

1. Gender of respondent
   a) Male [ ] b. Female [ ]
2. How old were you on your last birthday? a. 18-25years [ ] b. 26-33 years [ ] c. 34-40 years [ ] d. 41-47 years [ ] e. 48 years and above [ ]
3. What is your highest level of education? a. Primary [ ] b. Junior High [ ] c. Senior High [ ] d. Tertiary [ ]

4. What is your marital status? A. Single [ ] b. Married [ ] c. Divorced/Separated [ ] d. Widow/Widower [ ] e. Consensual union [ ]
5. How many children do you have?
   .....

Section B: Causes of low female participation in the construction industry.

6. In your opinion what are the causes of low female participation in the construction industry?

.....

7. In recruiting females to participate in the construction industry, what specific skills set do you look out for? Please list them below

.....

8. What peculiar challenges do female face in participating in the construction industry?.....
.....
.....
.....
.....
9. In what ways can these challenges be surmounted by females in order to increase their participation in the construction jobs?
.....

10. What recruitment methods do you find efficient in recruiting females? Please specify them below
.....

11. What recruitment and selection criteria do you use in recruiting female workers? Please tick all that apply.

Skills/capabilities	**Tick all that apply**
Work experience	
Academic qualifications	
Physical fitness and strength	
Ability to supervise	
Decision making skills	
Marital status	
Work trial program	
Apprenticeship	
Others specify	

12. Do you find these criteria appropriate for recruiting females? A. yes [ ] b. no [ ]
13. Do you use the same criteria in recruiting male workers too? A. yes [ ] b. no [ ]
14. If yes why and if no why not (in 13 above)? Please explain below:

.....

Thanks for your cooperation.

Appendix 2: Questionnaire for female participation

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF BUSINESS. DEPARTMENT OF MANAGERIAL SCIENCES

This study is a requirement for partial fulfilment for the award of master of business administration degree. Information provided will be used for academic purpose only. Respondents are guaranteed confidentiality and privacy. Please fill the questionnaire with your utmost precision.

Section A: Demographic characteristics of respondents

15. Gender of respondent
    b) Male [ ] b. Female [ ]
16. How old were you on your last birthday? a. 18-25years [ ] b. 26-33 years [ ] c. 34-40 years [ ] d. 41-47 years [ ] e. 48 years and above [ ]
17. What is your highest level of education? a. Primary [ ] b. Junior High [ ] c. Senior High [ ] d. Tertiary [ ]
18. What is your marital status? A. Single [ ] b. Married [ ] c. Divorced/Separated [ ] d. Widow/Widower [ ] e. Consensual union [ ]
19. How many children do you have? .....

Section B: Causes of low female participation in the construction industry

20. Are you employed in the construction industry? A. yes [ ] b. no [ ]
21. If yes (in 20 above), what do you think are the causes of low female participation in the construction industry? Please select all that apply.

Factors	**Tick all that apply**
Image of the industry	
Limited career knowledge and information about the construction industry	
Lack of qualification and specialization	
The domination of the industry by male culture	

Family commitment i.e child bearing and child care	
Lack of interest	
Discrimination towards females	
Others specify	

Section C: Skill requirement of females to participate in the construction industry

22. Which of the following skills sets do you think are important for females to participate in the construction industry?

Skills requirement	**Tick all that apply**
Skills in engineering	
Skills in human resource management	
Skills in artisanship (example bricklaying, carpentry, plumbing, painting among others)	
Skills in marketing	
Skills in communication and public relations	
Skills in customer service and care	
Health and safety skills	
Skills in site inspection and supervision	
Skills in project management	
Diversity management and other managerial skills	

23. Please list the specialized skills required for you to work in the area specified in question 22 above?

.....
.....
.....

24. Does the possession of these skills make it easier for you to secure job in the construction industry? A. yes [ ] b. no [ ] c. not sure [ ]
25. If any option other than yes is selected in question 10 above, explain why it is so?

.....
.....

Section D: Challenges that prevent more females from participating in the construction industry

26. In your opinion, what are the challenges you face in participating in the construction industry?.....

27. What measures do you put in place to surmount the challenges listed above?

.....

28. Which of the following do you think serve as barriers to female participation in the construction industry? Please select all that apply.

Challenges	**Tick all that apply**
Lack of interests	
Lack of exposure of females to opportunities in the construction industry	
Male domination of training and education in construction	
Exposure to health risks i.e musculoskeletal disorders	
Stereotypes and discrimination towards females	
Poor sanitary facilities	
Sexual harassment	
Long hours of work	
Balance of work and Child bearing and child care	
Hostile working environment	
Rigorous and discriminatory recruitment criteria	
Others specify	

Section E: Criteria used by contractors to employ female workers

29. Which of the following recruitment methods do employers use to recruit females into the construction industry?

Recruitment Methods	**Tick all that apply**
e-recruitment and selection	
Employee referrals	
Outsourcing	
The use of recruitment agencies	

The use of informal networks	
Others specify	

Which of the following skills or capabilities are required by employers in the recruitment of women in the construction industry? Please select all that apply

Skills/capabilities	**Tick all that apply**
Work experience	
Academic qualifications	
Physical fitness and strength	
Ability to supervise	
Decision making skills	
Marital status	
Work trial programme	
Apprenticeship	
Others specify	

Thanks for your cooperation.