

**THE INFLUENCE OF PSYCHOLOGICAL FACTORS AND HUMAN CAPITAL
ON CAREER DEVELOPMENT IN A GHANAIAN ORGANISATION: THE
MODERATING ROLE OF ORGANISATIONAL SUPPORT.**

BY

ASSAN, EVELYN AMA

(10225436)



**THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA LEGON IN
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DECLARATION

I, Evelyn Ama Assan hereby declare that except for references to other people's work, which have been duly acknowledged, this work is the result of my own research and that it has not been submitted elsewhere for another degree.

I therefore take responsibility for any inaccuracies and shortcomings, which may be detected in this thesis.

.....

Assan Evelyn Ama
(Student)

.....

Date

We hereby certify that this thesis was supervised in accordance with all procedures laid down by the University.



.....

Dr. M. Asumeng
(Supervisor)

.....

Date

.....

Dr. B. Amponsah
(Supervisor)

.....

Date

DEDICATION

I dedicate this work to the Almighty God, for the gift of life and today. To my family, you embraced my dream and have supported me all the way to make this dream a reality, my Uncle Charles, your concern for my success goes beyond measure, may your soul rest in peace. To my friends and mentors for the encouragement. You have been the wind beneath my wings.



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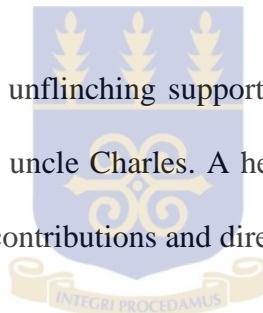
All praise and thanks to God for bringing me thus far, for without you I can do nothing.

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ABSTRACT

The study investigated the influence of psychological factors and human capital on career development at the Volta River Authority in Ghana. It also investigated the moderating role of organisational support on the relationship between psychological factors and career development, as well as the relationship between human capital and career development. One hundred and ninety four employees were purposively sampled across departments from five locations of Volta River Authority in Ghana. Participants completed questionnaires on psychological factors comprising of career resilience, self-efficacy and career identity. They also completed questionnaires on their perceived organizational support and career development. Standard multiple regression, hierarchical regression and moderating analysis were employed to analyse the data. Results indicated that both psychological factors and human capital predicted career development with organizational support moderating the relationship between psychological factors and career development, as well as human capital and career development as predicted. It was concluded that employees would need to have career resilience, self-efficacy and career identity and invest in their human capital in order to develop in their careers. However, it is essential that organizations provide support to their employees in their career development pursuits.

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LIST OF ABBREVIATIONS

- CDQ** - Career Development Scale
- CIS** - Career Identity Scale
- CRS** - Career Resilience Scale
- SES** - Self- efficacy scale
- SPOS** - Survey of Perceived Organizational Support Scale

CHAPTER ONE

INTRODUCTION

1.1 Background

Changes in the global and local work environments over the past decade and a half years have left in their wake globalization, increased competition from worldwide and emerging markets, rapid increase in cost of labour and pension liabilities, thus leading organizations to replace full-time, permanent workers with temporary or part-time employees (Sullivan, 1999). As employees strive to create a career in a world of fast-paced technology, decreased job security and increasing personal responsibility for constant up-skilling, they are faced with several challenges (Baruch, 2004; Coetzee & Schreuder, 2010; Marshall & Bonner, 2003; Sinclair, 2009). Individuals in organizations are compelled to be more efficient and flexible in their struggle to survive in this complex and turbulent environment and an essential means is through career development (Golian-Lui, 2003). It is therefore pertinent to look at the factors that influence the career development of individuals in organizations and how these relationships are enhanced.

Krieshok, Black and McKay (2009), describe career development as a major aspect of human development which spans one's entire lifetime. It pertains to the interventions of a person or body geared to the application of determinants which can be self-originated and/or externally originated, for the influencing of the career consistent with policy objectives (Boerlijst, 1998), hence career development is not the prerogative of only individuals but organizations as well (Millward, 2005).

In the past two decades, studies in career development have focused on personality factors, motivation, career satisfaction and organizational commitment and have revealed a number of variables that lead to career development (Judge, Cable, Boudreau &

Bretz,1995; Ng, Eby, Sorensen & Feldman, 2005), some of which Tharaneou (1997) classified broadly into organizational (opportunity structures, social structure, interpersonal, promotion processes) and individual factors (psychological factors, human capital, managerial skills, social support). The focus has largely been on what constitutes career development, looking at it with respect to career success either objectively in terms of earnings, salary increments and position in organizations or subjectively which include criteria such as satisfaction, quality of life and self-fulfilment (Eby & Buch, 1995). Psychological factors, human capital and organizational support have also been found to relate to career development (Tharaneou, 1997)

Several trends in career research over the past couple of decades have focused on 'boundary-less careers', career transitions than on career stability and the factors that ensure this stability (Eby, Butts & Lockwood, 2003; Mitchell, Sablinski, Burton & Holtom, 2004). According to Baruch (2004) there is a major shift from research in careers that offer secured employment to careers that provide opportunities for development.

Most studies have shown that career resilience is positively related to age (Carson & Bedeian, 1994; Fu & Shaffer, 2001). Researchers such as London and Noe (1997) assumed that this might be due to employees' increasing experience, especially the experience required for adapting to change, hence the need to study human capital as it relates to career development in the present study. London and Mone (1987) imply that women might show lower career resilience. For example, they stated that women are more likely to underestimate their potential and to give lower appraisals of their performances than men do. However, Woodd (2000) argued that women might be higher in career resilience than men in the face of the turbulent workplace but generally, women's career patterns may better suit the requirements in today's work environment. For example,

women have more chances to shift from full-time to part-time jobs or from permanent to temporary work. Hence, they have more experiences with career interruption or disruption. In addition, women usually rate extrinsic factors (salary, promotion, job security) lower than men do. Therefore, women appear to be more adaptive and flexible in the less secure, non-linear upward workplace since they are more likely to have career breaks or quit from jobs to become full-time home makers. Fisher and Stafford (2000) found that there was no significant difference among African-American, Hispanic and Anglo-American students on career resilience. Noe, Noe and Bachhuber (1990) did not find a significant correlation between employees' managerial positions and career resilience.

Betz (2000) posits that resilience seems to denote self- efficacy which play a crucial role in career development in these turbulent times of constant organizational change (Maurer, 2001). The influence of self-efficacy on career-related behaviour as reported by Bandura, Barbaranelli, Caprara, and Pastorelli (2001) identified that children's self-efficacy was the essential determinant of their perceived occupational self-efficacy and preference of career choice. Blustein and Noumair (1996) also regard self and identity as two of the most important influential factors for career development from intra-personal experience, thus the need to assess the role career identity in career development.

Human capital is another important element in an individual that predicts career development and it refers to an individual's educational, personal and professional experiences that enhance their career attainment (Judge et al., 1995). This embodies individual's gender, age, educational level, number of hours worked, work centrality, skills, social capital, number of years of paid work, supervisory experience, career change as well as organization change (Wayne, Liden, Kraimer & Graf , 1999). Xiao (2001)

recognized three forms of human capital on employee salary, consisting of formal education, on-the-job training provided by employers, and adult education pursued by employees. Human capital theory suggests that education or training raises the productivity of workers by imparting useful knowledge and skills. Studies in some developing countries reveal that a mix of education and training is valuable for skill acquisition and there are various paths to skill development for a particular occupation (Adams, Middleton & Ziderman, 1992; Ziderman & Horn, 1995). Human capital has been also found to significantly predict career development (Judge et al., 1995).

Career development is the prerogative of individuals; however it is incumbent on organisations to provide a conducive and permissive organisational environment to enable employees develop their careers. Organizational support considerably influences the career development of employees in organizations (Nicholson, 2006; Schein & Schein 1978) and has been found to be related to career development (Judge et al., 1995; Ng, Eby, Sorensen & Feldman, 2005). London (1993) and Noe et al. (1990) also found that workers who believed they were empowered and who felt that their supervisors supported their career development yielded higher career resilience. London (1993) proposed that people who become resilient have been reinforced for exercising their judgment, and have received approval and admiration for taking challenges and acting independently. Some studies have found significant relationship between psychological factors and organizational support such as support from supervisor and colleagues (Fisher & Stafford, 2000; Kidd & Smewing, 2001), however, the results of hierarchical regression analysis indicated that there is no relationship between supervisor support and career resilience. Eby and Buch (1995), posits that subjective criteria such as satisfaction, quality of life and self-fulfilment are in some ways as important, if not more important than the objective career criteria.

Organisational support could be in the form of supervisor support, organizational resources, training and skill development opportunities and this have been found by Ng et al. (2005) to have a strong relationship with career development. Individuals may strive to develop their careers but may not be successful if organisational variables are not supportive hence the moderating role of organisational support would be assessed on the relationships that would be studied. Organisational support would be studied as a moderator of the relationships that would be observed. This would enable the researcher address “when” or “for whom” human capital or psychological factors most strongly predicts career development. Specifically, the researcher would observe the extent to which organisational support change the direction or strength of the relation between human capital and psychological factors and career development (Baron & Kenny, 1986).

Organizations are on the brink of a major cultural shift; contemporary organizations require flexibility, technical competence and mobility as well as high levels of commitment. The key issue is therefore to ascertain individual needs and expectations and to reconcile them with organizational expectations as they develop in their careers.

1.2 Statement of the Problem

Due to the continual changes in organization and the quest for upgrading there is a surging interest in career development. However there is still a dearth of empirical research on career development. The unit of analysis in career development research has most often focused on individuals in management positions (Millward & Flynn, 2005; Noe et al., 1990), this has helped in the understanding of how individuals achieve success in their careers. It is however important, to study those who are not successful yet or working their way towards success to be able to find out why they are sometimes unable to attain

success. There has also been too little focus on organizational factors in the study of career development, even though it has been found to have some form of influence on an individual's career (Schein & Schein, 1978). A better understanding of how organizational support influences the dynamics career development would enable organizations position themselves to embrace the development of their employees.

Largely qualitative and exploratory methods have usually been adopted in career development research, this has been very useful. It has enabled researchers derive meaning, describe and possibly explained career development in an open system where conditions continuously develop and interact with each other. However, the use qualitative design has made it difficult to study very large samples and thus made generalization to the larger population somewhat difficult. When large samples have been studied it has relied on existing data collected by the organizations under study or government agencies. These kind of secondary data are hardly devoid of biases since the organizations would like to present itself in good standing in order to attract the best market. It is therefore necessary to also use a quantitative approach to help clarify the relationships espoused and also to consider large samples so that generalization may be possible.

London and Mone (1987) postulated three aspects of career self concept that serve as motivation for individuals: identity, resilience and insight, however Arnold (1997) asserts that these variables may denote personal resources rather than motivation. Some studies conducted by (Grzeda & Prince, 1997; Millward & Flynn, 2005) found also that each of the constructs postulated by London and Mone (1987) relates in the expected way with career commitment being a better predictor of work outcomes than organizational commitment. Moreover, although psychological factors and human capital have been found to significantly relate to career development the strength of the relationships

established in the previous studies (Grzeda & Prince, 1997; Ng et al., 2005; Judge et al., 1995) have not been critically analyzed. The moderating role of organizational support has also not been adequately assessed to determine when and how it would influence the relationship between the predictors of career development. Even though several studies (Brutus, London & Martineau, 1999; Millward & Flynn, 2005; Rhoades, Eisenberger & Armeli, 2001) have found organizational support to be an essential component of career development in organizations, by it relating to career development, it is important that we ascertain the strength and direction of these relationships.

1.3 Rationale of the Study

The different components of an individual's repertoire of psychological career assets need to be well developed to enable the performance of hands-on career behaviour (Coetzee, 2008). If any one aspect is out of balance, none of the other career resource aspects can function optimally to enhance self-empowering career behaviour. A well developed career enables people to proactively engage in career self-management activities. This improves their job performance and experiences of subjective career development within a particular socio-cultural environment (Coetzee, 2008; Ebberwein, Krieshok, Ulven & Prosser, 2004; Van der Heijde & Van der Heijden, 2006).

A generally well-developed psychological career resources profile suggests careful, self-directed career behaviour that is motivated by the individual's career identity, career resilience and career self-efficacy (London, 1993). There is a paucity of research in the area of career development in Ghana regardless of the rapid changes that organizations are experiencing. It is therefore essential that the applicability of some of these models of career self development in this context are determined. It is also essential that career

development learning is best understood and that its outcomes are meeting the needs of the individual, organisations, schools and the society as a whole. There is also little research done based on the theory of career motivation and the few that have been done have shown inconsistencies and also no evidence that career motivation as measured by London and Mone (1987) would predict career success (Millward, 2005).

The present study will focus not only on the psychological factors and ascertain the relationships that have been established in the career development literature but would go further and explore the role that organizational support plays in either strengthening or weakening this relationship and make it more applicable in this context by using objective methods and both managerial and non managerial employees. Studies have not considered the moderating effects of organisational support although it has been found to influence career development. It is therefore relevant to study career development in relation to the broader context of changing organisations. The study will also explore the variable hard work as a human capital variable essential in the development of an individual's career, by finding out what it means to work hard among employees in Ghana and also to develop an objective measure for hard work.

According to Millward (2005) research seeks to explore internally generated facets of subjective careers that facilitate personal success, these include efficacy, resilience, self-insight and self-motivation. She recommends that these should be studied in context to externally verifiable criteria. Thus the present study will study both objective and subjective criteria of career development in tandem.

1.4 Research Questions

This study thus seeks to answer the following questions

1. Do psychological factors predict career development?
2. Does human capital influence career development?
3. Does organizational support influence the strength of the relationship between psychological factors and career development?
4. How does organizational support influence the strength of the relationship between human capital and career development among employees?

1.5 Aims and Objectives

The present study investigates the extent to which psychological factors and human capital would influence the career development of employees of an organisation, the Volta River Authority. The moderating role that organizational support plays in these relationships would also be ascertained. Specifically;

1. To determine whether psychological factors (self-efficacy, career resilience and career identity) would significantly predict employees' career development and the amount of variance that psychological factors would account for in career development. That is the extent to which the three factors will influence an employee's ability to develop in a chosen career.
2. To assess whether human capital (age, educational level, tenure and supervisory experience) would significantly predict career development and the amount of variance that human capital would account for in career development. That is the extent to which the four variables will influence an employee's career development, positively.

3. To examine whether organisational support would moderate the relationship between psychological factors (self-efficacy, career resilience, career identity) and career development. Specifically to determine if organisational support would strengthen the relationship between psychological factors and career development. And the direction in which organisational support would influence this relationship.
4. To determine whether organisational support would moderate the relationship between human capital (age, educational level, tenure and supervisory experience) and career development. Specifically to find the extent to which organisational support would strengthen the relationship between human capital and career development and the direction this relationship would go in the presence organisational support.

1.6 Relevance of Study

The study would contribute enormously toward the career development literature by broadening our understanding of the dynamics of career development. Psychological factors and human capital have been found to influence the career development of employees (Grzeda & Prince, 1997; Judge et al., 1995; Ng et al., 2005), however, how and when these relationships would be strengthened or weakened have not been fully explored. The study would therefore find out the extent to which organizational support would influence the relationships that would be established among the variables.

It would also educate organizations by providing an understanding of whether there is the need for organizations to support the career development of their employees. For employees the study would help them to understand the dynamics of their own career

development and how they would attain career development. This is by elucidating the factors that are essential in the career development of employees. For educators it would provide them with further knowledge on the factors that are essential in developing a career and provide adequate information concerning how these factors could be enhanced to attain optimal career development.

Finally, results of the study would also add on to existing literature on career development research and would help fill the gaps concerning career development among employees in Ghana.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter is in four sections. The first section examines some of the existing theories on career development. The second section of this chapter reviews available studies related to career development taking into consideration the relationships that have been found. The next section then summarises the hypotheses tested based on the literature reviewed. The last section briefly defines the terms that have been used in the study.

2.1 Theoretical Framework

Several theoretical frameworks spanning a number of disciplines such as sociology, economics and psychology have been used to understand the concept of career development. These can be classified broadly into six perspectives namely: differentialist, behaviourist, developmental, decision-making, organizational and structural (Millward, 2005).

2.1.1 Theory of Career Motivation

The theory of career motivation was proposed by London and Mone (1987), in which they identified three aspects of career self concept; identity – “who am I” with respect to my career, resilience – dealing with barriers and disruptions without giving up and self insight – knowing ones’ strengths, limitations, goals and values. They assert that these are the driving forces in managing one’s career. An employee needs to have a vivid understanding of what abilities and aptitudes one possesses, their interests, ambitions, assets and shortcomings in order to develop in their careers. A comprehensive knowledge of the requirements and conditions of success, the advantages and disadvantages career

development may have as well as opportunities, compensation and even prognosis in varied lines of work in order to develop in a chosen career. According to Parsons (1909), the theory of career motivation assumes that individuals and job traits can be harmonized, and if matched well they will be positively related with job success and satisfaction.

Career resilience is the ability to adapt to changing circumstances even when these circumstances are discouraging or disruptive (Millward, 2005). Being resilient keeps individuals moving forward, gives them the strength to overcome barriers such as job loss, job stress, transfers and poor performance. Griffin and Hesketh (2005) regard this ability to cope with stress and uncertainty during career transitions as an important characteristic of adaptive career behaviour. London (1983) hypothesized these sub domains of career resilience: willingness to take risks, working independently or cooperatively as needed, the ability to adapt to changing circumstances, self confidence, being comfortable with new and different people and being positive about job or organizational changes. Fourie and VanVuuren (1998) also assert that career resilient individuals have the ability to acclimatize to varying circumstances. Such individuals would most probably welcome job and organizational changes, and find working with new and different people interesting. Career resilient individuals are thus self-confident and willing to take career-related risks. Luthans (2002) defines resilience as a kind of positive psychological capacity to spring back from adversity, insecurity, disappointment, change and even increased responsibility.

In a research done by Grzeda and Prince (1997), they found that each construct within London and Mone (1987) model relates in the expected way to other variables. For example, resilience correlates with self-reported autonomy and perseverance, resilience seems to denote self-efficacy (Betz, 2000; Brutus, Ruderman, Ohlott & McCauley, 2000). Self-efficacy refers to an individual's belief in their ability to meet situational demands.

Self-efficacy theory was developed within the framework of the social learning theory (Bandura, 1977). It encompasses one's belief that one can perform an act or complete a task. Hence an individual would endeavour to sustain an adequate level of self-efficacy which is essential for psychological well-being. London (1983) describes this as a "belief in self". Feelings of self-efficacy are thus sustained if the environment promotes or does not hamper an individual's daily actions. In the organisational settings it thus implies that an employee's feeling of self-efficacy is sustained if there is organisational support, hence the need to find out if the relationship between career development would be moderated by organisational support.

Career decision-making in this century is ever more influenced by an individual's deep-seated values and career identity, as individuals are required to become proactive in the pursuit of their careers (du Toit & Coetzee, 2012). According to Erikson (1970), identity is essentially the ability to perceive oneself as whole. Looking at the concept of identity in the field of career research, career identity refers to how central an individual's career is to that individual's identity (London, 1983). London (1983) has proposed that career identity includes both work centrality and the desire for upward mobility. Schein and Schein, (1978) identified eight career anchors which influence the development of an individual's career. They consist of autonomy/independence, security/stability, lifestyle, technical/functional, general managerial competence, entrepreneurial creativity, service or dedication to a cause and pure challenge. These anchors represent what an individual deems to be important in his/her chosen career: 'who am I' in relation to my career. These enhance one's career development in many ways. An individual with high autonomy would seek to be free from organizational constraints in order to pursue professional or technical/functional competency. By contrast, people high on security tend to do what is

expected of them by their employers in order to preserve job security, an adequate income, and an unwavering future most probable in the form of good retirement benefits (du Toit & Coetzee, 2012). Blustein and Noumair (1996) regard self and identity as two of the most important influential factors for career development from an intra-personal experience.

Regardless of the success to some extent of the theory of career motivation in explaining career development, there have also been some criticisms. According to Millward (2005), there is no evidence that career motivation as measured by London and Mone (1987) would predict an individual's career development and as asserted by Arnold (1997), the constructs postulated by London and Mone (1987) may denote personal resources other than motivation. The fact that these psychological factors are motivating factors for an individual to pursue development in a chosen career does not necessarily imply that, that individual would develop in that career.

Savickas, (2002) asserts that this theory of career development lays little emphasis on factors that are outside the individual and out of the individual's control such as economic and organizational factors and thus admonishes that in studying career development there is the need to take into account contextual influences, hence the use of Super's theory and the organizational theories in this study. These theories look at career development in the wider context considering factors outside the individual.

2.1.2 Super's Theory (Developmental)

Donald Super (1990) and other theorists (Ginzberg, 1972; Ginzberg, Ginsberg, Axelrad & Herma, 1951) of career development identify the changes that people experience as they mature. Career choices according to Super (1990) are influenced by mental and physical abilities, socioeconomic factors, personal traits and the opportunities which are available

to a person. Individuals seek career satisfaction through work tasks in which they can express themselves, employ and develop their self-concepts and identities. Career maturity, a main idea in Super's theory, is apparent in the successful achievement of age and stage developmental tasks across the span of an individuals' working life. Super (1990) also observed the varied roles we play during our lifespan and the changes that people go through as they mature. He considered the relative importance that individuals give to these roles at different times in their lives and proposed a life stage developmental framework with the following stages: growth, exploration, establishment, maintenance (or management), and disengagement.

Self-concept is a fundamental factor in Super's model, comparable to that of London and Mone's theory of career motivation. Super believes that career self-concept develops as result of mental and physical growth, interpretation of work, identifying with working adults, as well as the general environment and experiences. As these experiences become wider in relation to consciousness of the world of work, the more sophisticated the career self-concept formed by the individual is (Zunker, 1994). According to Super (1990), self-concept comes as a result of interactions among a number of factors, including physical and mental growth, personal experiences, and environmental characteristics and stimulation.

In the past decade or so, formulations (Herr, 2001; Savickas, 2002) of Super's theory have emphasized strongly on the effects of the social context and the shared influence between person and environment. The study would therefore incorporate the role that the organisation plays in the employee's career development, bearing in mind Savickas (2002) constructivist view of Super's theory which postulates that, the process of career development is basically that of developing and putting into practice vocational self-

concepts in work roles. Self-concept is not a static entity but continues to develop as an individual experiences new things and advances through the developmental stages. Thus, as an employee matures and advances in age, and also gains experience on the job and in supervisory roles, one is expected to also develop with regards to one's career development as posited by Super (1990).

2.1.3 Organizational Theories

In studying career development in the organizational context, Schein and Schein, (1978) distinguish between 'structural' variables that are stable elements in the organization as well as 'process' variables such as socialization of the individual by the organization. Schein and Schein (1978) assert that movement is controlled by the boundaries in the organization. Thus, there is the possibility that individuals can be blocked from career progression by boundaries they perceive for example 'glass ceiling' in the case of female executives (Nicholson, 2006). They also focus on the role that individual's play in shaping the organizational career.

Sociologists and economists offer comprehensive explanations of how an individual's family background, culture, economic and social conditions and other external factors can influence one's identity, values, and overall career development. This approach to the understanding of career development implies that many people develop along the path of least resistance. They do this by taking whatever work openings that come their way (Millward 2005).

Perceived organizational support based on social exchange theories (Blau, 1964) and the norm of reciprocity (Gouldner, 1960) offer insight into the study of career development in the organizational context in the sense that employees need to know whether the

organization values their contributions and cares about them. According to Allen and Meyer, (1990) when employees feel supported by their employer, they can identify with the organization and be rest assured that their effort will be rewarded (career development) and they may feel obliged to reciprocate thus contributing to the development of organizational career.

Schein and Schein's theory has been criticized for overly focusing on the 'managerial career' and not considering the role the individual plays in shaping the organizational career (Millward, 2005). In order to address the concerns raised by critiques (Herr, 2001; Millward, 2005; Savickas, 2002), Patton and McMahon (2006) suggest the use of the systems theory of career development. The systems theory advocates the convergence of theories in career development. It has been estimated as a potential framework for dealing with many issues in human behaviour and for developing an integrated framework of human development. Patton and McMahon (2006) have expanded the utility of systems theory by applying it as a meta-theoretical framework for career theory and have also illustrated the applicability of systems theory to career development.

The Systems Theory Framework proposed by Patton and McMahon, (2006) is not intended to be a theory of career development; rather it is designed as an overarching framework in which the various concepts of career development described in the plethora of career theories can be conveniently placed and employed in theory and practice.

2.1.4 Behaviourist Perspective.

John D. Krumboltz developed a theory of career development based on the social learning theory. He posits that career decisions are the product of an uncountable number of learning experiences made possible by encounters with the people, institutions and events in a person's particular environment. From the behavioural perspective, individuals

develop their careers through learning, in other words people choose their careers based on what they have learned. One may choose a particular career path as result of the associations that one makes between the career and possible outcomes. Individuals tend to form generalisations about these careers from experiences and examples in their environment (Millward, 2005).

Krumboltz proposed that there are four main factors that influence career choice, these are genetic influences, environmental conditions and events, learning experiences and task approach skills. The consequences of these factors and most particularly learning experiences lead people to develop beliefs about the nature of careers and their role in life. These beliefs, whether realistic or not, influence career choices and work related behaviour. Learning experiences, especially observational learning stemming from significant role models for example parents, teachers and significant others have a powerful influence on career decisions, making some occupations more attractive than others. Positive modelling, reward and reinforcement would likely lead to the development of appropriate career planning skills and career behaviour.

Krumboltz (1983) argues that people develop beliefs about themselves and work through two kinds of learning experiences: instrumental and associative. Instrumental learning occurs when individuals develop preferences for particular activities when their achievements are rewarded. Associative learning occurs as individuals observe the behaviour of significant others and the ways they are rewarded and punished. Individuals form “self-observation generalizations” as a result of these experiences, and they learn “task-approach skills” such as decision- making skills and orientations toward work. Sequences of these kinds of learning experiences form the basis for career development.

This perspective highlights the basis of decisions and also points out the relevance of vicarious learning to the way in which careers are pursued in organisations. However, critiques highlight the mechanistic nature of this perspective of career development and its difficulty to understand (Millward, 2005), thus making individuals a passive participant in the career development process. Many career decisions are made without valid or reliable information with reference only to abstractions derived from observing others. In order to address the mechanistic nature of this perspective in explaining career development, the decision-making theory of career development focuses on the active role that individuals play in developing their careers.

2.1.5 Decision-making Perspective

Proponents of this theory of career development have argued that a career is more or less a series of decisions (Millward, 2005). This approach assumes that individuals can make rational and informed choices from a range of available choices. Individuals have to deal with various cognitive-developmental tasks which are progressively more difficult in nature in order to achieve a satisfactory career identity. These tasks may include movement from external to internal locus of control, self-examination, the ability to assume responsibility and to take on new roles.

However, this perspective has been criticised for its over-reliance on student samples, making it a student-centred theory without its consideration of its application to non-student samples. The composition of these samples and how it was chosen is not mentioned, thus making the empirical basis of the theory weak (Millward, 2005). According to Kidd (2004), the decisions that individuals make concerning their careers may not be always rational but may be fuelled by emotions. No explanation is also given as to how individuals develop from one decision-making stage to the other.

Attention to the decision- making theory of career development is of particular importance to the contemporary organisational world which is characterised by continual change and transition. The presence of a myriad of career options heightens the relevance of individual career choices and decisions. There is now a shift to decision making in a career self-management model which is applicable to both educational and occupational settings.

2.1.6 Structuralists Perspective

This theory was proposed by Roberts (1977) and also known as the theory of opportunity structures. When it comes to understanding career development in career literature the starting point is usually the individual or organisation without respect for the economic and political environment of decision making. However, this theory focuses on the broader context, taking into consideration the concept of occupational choice. It considers the fact that in career decisions' individuals can only take what is available. Job preferences argues Roberts (1977) is merely a matter of individual taste but are determined by a system of stratification and opportunity.

Aspirations can best be understood not as preliminaries to decisive occupational choices but as products of anticipatory socialisation. This is because the employment realities or creation of opportunities for personal growth and development is outside the control of the individual; hence career development should concentrate on practical employment growth and development. According to Tharanou (1997) a structural analysis can be applied to organisations as they evolve their own opportunity structures that delimit the career development possibilities of individuals. These opportunity structures however are in respect to what pertains in the society.

As with other developmental theories the structuralist theory is criticised that it overestimate the importance and scope of the individual's range of choice. It also encourages the adoption of unrealistic aims and fails to target resources to the areas of greatest need.

In the present study three main theories would be used to explain what influences an individual's career development; these are the theory of Career motivation, Super's theory and the Organizational theories. This is because the focus of the study is on the influence of psychological factors and human capital on career development which is best explained by these three theories. However, the structuralist, differentialists and decision-making perspectives focus more on career development as a decision making process which may not be relevant in the scope of the present study. These theories do not separately explain the concept of career development fully but are intertwined to bring out a comprehensive understanding of the concepts with similar ideas running through them.

2.2 Related Studies

2.2.1 Relationship between psychological factors (self-efficacy, career resilience, career identity) and career development

In a study of the big five personality traits, general mental ability and career success across the life span done by Judge, Higgins, Thorensen and Barrick (1999), they assessed the predictors of subjective (job satisfaction) and objective (income and occupational status) career success. They acquired data from the Intergenerational studies which is a set of three studies that followed its participants from childhood to retirement and upon analyses found conscientiousness to positively predict both intrinsic and extrinsic career success while neuroticism negatively predicted career success. Identity was also found to relate to career development.

Coetzee et al. (2010) in a quantitative survey conducted on a sample of 2997 participants who were predominantly managers and supervisors in the service industry empirically assessed the influence of career orientations on subjective work experiences. They used an adapted five-factor career orientations model of the Career Orientations Inventory and a 4-item global subjective work experiences scale. Conducting a structural equation modelling, they observed statistically significant causal relationships between the career orientations and subjective work experiences variables. They also found that individuals' career orientations had an influence on their general sense of life and career satisfaction, happiness and perceptions of work as a valuable activity. Organizations which are concerned with retaining their staff would therefore need to find a way of aligning individuals' career needs and motives with the goals and aspirations of the organization. This research thus confirms the need for assessing the inner career orientations, such as earlier experiences, attitudes and beliefs of employees, of which career identity forms part, as these orientations provide information regarding the motives and values that influences the decisions taken by individuals concerning their careers and subjective experiences they encounter in their working lives.

A cross-cultural comparison among Chinese and Dutch teachers was also done by Wang (2009) to study the impact of career identity on career development. The sample made up of 95 Chinese teachers and 71 Dutch teachers was surveyed to investigate the relationship between two types of career identity that is work centrality and the desire for upward mobility and two types of career development namely content-oriented career development and process-related career development. The results showed that work centrality led to content-oriented career development whereas the desire for upward mobility leads to process-related career development. However the relationship between

the desire for upward mobility and the process-related career development was found to vary across the two countries with the relationship between the desire for upward mobility and the process-related career development being reinforced in the Netherlands, but not in China. In this present study however career identity would be studied in its entirety, not separated into content- related and process- related in order to find whether it would be related to career development.

Antecedents of intent to change careers among psychologists were studied by Carless and Bernath (2007). It was aimed at examining the antecedents of intent to change careers among psychologists. Particularly, they examined the importance of these variables: a multi-dimensional model of career commitment (career planning, career resilience, and career identity), job satisfaction, and conscientiousness. A self-report questionnaire was used to acquire data from a sample of 437 Australian psychologists. The findings showed that career planning, career resilience, and job satisfaction were significant predictors of intent to change careers which to some degree depicts the development of one's career. Career identity and conscientiousness were not significant predictors.

Lounsbury, Loveland, Sundstrom, Gibson, Drost and Hamrick (2003) also examined personality traits in relation to career satisfaction and job satisfaction for 5,932 individuals in career transition. They found that personality traits were related to career satisfaction and job satisfaction in the total sample and 14 separate occupational groups. Regression analyses discovered three personality traits that were consistently associated to career satisfaction: emotional resilience, optimism, and work drive in the samples studied, this accounted for an average of 17% of the career satisfaction variance. Personality traits associated with career satisfaction includes conscientiousness, extraversion, openness, assertiveness, customer service orientation and human managerial relations orientation.

Lounsbury et al. (2003) discussed their findings in terms of Holland's general personal competence factor, Goleman's emotional intelligence, career adaptation, and the nomothetic span of personality constructs. In addition, the measurement of career stage also proposed ways in which developmental theories can be tailored to environmental changes.

Medina (2010) on the other hand investigated career course impact on adolescents' levels of self esteem, hope and career decision efficacy. Eighty high school students participated in this study with thirty- seven in a treatment group and forty-three in a control group. The study was aimed at finding out if activities executed in a career course have the potential to increase students' self-confidence in making decisions about their careers. The influence it will have on their hope about their future goals and their self-esteem. The Career Decision Self-Efficacy Scale, the Rosenberg Self-Esteem Scale, and the Hope scale was used, the study was a non-equivalent group, pre-test-post-test quasi-experimental design. The data was analyzed with descriptive statistics, chi-square test of homogeneity, and repeated measures ANOVA. Medina (2010) found main effect differences for career decision self-efficacy in the pre-test ($M = 94.91$, $SD = 12.10$) and post-test scores ($M = 100.56$, $SD = 13.18$), $F(1, 78) = 20.67$, $p < .001$, as well as significant interaction effects between the pre-test and post-tests and the treatment and control groups $F(1, 78) = 20.81$, $p < .001$, which indicates that there were differences based on the treatment and control groups in their confidence levels with making career decisions. There was no significant main effects or interactions found for hope and self-esteem. The results show that the career course influenced career decision self-efficacy in the treatment group, however, hope and self-esteem did not influence the career decision self-efficacy of either groups. The findings support the notion that Social Cognitive Career Theory is an effective model

which has components that can be translated to bolster students' confidence in making career decisions and raise hope and esteem levels (Medina, 2010).

2.2.2 Relationship between human capital (age, educational level, tenure and supervisory experience) and career development

Xiao (2001) studied the predictors of salary growth in China by doing an analysis of formal education, on-the-job training, and adult education. The study employed a survey data consisting of 1,023 employees collected in 1996. Xiao (2001) approximated the effects of three forms of human capital on employee salary, which are formal education, on-the-job training provided by employers and adult education pursued by employees. He used the hierarchical linear model in his analysis and found that pre-work formal education was positively associated with salary only at hiring. Employees' experience in changing technology as well as on-the-job training was positively associated with salary increases through improved proficiency. However, formal education was not positively associated with salary increment. He also found that manufacturing firms brought in more new technology than the service sector and provided more on-the-job training. This improved workers' performance and this reflected in salary increments.

Melamed (1995) espoused the barriers to Women's Career Success using 457 British employees. The factors studied included career choices, human capital, gender and structural determinants. This quantitative study by Melamed (1995), examined the gender gap in career development to assess explanations for the gender differences in salaries and managerial level. The relative importance of sex discrimination was compared to personality characteristics, human capital variables and demographic characteristics. Career choices, economic factors as well as structural features of the organisations were

also considered. The results revealed that the personality traits, human capital, structural and demographic features explained a large amount of variance in career development. However about 55% of the gender gap in career success was attributed to sex discrimination.

Boudreau, Boswell and Judge (2001) studied the influence of personality on managerial career development in the United States and Europe. They incorporated traits from the five-factor model of personality and several dimensions of extrinsic (remuneration, ascendancy, job level, employability) and intrinsic (job, life, and career satisfaction) career success. The model examined both the direct effects and the mediating effects of human capital and motivation. Results showed that extroversion related positively, and neuroticism negatively, to intrinsic career success across both the U.S. and the European samples. However, conscientiousness was mostly unrelated to extrinsic success and negatively related to intrinsic success in both samples, and agreeableness was negatively related to extrinsic success in both samples. There were differences between the European and U.S. samples, in that neuroticism associated with lower levels of extrinsic success for the U.S. executives but not the Europeans, and extroversion associated with higher levels of extrinsic success for the European executives but not the U.S. executives. For both samples, human capital and motivational variables associated predictably with career success, but seldom mediated the relationship between personality and career development.

In assessing the factors that influence career decision making in adolescents and adults Albion and Fogarty (2002) validated and compared the structure of the Career Decision-making Difficulties Questionnaire (CDDQ) developed by Gati, Krausz and Osipow (1996), across two age cohorts using Structural Equation Modelling. The sample used in

the first study consisted of one hundred and twenty-one upper high school students, 78 girls and 43 boys with a mean age 15.92 years while in the second study 127 adults, 86 females and 41 males with a mean age 33.44 years participated in it .The model supported the multidimensional structure of the CDDQ, and fitted both cohorts thus suggesting that a common pattern of difficulties was experienced by people of different ages, even though it was observed that older career deciders reported fewer difficulties with Internal Conflicts and Conflicts with Others than students did.

2.2.3 The moderating role of organizational support on the relationship between psychological factors (self-efficacy, career resilience and career identity) and career development

Soer (2009) examined the relationship between career identity and teacher career development. The role that individual teachers' self-construal and school climate have on this relationship was also studied. The sample was made up of 72 teachers from 10 primary and secondary schools. The teachers filled a questionnaire which assessed their career identity, self-construal and school climate. Ten team leaders also filled a questionnaire that assessed the teachers' professional development. Upon regression analyses it was found that there is a relationship between work centrality and task-related professional development and a relationship between desire of upward mobility and process-related professional development (Soer, 2009). In addition, the interaction effect showed that the individual self does have an influence on the relationship between the work centrality aspect of career identity and task-related career development, whereas, the collective self strengthens the impact of desire of upward mobility aspect of career identity

on process-related professional development. The school climate however had very little to do with the relationship between career identity and teacher professional development.

Fowke (1998) in his study of layoffs and survivors' career motivation identified the factors that determine the career motivation of employees who survive layoffs. He tested a model of career motivation for survivors and found that it supported Barling, LeDrew, and Kelloway (1997) model of layoff outcomes and London's (1993) concept of the stability of career motivation. Statistical analysis of the data collected revealed that the model provides a reasonably good fit to the data, on the other hand there was little support for the second model in which six exogenous variables (identification with the victims, perceived justice, perceived planning, continuance commitment, negative mood, and job insecurity) were related to career motivation through trust in management and affective commitment. Identification with the victims, perceived justice, and perceived planning were related to trust in management, conversely, trust in management did not significantly predict career motivation. Moreover, perceived planning and negative mood predicted affective commitment; through continuance commitment and job insecurity were not related to any of the variables under study.

Millward and Flynn (2005) also investigated the career self-concept and its role in self-managed organizational career. They demonstrated that the development of a career self-concept is crucial to successful career self management using a model of career development based on the importance of self-exploration, organizational support and encouragement. This model was tested on a sample of 269 managers who had taken part in a Corporate Management Development program. They found significantly higher levels of career identity, career focus and career self-efficacy in the successful managers and a fit between career requirements and organizational opportunities. The levels of career

satisfaction did not differ significantly between the groups of successful managers and the control group.

A study was conducted by Brutus et al. (1999), on the impact of 360-degree feedback on planning for career development. In this study they hypothesized that, there will be a negative relationship between performance ratings and the setting of development goals, self-other discrepancies would be related to choice of goals and that supervisor ratings would have a greater effect on the choice of developmental goals than ratings from peers and subordinates. Findings revealed that subordinate rating was most important in career goal setting as compared to ratings by supervisors and peers and the relationship was stronger for lower level managers.

2.2.4 The moderating role of organizational support on the relationship between human capital and career development

Judge et al. (1995) examined the degree to which external variables, human capital, psychological and organizational variables predicted executive career success. Results implied that human capital, demographic, motivational and organizational variables accounted for a significant variance in objective career success and career satisfaction.

Ng et al. (2005) did a meta-analysis of 4 categories of career development; human capital (number of hours worked, work centrality, job tenure, organization tenure, work experience, educational level, social capital, knowledge and skill), organizational sponsorship (supervisor support, organizational resources, training and skill development opportunities), socio-demographic status (gender, race and marital status) and stable individual differences (conscientiousness, extroversion, internal locus of control, proactivity, cognitive ability, neuroticism). They observed that human capital and socio-

demographic status displayed stronger relationships with objective career success while organizational sponsorship and a stable individual showed a stronger relationship with subjective career success; gender however moderated the relationships that were examined.

Lynn, Cao and Horn (1996) in a sample of 718 men and women accountants, observed the effect of career stage on turnover intention. They found that organizational commitment, reward satisfaction and job involvement had a positive relationship with professional tenure. Turnover intention negatively correlated with professional tenure for men. Lynn et al. (1996) reported no significant differences for women but asserts that number of years in professional work may not be a suitable measure of career stage for women due to their discontinuous career patterns. Thus, they suggest that multiple measures should be used to investigate different aspects of career progression, for example, the use of age to measure cohort effects, professional tenure to assess career stage across the boundaries of multiple firms and organizational tenure to assess career stage within the context of a particular organization.

The role of social capital in the relationship between human capital and career mobility: was assessed by Lin and Huang (2005), in which they examined the role that social capital plays in the relationship between human capital and career outcomes, with a particular focus on testing the mediation and moderation models. Using data compiled from 111 employees at three financial institutions in Taiwan, social capital was measured by employees based on network in-degree centrality and the development potential was measured by supervisors. The results showed that the effect of human capital on developmental potential was mediated by social capital. In addition, employees with firm-specific human capital, managerial positions and longer tenure, received higher potential

evaluations by their supervisors and also found that human capital should translate into social capital in order to get positive career outcomes. Lin and Huang, (2005) therefore assert that employees should make the best use of social capital transformed from human capital to obtain positive career outcomes in the organizations.

2.3 Statement of Hypotheses

- H1: Psychological factors (career resilience, self-efficacy, career identity) would significantly predict career development.
- H2: Human capital (age, educational level, tenure, supervisory experience) would significantly predict career development.
- H3: Organisational support would moderate the relationship between psychological factors (career resilience, self-efficacy, career identity) and career development. Specifically, they would strengthen positively the relationship between psychological factors and career development.
- H4: Organisational support would moderate the relationship between human capital (age, educational level, tenure, supervisory experience) and career development. Specifically, they would strengthen positively the relationship between human capital and career development.

Hypothesized model of the relationship between the variables

Independent variables

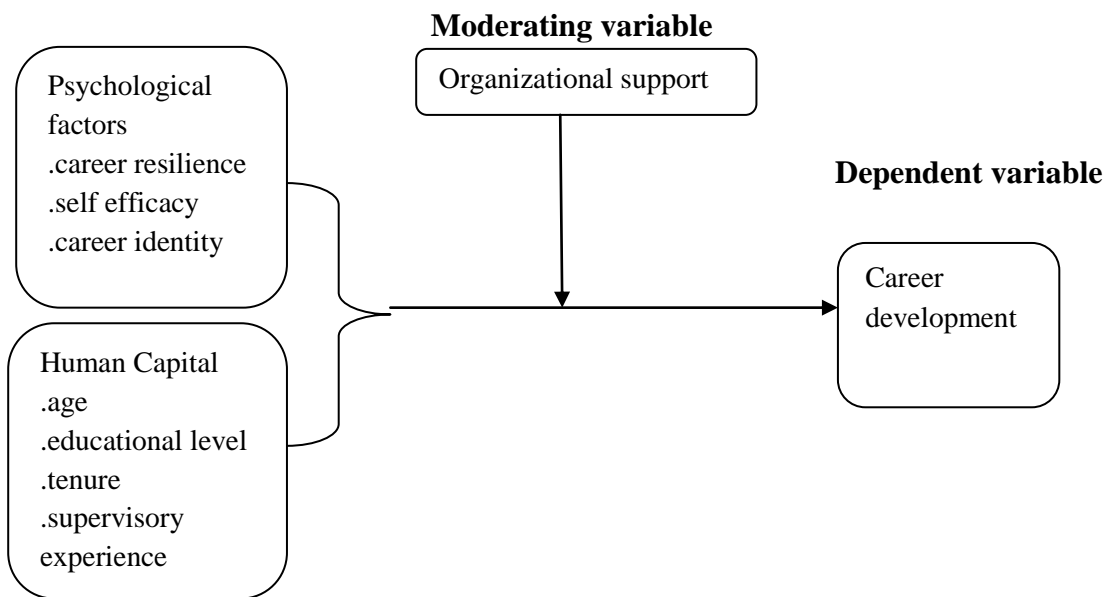


Figure 2.1: proposed conceptual model of the relationships between the independent and dependent variables in the study.

The proposed conceptual model indicates that both psychological factors (career resilience, self efficacy, career identity) human capital will be related to career development. Organizational support is proposed to moderate the relationship between psychological factors and career development and also human capital and career development.

2.4 Operational definition of terms

- ▶ **Human capital:** age, tenure, educational level, supervisory experience of participant (see Appendix 6).
- ▶ **Psychological factors:** an individual's score on the career resilience, career identity and self -efficacy scales (see Appendix 6).
- ▶ **Career development:** the subjective and objective career success as measured on the career development questionnaire (see Appendix 6).
- ▶ **Organizational support:** as measured on the survey of perceived organizational support scale (see Appendix 6).

CHAPTER THREE

METHODOLOGY

3.0 Introduction

The methodology section of this study gives an elaborate description of the organisation setting, sample size, research design and instruments used in conducting the present study. It also explains the data collection procedure, ethical considerations and data analysis. The various subsections of the methodology are elaborated below.

3.1 Population/Organisational Setting

The sample was drawn from the population of employees working at the Volta River Authority in Ghana. The Volta River Authority (VRA) was set up on the 26th day of April in the year 1961 under the Volta River Development Act, Act 46 of the Republic of Ghana. VRA's core business purpose was to generate and supply electrical energy for industrial, commercial and domestic use in Ghana. VRA has substations at Akosombo, Kpong/ Akuse, Aboadze and Tema with its head office situated in Accra. The Northern Electricity Department (NED) is a subsidiary company and it also has other non-power departments which are operated as Strategic Business Units, to enhance return on investment (Volta River Authority, 2002).

In 2005, following an improvement to the VRA Act in the context of the Ghana Government Power Sector Reforms, the VRA's mandate was modified and has now been limited to a large extent to the generation of electricity. The transmission task has been separated and National Grid Company (GRIDCo) has been designated to perform these functions (Volta River Authority, 2002).

3.2 Participants

Two hundred and fifty participants were randomly sampled for the study, questionnaires were administered to all the participants however, 194 participants responded giving a response rate of 77.6%. This sample size was based on the rule of thumb suggested by Tabachnick and Fidell (1996) that the sample size, N , should be equal or greater than $50 + 8p$, where p is the number of predicted variables (cited in Dunlap, Xin & Myers, 2004). The study considered 3 predictors, therefore according to rule of thumb, the sample size should be greater than 74 hence the 250 which is greater than 74, therefore the sample size of 250 is deemed appropriate. Nine departments of the Volta River Authority in four locations namely Akosombo, Accra, Tema and Aboadze were selected randomly and employees conveniently sampled from each of these departments. The departments were the Hydroelectricity Power Generation department in Akosombo, Thermal Electricity Power Generation department at Aboadze and Procurement department in Tema. In Accra, the departments included the Human Resource department, Real Estate the Audit department and Integrated Generation Information System at the Heritage Towers. Also, General Services department and Planning and Business Development department at the Ridge Towers in Accra.

The one hundred and ninety-four (194) participants sampled for the study had a mean age 34.14 years. They consisted of 117 (60.3%) males and 77 (39.7%) females. One hundred and thirty-two (68.0%) of them were in supervisory roles with the other 62 (32.0%) in non-supervisory roles. The sample also had their highest educational level at seven different levels the Doctorate level had 9 participants (4.6%), the Masters level had 36 participants (18.6%), first degree level had 109 participants making 56.2%, GCE 'A' level had 8 participants (4.1%) and GCE 'O' level had 10 participants (5.2%). There were 19

participants (9.8%) at the HND level and other levels made up 1.5% (3 participants).

These demographic characteristics are presented in Table 3.1.

Table 3.1

Demographic Characteristics

Characteristics	Frequency			Percentage		
	Males	Females	Total	Males	Females	Total
Position in organisations	117	77	194	60.3	39.7	100
Supervisory role	92	40	132	47.4	20.6	68.0
Non-supervisory role	25	37	62	12.9	19.1	32.0
Educational level	117	77	194	60.3	39.7	100
Doctorate	6	3	9	3.1	1.5	4.6
Masters	24	12	36	12.4	6.2	18.6
First degree	64	45	109	33.0	23.2	56.2
GCE 'A' Level	4	4	8	2.1	2.1	4.1
GCE 'O' Level	6	4	10	3.1	2.1	5.2
HND	12	7	19	6.2	3.6	9.8
Others	1	2	3	.5	1.0	1.5

3.3 Sampling Techniques

The purposive and convenience sampling techniques were employed, due to the basis of inclusion and the nature of the activities of the target participants, so as to obtain the required sample and in order to cause minimum inconvenience to the participants and the organisation. The inclusion criterion was that employees had been currently working continuously with the organization for at least a year.

3.4 Design

The study employed a Correlational / Multi Linear Regression cross-sectional survey. The study adopted also the 'multiple linear regression' as a general design strategy, following

the assertion Punch (2005) made that, it is basically a statistical technique for analysis of data but could however be considered as a design strategy thus ‘regression analysis design’. It is used in this study since the focus is on the dependent variable and the relationship it has with a number of independent variables.

The independent variables in this study are psychological factors (career resilience, career identity, career efficacy) and human capital (age, tenure, position, educational level and training). The moderating variable is the organisational support the participants perceive with the dependent variable being career development.

3.5 Instruments/Measures

The main instrument for data collection was a standardized questionnaire. The questionnaire was divided into three main sections. The first section assessed the demographic characteristics of the participants which included their age, gender, position in organisation, tenure, training and educational level, measuring the human capital of participants.

The second section measured the psychological variables which included career self-efficacy, career resilience and career identity, perceived organisational support and career development.

A modified version of Jones (1986) Efficacy Scale was used to measure the self-efficacy of participants. The questionnaire contains 5-items measured on a six point Likert scale ranging from ‘strongly disagree’ (1) to ‘strongly agree’ (6). Some items in the questionnaire include: “I can handle a more challenging job than the one I’m doing”, “I feel confident that my skills and abilities equal or exceed those of my colleagues” and “I believe that I’m fully qualified for the job I’m doing”. The 5-item modification of the

scale by Jex and Bliese (1999) was used, which has an alpha of 0.70 whereas the reliability of the original scale by Jones was reported to be 0.71. High scores indicate high perceived self efficacy

The career resilience of the participants was measured using the Career resilience scale adapted by Lui (2003) from London (1993) and Noe et al. (1990). The scale is measured on a 5-point Likert scale (*1=strongly disagree to 5=strongly agree*) with a Cronbach alpha of .86. The scale has 28 items, and examples of items on the career identity scale are “I can handle any work problem that come my way” and “I am able to adapt to changing circumstances.”

The career identity of the participants was also measured using the Career identity scale designed by London (1983). The scale is measured on a 4-point Likert scale (*1= Very slight extent to 4= Very large extent*), having a Cronbach alpha of .92. The scale has 26 items, and examples of items on the career identity scale are “Do you have a specific career goal?” and “Have you changed or revised your career goals based on new information you have received regarding yourself or your situation?”

Next, the perceived organizational support of the employees was measured using the Survey of Perceived Organizational Support developed by Rhoades and Eisenberger, (2002). The scale consisted of eight items measured on a 6-point Likert-scale (0 = strongly disagree to 6 = strongly agree). An item of the scale is “The organization values my contribution to its well-being”. The alpha was found to be .86.

After this, the career development of the employees was measured with an adapted version of the five item scale developed by Greenhaus, Parasuraman and Wormley (1990). There are six items on the scale, measured on a 7-point Likert-scale (1 = strongly disagree to 7 =

strongly agree), with a Cronbach's alpha of .92. An item of the scale includes "I am satisfied with progress I have made toward meeting my goals for advancement".

3.6 Scoring

The Jones (1986) Efficacy Scale used to measure the self-efficacy of participants was scored by summing up the responses of the participants, on all the five items. The responses ranged from 'strongly disagree' (1) to 'strongly agree' (6). None of the items were reversed scored; hence a participant could have a score of 5-30. High scores indicate high perceived self- efficacy and low scores indicate low perceived self-efficacy.

The Career resilience scale was scored by summing up the responses of participants on the 28 items of the scale with responses ranging from 1=strongly disagree to 5=strongly agree. None of the items were reversed scored; hence a participant could have a score of 28-140. High scores indicate high career resilience whereas low scores indicate low career resilience.

The career identity of the participants which was measured using the Career identity scale was scored by summing up the responses of the participants for all the 26 items. The items ranged from 1= Very slight extent to 4= Very large extent. None of the items was reversed scored hence a participant could have a score ranging from 26-104. High scores indicate high career identity whereas low scores indicate low career identity.

The perceived organizational support of the employees was measured using the Survey of Perceived Organizational support scale consisting of eight items. Responses ranged from 0 = strongly disagree to 6 = strongly agree. Four of the items were reversed scored; they were items 2, 3, 5 and 7. A participant can therefore score from between 0 to 48. High scores indicate high perceived organisational support whereas low scores indicate low perceived organisational support.

The career development questionnaire was scored by summing up all the responses of the participants on the six items of the scale. The responses ranged from 1 = strongly disagree to 7 = strongly agree. None of the items were reversed scored; hence a participant could have a score of 6-42. High scores indicate high career development whereas low scores indicate low career development.

3.7 Procedure

The procedure employed in this present study was in two parts: a pilot study, which was then followed by a main study. The specific procedure followed in conducting the study is as follows: letters of introduction were taken from the Psychology Department and sent to the human resource departments of the Ghana Grid Company (GRIDco) and the Volta River Authority (VRA) (see Appendix 2 and 3). The letter introduced the researcher to the organisation and also sought permission for the study to be conducted there. When permission was granted, dates were scheduled for data collection, being two weeks for the pilot and about four weeks for the main study. The researcher went further to establish contact with the training and development officers of the human resource departments of these two organisations. Details of the pilot and main study follow.

3.7.1 Pilot study

The study was preceded by a pilot study to ascertain the psychometric properties of the scale and to adapt it to the Ghanaian setting. It was necessary to find the psychometric properties of the questionnaire to be used in the study because five different questionnaires have been adapted and combined for use in the present study. The aim of the pilot study therefore was to test the reliability of the various measures and their suitability on the Ghanaian sample. Forty questionnaires were given out to employees at the Ghana Grid

Company and filled questionnaires were collected by the researcher over a period of two weeks. However the researcher received 25 filled questionnaires, hence response rate was 62.5%. This meant that a little over half of the questionnaires sent out were filled and returned to the researcher.

After Cronbach's alpha was calculated for the scales, the career resilience scale yielded an alpha value of .86, the self-efficacy scale was .70, the career identity scale was .92, the survey of perceived organisational support scale recorded an alpha value of .86 and the career development scale questionnaire yielded an alpha value of .92. This indicated that the scales were reliable hence could be used in this study.

3.7.2 Main study

The researcher sought ethical clearance from Noguchi Memorial Institute for medical research (Institutional Review Board, IRB) (see Appendix 1). Copies of the clearance certificate were sent to the Ghana Grid Company and also to Volta River Authority (see Appendix 2 and 3) to assure the organisations that the researcher would follow due ethical procedures. A consent form promising participants complete confidentiality and also seeking for their consent was attached to the questionnaires (see Appendix 5).

Two hundred and fifty questionnaires were sent by the researcher to Volta River Authority head office and they were dispatched by the human resource officer to the interested departments, under the directive of the Director of Human Resources. This was to aid the researcher reach out effectively to the employees. It took the researcher approximately one month to go to the various departments to collect filled questionnaires. The researcher received 194 filled questionnaires; corresponding to a response rate of 77.6. This means that out of the 250 questionnaires given out, only 56 were not retrieved. The researcher

provided a contact number for participants to reach her for questions and/or clarifications when necessary.

3.8 Ethical Considerations

In undertaking this research, the ethical principles of the American Psychological Association was adopted. Silverman (2006) posits, that it is essential for a researcher to consider relevant ethical issues at each stage of the research process. The ethics code (APA, 2002) outlines a set of standards and principles upon which psychologists are encouraged to build their professional and research work. As part of this organizational research, these standards were considered right from the planning stage of this research.

Ethical clearance was sought from the Ethical Committee of Noguchi Memorial Institute for Medical Research in Ghana. Participants in the study were provided with information that gave them a fair idea about the aims and objectives of the research and were made to sign a consent form (see Appendix 5). The researcher ensured a high sense of confidentiality and anonymity. This was done by making sure the data collected was managed in such a way that the identities of the respondents were protected at all times and that no information will be directly traced or associated with any individual participant. They were not required to provide a name on any of the questionnaires and any information collected was protected by ensuring that data was collected anonymously. They were assured that the information that they will provide would be used only for the purpose of research and there was no wrong or right answer.

Due to the number of questions that participants were required to answer, they were allowed to take intermittent breaks to relax when necessary in order to minimize fatigue. Participation in this research was completely voluntary. Participants had the right to say no and they could change their minds at any time and withdraw, choose not to answer specific questions or to stop participating at any time. They were given pens to use to fill

the questionnaires, which they kept afterwards. After participants completed filling the questionnaires, they were thanked for their time and participation.

CHAPTER FOUR

RESULTS

4.1 Introduction

The study examined the influence of psychological factors and human capital on career development at Volta River Authority: The moderating role of organisational support. Four hypotheses were formulated based on the objectives set. The first objective was to determine whether psychological factors (self-efficacy, career resilience and career identity) would significantly predict career development. The second objective was to assess whether human capital (age, educational level, tenure, supervisory experience) would significantly predict career development. The third objective was to determine whether organisational support would moderate the relationship between psychological factors (self-efficacy, career resilience, and career identity) and career development and the fourth to determine whether organisational support would moderate the relationship between human capital (age, educational level, tenure, supervisory experience) and career development.

The sixteenth version of the Statistical Product and Service Solutions (SPSS) software was used in analysing the data employing the use of Multiple Linear Regression. The chapter is divided into two sections: preliminary analysis of all variables studied and results of inferential statistics to test hypotheses

4.2 Preliminary Analysis

The preliminary analysis done were descriptive statistical analysis, factor and reliability analysis of all the scales used analysis of the Normal Distribution of the variables and

Pearson Correlation analysis among the key study variables. The normality of the data obtained for the study was verified by assessing the skewness and kurtosis (see Table 4.1).

4.2.1 Analysis of the normal distribution of variables

A test of normality was also done on the scores obtained from the participants in the study by assessing the skewness and kurtosis of the scores obtained for the variables under study as indicated in Table 4.5. This involved ascertaining that the data for the study was normally distributed; this is because according to Pallart (2001) it is essential that the dependent variable is normally distributed. Since the scales for the study were normally distributed, appropriate parametric statistical analysis could be utilised in the study.

4.2.2 Reliability Analysis of the Scales

The coefficient of internal consistency (Cronbach's alpha) was computed to establish reliability of the measures used in the study. This ensured the researcher's confidence in the internal and external consistency of the scales. All the scales used in this analysis yielded acceptable results of Cronbach's alpha coefficients with alpha values ranging from .68 to .92 (see Table 4.1).

4.2.3 Descriptive Statistics

The next step involved the computation of descriptive statistics of the data, which comprised summarizing the raw data obtained by finding means and standard deviations. Results from this analysis can be obtained from Table 4.1

Table 4.1

Descriptive Statistics and reliability coefficients of Continuous Variables in the Study.

VARIABLE	Mean	Std. Deviation	Skewness	Kurtosis	Alpha
Age	34.14	9.38	.933	-.039	
Tenure	6.73	7.22	.628	.412	
Self- efficacy scale	4.65	1.25	-.834	.147	.680
Career resilience scale	114.72	13.33	-.969	.962	.855
Career identity scale	77.57	11.30	-.071	-.267	.923
Survey of perceived organisational support scale	33.90	8.27	-.030	-.028	.860
Career development questionnaire	30.50	6.29	-.438	.473	.917

(N=194)

From the Table 4.1, for instance, the average age of the participants in the study was 34.14 with a standard deviation of 9.38. For tenure, the participants had been working with the Volta River Authority for an average of 6.73 years with a standard deviation of 7.22. The average score of the sample on the self efficacy scale was 4.65, and the scores had a standard deviation of 1.28. Career resilience scores of the sample had an average of 114.72 with a standard deviation of 13.33; career identity scores also had an average of 77.57 and standard deviation of 11.30. On the survey of perceived organisational support scale participants had an average score of 33.90 and a standard deviation of 8.27 whereas on the career development questionnaire they had an average score of 30.50 and a standard deviation of 6.29. The reliability coefficients of the scales were strong ranging from .68 to .92.

4.2.4 Factor analysis of the scales

As part of preliminary analysis, the researcher did a principal component factor analysis of the items in the scales. This allowed the researcher to determine if the items included as part of a scale produced factor loadings that indicated that they can be considered to be part of a single construct (Field, 2005). This was done to ensure that the scales have construct validity. This will ensure that they will measure what they are intended to measure (Tabachnick & Fidell, 2001).

The influence of the factors on each construct was measured by means of their factor loadings; the value of each of the factor loadings indicates the strength of the influence of the factor on the variable. For a factor loading to make a significant contribution to the variable of study it had to be greater than .3 (Field, 2005). Factors of the items on the scales loaded satisfactorily upon the principal component analysis.

Tables 4.2 to 4.6 show the result of the principal component analysis of the items of the scales used in the study.

Self-efficacy**Table 4.2:**

Factor loadings based on a principal component analysis of the five items on the self-efficacy scale (N=194).

No.	Item	Factor loading
1.	I can handle a more challenging job than the one I'm doing	.877
2.	I feel confident that my skills and abilities equal or exceed those of my colleagues.	.873
3.	My job is well within the scope of my abilities.	.851
4.	Personal qualities that distinguish me favourably from others are easy to display.	.815
5.	I believe that I'm fully qualified for the job I'm doing.	.812

The five items on the self- efficacy scale were subjected to principal components analysis (PCA) using SPSS. Prior to performing PCA, the suitability of the data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of .3 and above. A Kaiser-Meyer-Olkin (KMO) value of .85, exceeding recommended value of .6 (Kaiser, 1974) and Bartlett's Test of Sphericity ($p=.000$) was also significant (Bartlett's, 1954) thus supporting the factorability of the correlation matrix. Principal components analysis revealed the presence of components with eigenvalues exceeding 1, explaining for a cumulative variance of 72%. The coefficients of the items ranged from .81 to .88, with the factor loadings making significant contributions to the variable; a varimax method of rotation was employed which revealed the presence of a

simple structure of the factor loadings of the items. The interpretation was consistent with previous research done using the scales (Jones, 1986).

Career resilience scale

Table 4.3

Factor loadings based on a principal component analysis of the twenty-eight items on the career resilience scale (N=194).

No.	Item	Factor loading
1.	I have actively sought better assignments in my current or past jobs.	.770
2.	I explore trends in my field/industry and have identified various changes that are occurring.	.731
3.	I have sought opportunities to take on new responsibilities in my work	.660
4.	I have a network of people in and outside my field that can help my career	.647
5.	I can identify three important accomplishments from my current/last job	.632
6.	Regularly, I try to identify the future direction of my field by making personal contacts, reading or attending professional meetings.	.629
7.	I'm more comfortable than ever with the constantly changing world of work	.615
8.	The skills and abilities that I need to be employable are clear to me	.610
9.	If I identify what I need to learn, I will actively seek the learning opportunity	.580
10.	I like to read or attend conferences and workshops to learn new knowledge or skills	.560
11.	I have sought opportunities to work with others or contribute to work teams.	.551
12.	My career goals are clear and I have a good idea of where I'm heading	.484
13.	I look for opportunities to interact with influential people	.479

No.	Item	Factor loading
14.	I have adequate computer knowledge/skills to do my job	.476
15.	My skills have been upgraded to keep pace with the current technique	.436
17.	I look forward to working with new and different people	.663
18.	I welcome job and organizational changes	.647
19.	I make and maintain friendships with people in different departments	.640
20.	I will take the time to do the best possible job on a task	.607
21.	I can handle any work problem that comes my way	.590
22.	I have outlined ways of accomplishing jobs without waiting for my boss	.579
23.	I have made suggestions to others even though they may disagree	.569
24.	I will design better ways of doing my work	.545
25.	I am willing to take risks (actions with uncertain outcome)	.520
26.	I accept compliments rather than discount them	.520
27.	I believe other people when they tell me that I have done a good job	.478
28.	I will evaluate my job performance against personal standards rather than comparing it with what others do	.410

The twenty-eight items on the career resilience scale were subjected to principal components analysis (PCA) using SPSS. Prior to performing PCA, the suitability of the data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of .3 and above. A Kaiser-Meyer-Olkin (KMO) value of .88, exceeding recommended value of .6 (Kaiser, 1974) and Bartlett's Test of Sphericity

($p=.000$) was also significant (Bartlett's, 1954) thus supporting the factorability of the correlation matrix.

Principal components analysis revealed the presence of components with eigenvalues exceeding 1, explaining for a cumulative variance of 62%. The coefficients of the items ranged from .77 to .41, with the factor loadings making significant contributions to the variable; a varimax method of rotation was employed which revealed the presence of a somewhat simple structure of the factor loadings of the items. The interpretation was consistent with previous research done using the scales (Lui , 2003).

Career identity scale

Table 4.4

Factor loadings based on a principal component analysis of the twenty-six items on the career identity scale (N=194).

No.	Item	Factor loading
1.	Have you asked your boss to discuss your specific strengths and weaknesses?	.711
2.	Have you taken the initiative to discuss you career goals with your boss?	.708
3.	Do you reward yourself when you complete a project?	.677
4.	Do you look for opportunities to interact with influential people in your organization?	.639
5.	Do you set difficult but not impossible work goals?	.618
6.	Do you ask co-workers you respect for feedback on your performance?	.596
7.	Have you changed or revised your career goals based on new information you have received regarding yourself or your situation?	.591
8.	Have you sought job assignments that will help you obtain your career goal?	.553
9.	Have you joined professional organizations related to your career goal?	.475
10.	Have you taken courses toward a job-related degree?	.418
11.	Have you accepted a job assignment for which you have little to no expertise?	.413
12.	Do you spend your free time on activities that will help you do your job?	.411
13.	Do you believe other people when they tell you that you have done a good job?	.711
14.	Have you outlined ways of accomplishing jobs without having to wait for your boss?	.645
15.	Have you made and maintained friendships with people in different departments	.634

No.	Item	Factor loading
16.	Have you kept current on company affairs?	.595
17.	Do you take the time to do the best possible job on a task?	.594
18.	Do you stay abreast of developments in your line of work?	.577
19.	Do you have a specific plan for achieving your career goal?	.548
20.	Have you made suggestions to others even though they may disagree?	.548
21.	Do you accept compliments rather than discount them?	.537
22.	Have you designed better ways of doing your work?	.504
23.	Have you evaluated your job performance against personal standards rather than comparing it with what others do?	.457
24.	Do you feel you are aware of your skill strengths and weaknesses?	.443
25.	Do you have a specific career goal?	.440
26.	Do you help co-workers with projects?	.354

The twenty-six items, on the career identity scale were subjected to principal components analysis (PCA) using SPSS. Prior to performing PCA the suitability of the data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of .3 and above. A Kaiser-Meyer-Olkin (KMO) value of .82, exceeding recommended value of .6 (Kaiser, 1974) and Bartlett's Test of Sphericity ($p=.000$) was also significant (Bartlett's, 1954) thus supporting the factorability of the correlation matrix. Principal components analysis revealed the presence of components with eigenvalues exceeding 1, explaining for a cumulative variance of 64%. The coefficients of the items ranged from .71 to .35, with the factor loadings making significant contributions to the variable; a varimax method of rotation was employed which revealed the presence of a simple structure of the factor loadings of the items. The interpretation was consistent with previous research done using the scales (London, 1983).

Survey of perceived organisational support scale

Table 4.5

Factor loadings based on a principal component analysis of the eight items on the survey of perceived organisational support scale (N=194).

No	Item	Factor loading
1.	The organization shows very little concern for me	.775
2.	The organization fails to appreciate any extra effort from me.	.737
3.	Even if I did the best job possible, the organization would fail to notice.	.716
4.	The organization would ignore any complaint from me.	.714
5.	The organization values my contribution to its well-being.	.642
6.	The organization takes pride in my accomplishments at work.	.491
7.	The organization really cares about my well-being.	.421
8.	The organization cares about my general satisfaction at work.	.504

The eight items on the survey of perceived organisational support scale were subjected to principal components analysis (PCA) using SPSS. Prior to performing PCA, the suitability of the data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of .3 and above. A Kaiser-Meyer-Olkin (KMO) value of .77, exceeding recommended value of .6 (Kaiser, 1974) and Bartlett's Test of Sphericity ($p=.000$) was also significant (Bartlett's, 1954) thus supporting the factorability of the correlation matrix.

Principal components analysis revealed the presence of components with eigenvalues exceeding 1, explaining for a cumulative variance of 62%. The coefficients of the items ranged from .77 to .50, with the factor loadings making significant contributions to the variable; the varimax method of rotation was used which exposed the presence of a simple

structure of the factor loadings of the items. The interpretation was similar with previous research done using the scales (University of Delaware, 1984)

Career development questionnaire

Table 4.6

Factor loadings based on a principal component analysis of the six items on the career development questionnaire (N=194).

No	Item	Factor loading
1.	I am satisfied with the progress I have made toward meeting my goals for advancement	.867
2.	I am satisfied with the progress I have made toward meeting my goals for income	.840
3.	I am satisfied with the progress I have made toward meeting my overall career goals	.820
4.	I am satisfied with the success I have achieved in my career	.741
5.	I am satisfied with the progress I have made toward meeting my goals for the development of new skills.	.733
6.	I am satisfied that I have a prestigious job and attained a high status.	.604

The six items on the career development questionnaire were subjected to principal components analysis (PCA) using SPSS. Prior to performing PCA, the suitability of the data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of .3 and above. A Kaiser-Meyer-Olkin (KMO) value of .76, exceeding recommended value of .6 (Kaiser, 1974) and Bartlett's Test of Sphericity ($p=.000$) was also significant (Bartlett's, 1954), thus supporting the factorability of the correlation matrix.

Principal components analysis revealed the presence of components with eigenvalues exceeding 1, explaining for a cumulative variance of 60%. The coefficients of the items ranged from .87 to .60, with the factor loadings making significant contributions to the

variable; the varimax method of rotation was used which showed the presence of a simple structure of the factor loadings of the items. The interpretation was similar with previous research done using the scales (Greenhaus, Parasuraman & Wormley, 1990).

The factor loadings of all the five scales used in the study all made significant contributions to their respective constructs, thus having construct validity. This means that the scales measured what they intended to measure and the interpretation would therefore be sound.

4.2.5 Correlation matrix of all the independent and the dependent variables.

The final step in the preliminary analysis was the computation of Pearson Product-Moment Correlations among the key variables. This was done to explore the relationship between the variables. The summary of this outcome is presented in Table 4.7.

Table 4.7

Pearson's Product Moment Correlation for study variables

	1	2	3	4	5	6	7	8	9
1 Age	–	–	–	–	–	–	–	–	–
2 Educational level	.074	–	–	–	–	–	–	–	–
3 Tenure	.818**	.090	–	–	–	–	–	–	–
4 Supervisory experience	.625**	.144*	.728**	–	–	–	–	–	–
5 Self efficacy	.116	.034	.108	.117	–	–	–	–	–
6 Career resilience	.117	.039	.029	.079	.147*	–	–	–	–
7 Career identity	.037	.122	.013	.091	.085*	.322**	–	–	–
8 Organisational support	.083	.133	.059	.036	.058	.156*	.184*	–	–
9 Career development	.065	.106	.096	.216**	.049	.218**	.492**	.178*	–

Note: N=194, * = p<.05, ** = p<.01 (one-tailed).

Findings from Table 4.4 indicate that among the psychological variables (career resilience, self-efficacy, career identity) there is no significant correlation between self-efficacy and career development [$r(192) = .049$, $p = .001$ (one-tailed)]. There was however a significant positive correlation between career resilience and career development [$r(192) = .218$, $p = .001$ (one-tailed)] and career identity and career development [$r(192) = .492$, $p = .001$ (one-tailed)]. Findings from Table 4.4 also indicate that among the human capital variables (age, educational level, tenure, supervisory experience), there is no significant correlation between age and career development [$r(192) = .065$, $p = .154$ (one-tailed)], educational level and career development [$r(192) = .106$, $p = .070$ (one-tailed)] and also between tenure and career development [$r(192) = .096$, $p = .092$ (one-tailed)]. There was however a significant positive correlation between supervisory experience and career development [$r(192) = .216$, $p = .001$ (one-tailed)].

The interrelationships between variables from Table 4.4 indicate that career resilience related positively with self-efficacy ($r = .15$, $p = .021$), and career identity ($r = .32$, $p = .000$) indicating that the higher an employee's career resilience the higher the self-efficacy and career identity. Among the human capital variables, a significant correlation was established between age and supervisory experience ($r = .625$, $p = .000$) and tenure and supervisory experience ($r = .728$, $p = .000$). This indicates that the older the employee, the higher the supervisory experience and also the longer the tenure of work, the higher the supervisory experience. Organisational support was also found to have a significant positive relationship with career development ($r = .178$, $p = .006$). Other relationships are observed in the hypotheses stated.

4.3 Hypothesis testing

Four main hypotheses were formulated based on the above objectives. Inferential statistics like the Pearson Product-Moment Correlation Coefficient (Pearson r) and Hierarchical Multiple Regression was used. The sixteenth version of the Statistical Product and Service Solutions (SPSS) software was used in analysing the data.

Hypotheses One

The first hypothesis stated that Psychological factors (career resilience, self-efficacy, career identity) would significantly predict career development. The multiple regression analysis was used to analyse this hypothesis and the result is presented in Table 4.8.

Table 4.8

Standard Multiple Regression Analysis for Psychological Factors as a predictor of Career Development.

		B	SEB	β	T	P
Step1	Constant	6.60	3.9		1.68	.095
	Career resilience	.03	.03	.07	.99	.323
	Career identity	.26	.04	.47	7.06	.000**

Note: $R^2 = .246$, ** $p < .001$.

Findings from Table 4.8 indicate that the model (step 1) consisting of the psychological factors accounted for 24.6% of the total variance in career development [$F(3,190) = 20.637$, $\rho = .000$, $R^2 = .246$]. Therefore, the hypothesis that psychological factors (career resilience, self-efficacy, career identity) would account for a significant variance in career development was partially supported by the data. This is because only career resilience and career identity accounted for a significant variance in career development. Career

resilience accounted for 7% of the variance whereas career identity accounted for 47% of the variance in career development.

Hypotheses Two

The second hypothesis stated that Human capital (age, educational level, tenure, supervisory experience) would significantly predict career development. The Hierarchical Regression was used to analyse this hypothesis and the result is presented in Table 4.9.

Table 4.9

Standard Multiple Regression Analysis for human capital as a predictor of Career Development.

		B	SEB	β	T	P
Step	Constant	32.36	2.56		12.63	.000**
1						
	Age	-.05	.08	-.07	-.54	.587
	Educational level	-.36	.34	-.07	-1.04	.298
	Tenure	-.07	.12	.07	-.55	.581
	Supervisory experience	.37	.13	.30	2.92	.004**

Note: $R^2 = .062$, ** $p < .001$.

Findings from Table 4.6 indicate that the model (step 1) which consisted of the human capital variables accounted for 6.2% of the total variance in career development [$F(4,189) = 3.113$, $p = .016$, $R^2 = .062$]. Thus the hypothesis two which stated that Human capital (age, educational level, tenure, supervisory experience) would account for a significant variance in career development was partly supported. This is because among

the human capital variables only supervisory experience accounted for a significant variance in career development.

From Table 4.8 it was revealed that psychological factors accounted for 24% of the total variance while Table 4.9 indicated that human capital accounted for 6% of the total variance in career development, showing that from the data psychological factors accounted for a higher variance in career development than human capital.

Test for moderation effect of organisational support

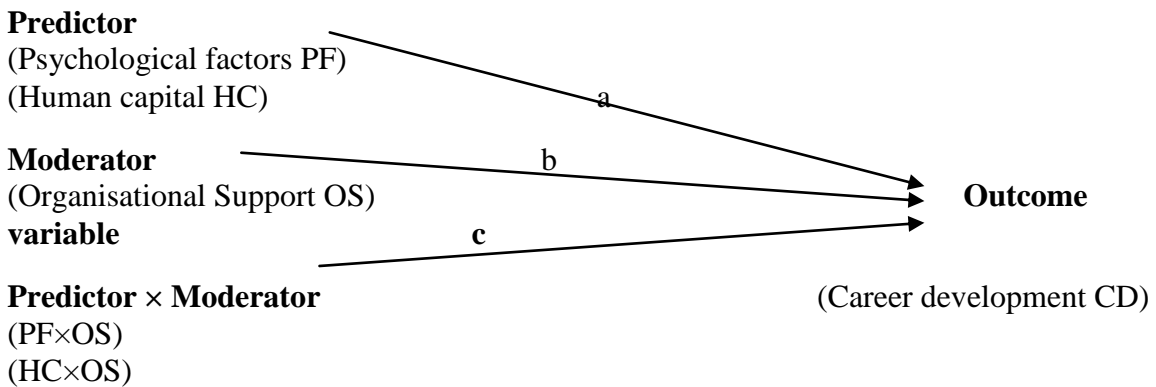
The third and fourth hypothesis were moderating hypothesis. Hypothesis three proposed that Organisational support would moderate the relationship between psychological factors (career resilience, self-efficacy, career identity) and career development. Hypothesis four also stated that Organisational support would moderate the relationship between human capital (age, educational level, tenure and supervisory experience) and career development. The conceptual and statistical basis for the test of this moderation is as follows:

Conceptual basis for moderation

The present study studied the moderating effect of organisational support on the relationship between the psychological factors and career development and between human capital and career development. A moderator is a variable which is either qualitative or quantitative that affects the strength and direction of a relationship between a predictor or independent variable and a criterion or dependent variable (Baron & Kenny, 1986). According to Baron and Kenny (1986), a common framework that captures both the experimental and correlational views of a moderator can be done by using a path

diagram. A path diagram which summarises the moderation model based on the study variables is shown in Figure 4.1.

Figure 4.1 Path diagram of the moderating model (after Baron & Kenny, 1986)



In figure 4.1, the model diagram has three causal paths that feed into the outcome variable, career development. These causal paths are a) the impact of psychological factors and human capital as a predictor, b) the impact of organisational support as a moderator, and c) the impact of the interaction of each of the predictors and the moderator. The moderation hypotheses are supported if the interaction that is path c is significant.

Statistical test for moderation analysis

In order for a test for moderation effect to be done, there should be a relationship between the independent and dependent variables. From Table 4.9 and 4.10 it is observed that this requirement was met. Hierarchical multiple regression was employed to test for the moderation effect of organisational support on the relationship between psychological factors, and also the relationship between human capital and career development. In hierarchical multiple regression, one variable or a set of variables are entered into an

equation in an order and on the addition of each new set of variables the R^2 is determined (Cohen & Cohen, 1983). The R^2 is the proportion of variance in the criterion variable accounted for by the predictors. The steps proposed by Baron and Kenny (1986) were employed in this study and it is as follows;

1. The predictors and moderator were standardized. This eliminates problems associated with multi-collinearity. According to Aiken and West (1991), the standardised scores are attained by subtracting the mean value for a variable from each score for that variable.
2. The interaction term is then calculated using the standardised values by multiplying the predictor and moderator.
3. The outcome variable is then regressed on the predictor, moderator and their interaction. This is done by a hierarchical regression analysis.
4. If the β of the predictor \times moderator (interaction effect) is significant, then there is a moderation effect. However, if it is not significant there is no moderation.

Hypothesis Three

The third hypothesis stated that organisational support would moderate the relationship between psychological factors (career resilience, self-efficacy, career identity) and career development. Specifically the relationship between psychological factors and career development would be strengthened positively in the presence of organisational support. The hierarchical multiple regression was used to test this hypothesis following the procedure outlined by Baron and Kenny, (1986) and results are shown in Table 4.10.

Table 4.10**Hierarchical Multiple Regression Analysis Testing the Moderating Effect of Organisational Support on the Relationship between Psychological Factors and Career Development.**

		B	SEB	<i>B</i>	<i>T</i>	<i>P</i>
Step 1	Constant	6.60	3.9		1.68	.095
	Self-efficacy	-.01	.31	.00	-.01	.997
	Career resilience	.03	.03	.07	.99	.323
	Career identity	.26	.04	.47	7.06	.000***
Step 2	Constant	29.13	.62		47.41	.000***
	Self-efficacy	-.14	.05	-.03	-3.14	.002**
	Career resilience	-.15	.01	-.31	-30.03	.000***
	Career identity	-.14	.01	-.25	-20.30	.000***
	Psychological factors × organisational support	.01	.04	.19	94.75	.000***

Note: $R^2 = .246$, $\Delta R^2 = .739$, * $p < .001$.

From Table 4.10, the results in step 2 reveal that the model significantly accounted for 74% variance in career development [$F(1,189) = 8977.724$, $\rho = .000$, $R^2 = .739$], indicating that upon the addition of the interaction of psychological factors and organisational support, the model was predictive of changes in career development ($\beta = .19$, $\rho = .000$) accounting for a variance of 19%. Therefore, the hypothesis three which stated that

Organisational support would moderate the relationship between psychological factors and career development was supported by the data.

Hypothesis Four

Hypothesis four also stated that Organisational support would moderate the relationship between human capital (age, educational level, tenure and supervisory experience) and career development. Specifically the relationship between human capital and career development would be strengthened positively in the presence of organisational support. The hierarchical multiple regression was used to test this hypothesis following the procedure outlined by Baron and Kenny, (1986) and results are shown in Table 4.11 following:

Table 4.11

Hierarchical Multiple Regression Analysis Testing the Moderating Effect of Organisational Support on the Relationship between human capital and Career Development.

		B	SEB	β	T	P
Step 1	Constant	32.36	2.56		12.63	.000***
	Age	-.05	.08	-.07	-.54	.587
	Educational level	-.36	.34	-.07	-1.04	.298
	Tenure	-.07	.12	.07	-.55	.581
	Supervisory experience	.37	.13	.30	2.92	.004**
Step 2	Constant	30.79	.98		31.44	.000***
	Age	-.57	.04	-.85	-16.14	.000***
	Educational level	-.67	.13	-.14	-5.11	.000***
	Tenure	-.61	.05	-.70	-12.34	.000***
	Supervisory experience	-.74	.06	-.61	-12.66	.000***
	Human capital \times organisational support	.02	.05	.28	33.28	.000***

Note: $R^2 = .062$, $\Delta R^2 = .802$, * $p < .001$.

From Table 4.11, the results in step 2 reveal that the model significantly accounted for 80% variance in career development [$F(1,188) = 1108.168$, $\rho = .000$, $R^2 = .802$]. Upon the addition of the interaction of human capital and organisational support the model was predictive of changes in career development ($\beta = .28$, $\rho = .000$) accounting for a variance of

28%. Therefore the hypothesis four which stated that Organisational support would moderate the relationship between human capital (age, educational level, tenure and supervisory experience) and career development was supported by the data.

4.4 Summary of Findings

This study tested four main hypotheses to assess the role of psychological factors and human capital on career development among the employees of Volta River Authority in Ghana. The hypotheses tested were supported and findings are presented below:

- Psychological factors (career resilience, self-efficacy and career identity) partially but significantly predicted career development.
- Human capital (age, educational level, tenure, supervisory experience) partially but significantly predicted career development.
- Psychological factors accounted for a higher variance in career development than the human capital variables.
- Organizational support moderated the relationship between Psychological factors and career development.
- Organizational support moderated the relationship between Human capital and career development.

CHAPTER FIVE

DISCUSSION

5.1 Introduction

The purpose of this chapter is to gain insight from the prediction and findings outlined in the previous chapters. With the increasing rate of uncertainty in organisations, several researchers have subscribed to the development of employees in order to ensure increase in organisational effectiveness and efficiency (Millward, 2005). In an attempt to do so, researchers have suggested attention to the influence of psychological and human capital variables on career development. Studies in the area of career development have reported that organisational support has a significant influence on career development (Millward & Flynn, 2005) and is an important factor in explaining an individual's career development. Based on this, the study was aimed at inquiring into certain psychological and human capital predictors of career development in Ghana and specifically probed into the extent to which organisational support moderated this predictive relationship.

Specifically, it aimed at determining the extent to which psychological factors (self-efficacy, career resilience and career identity) would predict career development and the extent to which human capital (age, educational level, tenure and supervisory experience) would predict career development. Furthermore, it aimed at examining whether organisational support would moderate the relationship between human capital (age, educational level, tenure and supervisory experience) and career development, and whether organisational support would moderate the relationship between psychological factors (self-efficacy, career resilience and career identity) and career development. This study has provided and confirmed certain hypotheses concerning career development in Ghana, and has elucidated the extent to which organisational support would strengthen

these relationships. Four hypotheses were tested and the data was analysed using the Multiple Linear Regression. The Multiple Linear Regression was employed because by using the presence of an association between two or more variables, we can further predict the values of one variable from those of the others (Ofori & Dampson, 2011).

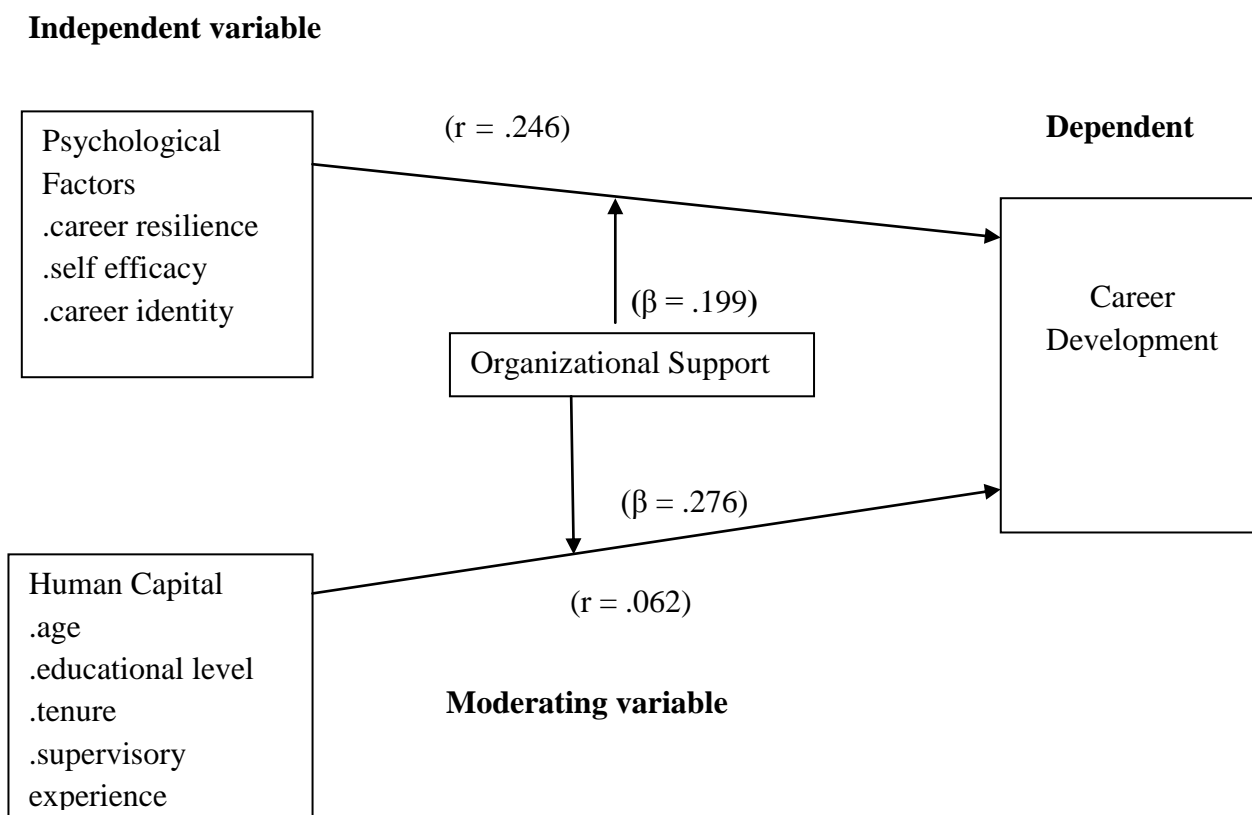
5.1.1 Summary of findings as observed in the conceptual model.

Psychological factors partially but significantly predicted career development. This implied that a significant positive relationship existed between the employees' psychological factors which comprised of career resilience, self-efficacy and career identity and their ability to progress, succeed or develop in their careers. The presence of these psychological factors predicted 24.6% of the variance in career development.

Human capital was found to partially but significantly predict career development. This implies that a significant positive relationship exists between employees' human capital, specifically, age, educational level, tenure and supervisory experience and their career development. These human capital variables accounted for 6.2% of the variance in career development.

Organisational support was found to positively strengthen the relationship between psychological factors and career development as well as the relationship between human capital and career development. A summary of the observed relationships between the independent variables, dependent variable and moderating variable is shown in the conceptual model presented in Figure 5.1. The findings are discussed with reference to the relevant literature reviewed earlier and within the framework of the career development theories reviewed.

Figure 5.1: A summary of the observed relationships between independent, dependent and moderating variables.



Note: \longrightarrow significant positive relationship

Figure 5.1 is the revised conceptual framework showing the significant relationships between the variables used in this study. Findings reveal that a significant positive relationship exists between psychological factors (career resilience and career identity) and career development and also there was a low but partially significant relationship between human capital (supervisory support) and career development. Organisational support was found to moderate the relationship between psychological factors and career development and also the relationship between human capital and career development.

5.1.2 The relationship between Psychological factors and career development.

The study sought to determine if psychological factors would influence the career development of employees in Volta River Authority. In view of this the first hypothesis stated that psychological factors (career resilience, self-efficacy and career identity) would significantly predict career development. Psychological factors accounted for 25% of the total variance in career development. This implies that for an employee to develop in his career he would need to possess some level of career identity, resilience and self-efficacy. This hypothesis was supported by the results of the study, indicating that the psychological factors predicted career development.

The findings from this study suggest that an employee who possesses psychological factors such as career resilience, self-efficacy and career identity is more likely to attain career development such as increase in pay, promotion or progression up the career ladder. This finding is explained by London and Mone's (1987) theory of career motivation, which postulates career identity and resilience as important factors influencing the development of an individual's career. This theory assumes that individual and job traits can be matched and if they are matched closely enough, they will positively correlate with career success or development (Parsons, 1909). Thus, employees with high levels of career resilience would develop in their careers just as those who are high on career identity are also most likely to develop in their careers. On the other hand, those who have low career resilience would not develop in their careers. In the same vein, those who are low on career identity are less likely to develop in their careers. Consequently, career resilience was also found to denote self-efficacy as purported by Betz (2000). As a result, self-efficacy contributed a significant variance in the career development model. Accordingly, it implied that if an individual believes in his ability to develop in his chosen career, and is

resilient in the face of challenges bouncing back from setbacks in his career, coupled with a good sense of identification with his career, that individual is most likely to attain career development.

This finding of the present study is consistent with those of Judge et al. (1999) and Coetzee et al. (2010), who found psychological factors to have a significant positive relationship with career development. Career identity also revealed a significant positive relationship with career development. In other words, as an employee's career identity increases the employee's career development increases and vice versa. Blustein and Noumair (1996) regard identity as one of the most important influential factors for career development from an intra-personal experience. Employees who have a high sense of career identity have specific career goals and they plan towards achieving them. They are also aware of their strengths and weakness, respect feedback on their performance and are usually on the lookout for job assignments that would aid them to achieve their career goals. This is because according to London (1983) career identity refers to how central an individual's career is to his identity, and it includes both work centrality and a desire for upward mobility not necessarily in just one organisation but in any organisation that would offer an opportunity for career development. I would describe it as a 'boundary-less' career development that spans across different spheres of careers in an individual's lifetime.

The results also showed a significant positive relationship between career resilience and career development. This implies that as an employee's career resilience, increases the employee's career development would also increase and as the employee's career resilience decreases the employee's career development would also decrease. This finding is also consistent with other studies which have also reported a significant positive

relationship between psychological factors and career development (Coetzee et al., 2010; Wang, 2009).

The results revealed that there was no significant relationship between self- efficacy and career development. This implies that the fact that an employee believes he or she is capable of working towards career success or development does not necessarily mean that that employee would actually work at developing his or her career and thus achieve career development. This is probably the reason for which London and Mone (1987) did not inculcate self-efficacy in their model of career motivation. Self-efficacy was however, found to have a significant positive relationship with career resilience; and this was consistent with the findings of (Betz, 2000). Resilience seems to denote self-efficacy, and these two play a critical role in the career development of employees especially in these turbulent times of constant organizational change (Maurer, 2001). It is essential that employees are able to bounce back from setbacks and disappointments which are inevitable in the quest of developing ones' career. Thus, merely possessing self-efficacy does not ensure that an individual would develop in a chosen career. However, such an individual would also need some level of career resilience and identity as proposed by London and Mone (1987).

5.1.3 The relationship between Human capital and career development.

It is pertinent for individuals to invest in their careers in order to attain career development, be it an increase in pay or promotion. The study sought to also examine the extent to which human capital would predict career development of employees in Volta River Authority. In this regard, the second hypothesis was stated as “human capital would significantly predict career development”. Human capital accounted for 6% of the total

variance in career development. This implies that an employee needs some level of investment in human capital to develop his career. This hypothesis was partially supported by the results of the study, thus indicating that human capital predicted to some extent the development of employees' careers at Volta River Authority.

Super (1990) in his theory of career development underscores the importance of personal development in the development of an individual's career. He looked at the different roles individuals played in their lifetime and in organisations, be it subordinate or supervisory roles and the relative importance that these individuals give to these roles, and proposed that, career development occurs as an individual progress in life and advances in age and other facets of life including experiences. An individual would attain career maturity or development, according to Super (1990), if that individual is able to successfully accomplish goals and tasks across the span of his or her working life. This is similar to the findings in the present study where employees perceived themselves to have developed in their careers when they had met goals they set for themselves in terms of the development of new skills, educational attainment, a prestigious job, high status and position in organisations as well as the pay increment they obtained.

The finding, human capital significantly predict career predict career development suggests, that as an employee advances in age, gains experience on the job and in supervisory roles, such an employee is more likely to attain career development. According to Super (1990), as an individual develops through physical and mental growth, development of work observations occurs and the individual identifies with other working individuals, as well as their general experiences and their environment. As these experiences are made more relevant to the individual, the individual acquaints with them and they influence his or her career development positively. This is consistent with other

findings in the literature. For instance, Boudreau et al. (2001) found empirical support that human capital associated predictably with career development. They explain that the investments that individuals make in their careers would determine their developmental outcome; just as the sort of experiences they have would have an influence on their career development.

Employees are most likely to engage in activities within or outside the organisations which equips them with the skills needed to enhance their career progression. This is in line with findings of Melamed (1995) who found that human capital attributes explained a large amount of the variance in career development. Consistent with the findings of Xiao (2001), human capital was found to account for a significant variance in career development. He found that education was positively associated with salary increments just in the same way as the experience gained by an employee on the job was also significantly related to the employee's career development. The situation in Ghana may be similar as the educational level and supervisory experience of the participants of the study was generally found to positively predict career development. An organisational climate which encourages the taking up of job responsibilities and upgrading of skills would engender career development of employees.

Consequently, as predicted by Judge et al. (1995), both human capital (age, tenure, educational level and supervisory experience) and psychological factors were found to positively predict career development. However, the psychological factors (24.6%) considered in the study were seen to collectively account for a higher variance in career development as compared to the collective variance that the human capital variables (6.2%) accounted for in career development.

5.1.4 Does organisational support moderate the relationship between psychological factors and career development?

The study further sought to examine if organisational support would moderate the relationship between psychological factors and career development. Specifically, it was hypothesised that organisational support would moderate the relationship between psychological factors (career resilience, self-efficacy and career identity) and career development. Results from the study indicate that organisational support moderates the relationship between psychological factors and career development, accounting for 19% of the variance in career development. The relationship between psychological factors and career development is positively strengthened by the support that employees receive from their organisations (Baron & Kenny, 1986). This implies that when employees have these psychological factors, they would still require some level of support from their organisation in order to develop in their careers.

The finding that organisational support positively strengthens the relationship between psychological factors and career development is consistent with theoretical arguments advanced by Schein and Schein (1978). He asserts that career progression in organisations is influenced by the organisations. These influences could be positive in the form of organisational support, where the organisation values contributions made by employees to the growth of the organisation. It could be a show of concern for the development of the employee or a sense of appreciation for efforts made by the employee. It could also be in the form of organisational sponsorship or even mentorship. However, these influences could be negative, such as boundaries that the employees perceive to hinder their progression in the organisation, for example, 'glass ceiling' usually perceived by female executives (Nicholson, 2006). This assertion made by Schein and Schein (1978) is

relevant in the present study since it throws more light on the perceived organisational support that the employees assented to, which according to Blau (1964) is based on social exchange theories. In the organisational context the employees need to know whether the organisation values their contribution, cares about them, appreciates any extra effort they may exert in their jobs and whether they are generally satisfied. Or on the other hand, the organisation fails to appreciate them, shows very little concern and ignores complaints from the employee. Accordingly, when employees feel supported by the organisation, they identify with the organisation and believe that they would be rewarded in terms of increase in pay or promotions thus leading to their career development (Allen & Meyer, 1990).

The finding, organisational support strengthens the relationship between psychological factors and career development is, however, contradictory to that of Soer (2009). Soer (2009) examined the moderating role of the organisational climate on the relationship between psychological factors, specifically, career identity and teacher career development. Soer (2009) found that the school climate had very little influence on the relationship between the psychological factor, career identity and the career development of the teachers. Further findings in her study, however, revealed that the individual self had a significant influence on the relationship between career identity and task-related career development. It is, therefore, possible that if other psychological factors were observed in the study in relation with career identity, Soer (2009) may have arrived at similar findings. The finding in the present study is inconsistent with Soer (2009) probably due to the disparity in the samples studied. The present study used a sample that cut across a myriad of professionals and careers but Soer (2009) considered only teachers in the study.

The study's findings were similar to that of Millward and Flynn (2005) who, in their investigations of career self-concept and career in organisational context, found a significant relationship between psychological factors (career identity, career self-efficacy and career focus) and career success, and found that organisational opportunities provide a significant influence on this relationship. In the present study, the relationship between psychological factors of career resilience, career identity and self-efficacy and career development was moderated by the organisational support that employees perceived. This implied that when employees perceive significant support coming from the organisation it would enhance their career development significantly, especially if they possess the psychological factors that aid in the development of their careers. The organisational support, therefore, plays a facilitating role enhancing when and how the career development occurs for these employees.

The study was also somewhat consistent with Brutus et al. (1999), who found organisational support, specifically support from subordinates, influencing setting of developmental goals among other career choices as compared to ratings by supervisors and peers. This means that among even the general support that employees perceive to receive from their organisations; differences exist even in the extent to which each type of support influences employees' career development. The study, however, did not probe further to investigate the types of support that the employees perceived and how they each influenced their career development; but this study throws more light on the relationships that were examined in the current study.

5.1.5 Does organisational support moderate the relationship between human capital and career development?

Furthermore, the study sought to investigate if organisational support would moderate the relationship between human capital and career development. Specifically it was hypothesised that organisational support would moderate the relationship between human capital (age, tenure, educational level and supervisory experience) and career development. Consistent with predictions, results from the study indicate that organisational support moderates the relationship between human capital and career development, accounting for 28% of the variance in career development. This implies that the relationship between human capital and career development is influenced by support from the organisation. Specifically, organisational support was found to positively strengthen the relationship between human capital and career development.

Based on the theoretical assertions made by Schein and Schein (1978), the moderating role of organisational support on the relationship between human capital variables such as age, tenure, educational level and supervisory experience was examined. The findings were found to support the contentions of Schein and Schein (1978). His approach to the understanding of career development suggests that people may follow the path of least resistance as they strive to develop in their careers. Hence, as employees make investments of time, education and experience they would be more likely to put in more effort if they perceive support from the organisation. They are thus, rewarded by a sense of development in their careers, and would therefore invest more in their careers. It is, however, possible that an individual may do all it takes to develop in his or her career, but the promotions and pay increments which are markers of career development that need to come from the organisation may not be forthcoming. In such a case, this individual would

believe that he or she has not attained career development. Hence, if organisations are not supportive of employees' career development it may impede or even forestall the motivation of employees to develop in their careers.

The finding that organisational support moderates the relationship between human capital and career development is similar to that of Judge et al. (1995), who found significant relationships between human capital, organisational support and career development. The results in the study by Judge et al. (1995) suggested that human capital and organisational variables explained significant variance in both objective and subjective career success. Lin and Huang (2005) also examined the role of organisational support in the relationship between human capital and career development. The organisational support was measured in terms of social capital based on network in-degree centrality. The results showed that the effect of human capital on career development potential was mediated by the organisational support (social capital). This result was inconsistent with that of the present study because of the disparity in measures used to examine the variables under study.

Furthermore, Ng et al. (2005), in a meta-analysis of four categories of career development found significant relationships between human capital such as tenure, educational level, work experience and work centrality, organisational sponsorship which entailed supervisor support, training and skill development as well as organisational support and career development. They observed that human capital and organisational sponsorship showed rather strong relationships with career development with gender moderating this relationship. These relationships were found probably due to the more extensive examination of organisational influence on career development and it goes to show that organisational support really does play a role in career development, be it a moderating

role or a predictive role. Lynn et al. (1996), however, found that gender did not play such a role on the relationship between human capital and career development.

5.2 Contributions and Implications of the study

This current study has theoretical, methodological and practical implications. Theoretically, findings of this study will enrich existing literature on career development in Ghana and provide a basis for further research in career development in Ghana. It provides empirical support for the theories of career motivation, London and Mone (1987), Super (1990) theory of career development as well as the organisational theories by Schein and Schein (1978). The present study offers some methodological implications. Due to the quantitative nature of the study and the sample size, the study throws more light on the expected relationships between human capital, psychological factors and career development. It explains how psychological factors of career resilience, self-efficacy and career identity work together to help an individual develop in his career. It is unlikely that a single psychological factor possessed by an individual can yield the desired results of career development.

The results of the present study may be practically applicable in several ways. The findings give explanations on how employees' career development are influenced by factors that are inherent in the individual and factors over which they may have little control. It also offers some explanations as to why some Ghanaian employees may not have developed in their careers. Based on the moderating hypotheses tested, the present study suggests that it is important for organisations to take an active part in the career development of employees. It is vital that organisations provide an organisational environment which is supportive of employees' career development and should provide

avenues for employees to explore their capacity and potential for growth, such as on-the-job training and internal recruitment. This may increase employability of these employees and also enhance their skills and expertise in increasing organizational effectiveness.

Career development, according to Hirsh (2007), holds out both opportunities and threats for an employing organization. One of the threats is that it increases the employability of an employee and gives him or her more opportunity thus increasing the tendency of such an employee searching for a better position in other organizations. There is also the possibility of raising employees' expectations which the organization may not be capable of meeting. In this circumstance an employee may move to another organization that may provide better terms of service. There is therefore the need for organizations to learn and understand the dynamics of career development to enable them deal with them. The organization needs to build an organizational career that encompasses the collective identities of its employees to ensure their stay with the organization.

The study reveals that career development holds out the possibility of growing critical skills within the organisation, which are often not available on the external labour market. Career development improves deployment of people in jobs where their talents are well used. An organisation that focuses on the career development of employees as one of its core goals has an improved ability to attract highly skilled workers and possibly retain them. It may also be able to improve flexibility in the workforce and therefore, a greater ability to respond to business change. There also exists a strong relationship of positive career development and workforce motivation which is essential in growing organisations today (Purcell, Kinnie, Hutchinson, Rayton & Swart, 2003).

The study provides knowledge on the predictors of career development. Considering the benefits espoused, organizations should broaden their training needs analysis and training

evaluation to assess the extent to which corporate values of career development have been imbibed and help employees to cultivate these psychological factors seen to be essential in the development of their careers. In addition, there is the need for managers in the course of person analysis to understand the interplay of these psychological and human capital factors and how they can be harnessed to develop employees with a high competitive urge on the global market.

During recruitment and selection, managers who intend to encourage career development in their outfit should look out for employees who score high on the psychological factors: career resilience, career identity and self-efficacy. They should take into consideration those who have a willingness to invest in themselves and in their careers as this will go a long way to help the organisation achieve its strategic developmental goals.

For individual employees, the study suggests that they own their careers, take a personal interest in upgrading themselves and be ready to bounce back when they fail. It will be prudent for employees to take the pains to invest in their education, take up responsibilities, challenging tasks at work and be willing to learn from their experiences. They may need to set clear personal goals and put in place practical measures to ensure the attainment of these goals. Even though the study found that the relationship between psychological factors, human capital and career development was moderated by organisational support, it is essential that the employee is willing to take risks and adapt to changing circumstances in the organisation and if possible adopt a 'boundary-less' career development stance so that he or she is not caught up in the winds of constant organisational changes.

For the educational sector, the study also proves beneficial. It throws more light on the qualities that educators may need to emphasize as they their students pursue careers and

professions in various areas. As part of their curriculum and training, it is highly incumbent upon vocational and career counsellors to put in place measures that would help build clients' psychological and human capital base to better prepare them for future career development.

5.3 Limitations and recommendation for future research.

Despite the contributions that the present study has made, it must be noted that the current study was to some extent limited by its design. The data collected were self-reported and therefore not devoid of bias, although research suggests that self-reported data may not be as limited as usually perceived since people often have an accurate perception of their social environment (Alper, Tjosvold & Law, 1998). It must however, be noted that the results of the present study do not differ significantly from previous studies (e.g., Coetzee et al., 2010; Wang, 2009) which also used self reported measures. It is thus recommended that future research should consider the use of a multi-rater system where significant others also evaluate career development of the employee as well the employee himself.

Another limitation pertains to the inability of the researcher to objectively assess hard work as part of the human capital variables predicting career development, due to the unavailability of an objective measure of hard work. In the literature, hard work is seen as a human capital variable which may influence the career progression or development of employees (Ballout, 2007). Some studies relate variables of workaholism to hard work in predicting career success (e.g., Burke, 2001). Others still perceive it as a part of the multidimensional construct Work ethic (Blau & Ryan, 1997; McHoskey, 1994) which denotes an attitudinal construct that reflects deeply-held values regarding the fundamental place of work in one's life (Cherrington, 1980). Regardless of these efforts made by earlier researchers (Blau & Ryan, 1997; Burke, 2001; McHoskey, 1994) there is still the need for

hard work to be researched as an objective construct, to serve as a basis for future research. This would also help establish and study relationships between hard work and career development. It is thus recommended that future research focus on studying the role hard work plays as a human capital variable in predicting career development among employees in Ghana. Future research should investigate other possible moderating or mediating influences, such as supervisor support and mentorship. This may shed light on the effectiveness of different individual career management strategies, and organizational career development programs.

In the present study the researcher employed the use of a cross-sectional/ multi-linear regression design. It is essential to note that associations were observed among the study variables however the design was not robust enough to establish a direct cause-effect relationship, between the psychological factors, human capital variables and career development but rather a predictive relationship. It did not capture any reciprocal relationships either, even though according to Field (2005), the moderating hypotheses helped to establish a relationship close to a cause effect relationship. The moderating study helped ascertain when and how the relations between the variables were strengthened. Nonetheless, experiments which determine a cause-effect relationship could not be used in the organisational setting because it creates an artificial environment and may inconvenience both employers and employees (Field, 1995). Longitudinal analysis of psychological factors and human capital variables as it relates to career development also appears profitable, in the light of the significant cross-sectional results reported in the present study. A longitudinal study would afford future researchers the ability to compare responses of participants in the same organisation over a period of time (Purcell et al., 2003), which was not possible in the present study due to time constraints.

Furthermore, the present study was done among employees of the Volta River Authority in the energy sector, which is just one segment of the workforce in Ghana and may not have captured all careers. Hence it is possible that our findings may not generalize all sectors of the working populace. Further research to replicate the findings in other samples taking into consideration other sectors of the working populace in Ghana is advisable. This would probably enable us to have a more vivid understanding of relationships and also allow for comparisons to be made across careers.

The findings in this study indicate that there are more factors predicting career development among Ghanaian employees in general, considering that psychological factors and human capital accounted for 25% and 6% respectively. This study is just an eye opener to what goes on as a Ghanaian employee develops his or her career, thus further research needs to be done to ascertain the other factors that influence an individual's career development.

5.4 Summary and Conclusion

This study is aimed at examining the influence of psychological factors and human capital on the career development of employees at Volta River Authority in Ghana. It also examined the moderating role that organisational support plays on the relationship between psychological factors and career development, and also between human capital and career development. The results of the study provided empirical evidence that psychological factors, specifically, career resilience, self-efficacy and career identity significantly predict career development, just as human capital variables: age, tenure, educational level and supervisory experience also significantly predict career development. The proposed conceptual model in which organisational support moderates

the relationship between psychological factors and career development, and also between human capital and career development was supported by the research findings.

These findings mean that for employees to develop in their career it is important for them to exhibit some psychological factors such as career resilience, career identity and self efficacy. They also need to invest human capital into their career development to ensure that they develop. The study elucidates the importance of organisational support in career development. It is, therefore, vital that organisations position themselves to offer support for their employees in their career development. Organisations are continually faced with the need for restructuring to forestall decline, ensure growth, to prevent obsolescence, to become abreast with technological advancement and also to obtain a competitive edge on the global market. This makes it pertinent that career development is fast becoming pervasive in organisations and as such, the need to understand the dynamics of developing a career, thus making it necessary for both organisations and employees to be engaged actively in the development of careers.

The current study has paved the way for career development research in Ghana by examining a number of variables related to career development. Career development must be seen as the prerogative of both management and employees and future research will thus help explain the role that other variables such as supervisor support and mentoring play in the dynamics of career development and how beneficial a career development culture will be to organisations.

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APPENDICES

Appendix 1: Ethical clearance from Noguchi Memorial Institute

NOGUCHI MEMORIAL INSTITUTE FOR MEDICAL RESEARCH
Established 1979 *A Constituent of the College of Health Sciences*
University of Ghana

INSTITUTIONAL REVIEW BOARD

Phone: +233-302-916438 (Direct)
 +233-289-522574
 Fax: +233-302-502182/513202
 E-mail: nirb@noguchi.mimcom.org
 Telex No: 2556 UGL GH



Post Office Box LG 581
 Legon, Accra
 Ghana

My Ref. No: DF.22
 Your Ref. No:

8th May, 2013

ETHICAL CLEARANCE

FEDERALWIDE ASSURANCE FWA 00001824

IRB 00001276

NMIMR-IRB CPN 083/12-13

IORG 0000908

On 8th May, 2013, the Noguchi Memorial Institute for Medical Research (NMIMR) Institutional Review Board (IRB) at a full board meeting reviewed and approved your protocol titled:

TITLE OF PROTOCOL : **The Influence of Psychological Factors and Human Capital on Career Development: The Moderating role of Organizational Support**

PRINCIPAL INVESTIGATOR : **Evelyn Maame Ama Assan, MPhil Candidate**

Please note that a final review report must be submitted to the Board at the completion of the study. Your research records may be audited at any time during or after the implementation.

Any modification of this research project must be submitted to the IRB for review and approval prior to implementation.

Please report all serious adverse events related to this study to NMIMR-IRB within seven days verbally and fourteen days in writing.

This certificate is valid till 7th May, 2014. You are to submit annual reports for continuing review.

Signature of Chairman:

Rev. Dr. Samuel Ayete-Nyampong
 (NMIMR – IRB, Chairman)

cc: Professor Kwadwo Koram
 Director, Noguchi Memorial Institute
 for Medical Research, University of Ghana, Legon

Appendix 2: Letter of introduction to Ghana Grid Company

UNIVERSITY OF GHANA
DEPARTMENT OF PSYCHOLOGYTel: (233-0302) 500381 Ext. 3754/3310
028 955 04 63

P. O. Box LG 84, Legon Ghana

E-mail: psychology@ug.edu.gh

PSYC 2/33/01

April 17, 2013

Our Ref. No.....

The Director
Human Resource
Ghana Grid Company
Head Office
Tema

Dear Sir/Madam,

Letter of Introduction
Evelyn Maame Ama Assan

The above-named is an M.Phil Industrial/ Organisational Psychology student of the University of Ghana, Legon.

In partial fulfilment of the requirement for the award of the M.Phil degree Ms Evelyn Maame Ama Assan has to write and submit an original thesis.

She has selected the topic: "**The Influence of Psychological Factors and Human Capital in Career Development at Volta River Authority: The Moderating Role of Organisational Support.**"

To enable her collect data for her work, she would need to administer questionnaires and/or conduct interviews. She has selected your institution as suitable for his data collection.

Any assistance you may give her would be greatly appreciated.

Yours sincerely,


Dr. Charity Akotia
(Head of Department)
.....
Supervisor

Appendix 3: Letter of introduction to Volta River Authority**UNIVERSITY OF GHANA
DEPARTMENT OF PSYCHOLOGY**Tel: (233-0302) 500381 Ext. 3754/3310 P. O. Box LG 84, Legon Ghana E-mail: psychology@ug.edu.gh
028 955 04 63

PSYC 2/33/01

April 17, 2013

Our Ref. No.....

The Director
Human Resource
Volta River Authority
Head Office
Accra

Dear Sir/Madam,

**Letter of Introduction
Evelyn Maame Ama Assan**

The above-named is an M.Phil Industrial/ Organisational Psychology student of the University of Ghana, Legon.

In partial fulfilment of the requirement for the award of the M.Phil degree Ms Evelyn Maame Ama Assan has to write and submit an original thesis.

She has selected the topic: **"The Influence of Psychological Factors and Human Capital in Career Development at Volta River Authority: The Moderating Role of Organisational Support."**

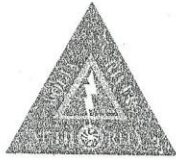
To enable her collect data for her work, she would need to administer questionnaires and/or conduct interviews. She has selected your institution as suitable for his data collection.

Any assistance you may give her would be greatly appreciated.

Yours sincerely,

Dr. Charity Akotia
(Head of Department)

Supervisor

Appendix 4: Acceptance letter from Volta River Authority**VOLTA RIVER AUTHORITY**

Phone: 233-30-2664941-9
Fax: 233-30-2662610
Telex: 2022 VOLTAGH
E-mail: paffairs@vra.com

P.O. Box MB 77
ACCRA, GHANA

Date:

Our Ref.:

April 23, 2013

Your Ref.:

Head of Department
Department of Psychology
University of Ghana
P. O. Box LG 84
Legon-Accra

Dear Madam,

RE: LETTER OF INTRODUCTION –MISS EVELYN MAAME AMA ASSAN

We refer to your letter dated March 14, 2013 on the above-mentioned subject and advise that permission has been granted to Miss Evelyn Maame Ama Assan to use the Authority as a case study for her M.Phil project work.

She is requested to report to the Corporate Training Officer, HR for the necessary guidance.

Yours faithfully,

Isaac K. Aidoo
DIRECTOR, HUMAN RESOURCES

Appendix 5: Consent form

Consent Form

Title: "The influence of Psychological Factors and Human Capital on Career Development at Volta River Authority in Ghana: the moderating role of organisational support."

Principal Investigator: Evelyn Maame Ama Assan

Principal Supervisor: Dr. Maxwell Asumeng

Department of Psychology, University of Ghana, Legon

General information about the research

The career development of employees is essential both for individual and organizational growth and survival especially in these times of rapid organizational change amidst downsizing, mergers, decline and growth. It is however not only the prerogative of employees but also the organization as a whole to ensure that employees have optimal career development. The aim of the research is to investigate the influence of Psychological Factors (self-efficacy, resilience, identity) and Human Capital (number years of experience, training, educational qualification) on Career Development (success in career) at Volta River Authority in Ghana. Your task will be to fill out the questionnaires given to you as truthfully as possible. It would take approximately 15 to 20 minutes to complete the questionnaire.

Possible Risks and Discomforts

Due to the number of questions that you are required to answer in the questionnaire, you may experience some level of fatigue; you are allowed to take intermittent breaks to relax when necessary in order to minimize fatigue.

Possible Benefits

You may not directly benefit from this research, however, your participation will help to gather information concerning the influence of Psychological Factors (self-efficacy, resilience, identity) and Human Capital (number years of experience, training, educational qualification) on Career Development (success in career) among employees in Ghana, which will greatly help to better understand the career advancement of employees from a Ghanaian perspective.

Confidentiality

Please be assured that the information you will provide would be used only for the purpose of research and there is no wrong or right answer. You are not required to provide your name on any of the questionnaires and any information you provide will be protected by ensuring that data is collected anonymously.



Compensation

You will be provided with pens to fill out the questionnaires and you may keep this pen upon completion.

Voluntary Participation and Right to Leave the Research

Participation in this research is completely voluntary. You have the right to say no. You may change your mind at any time and withdraw. You may also choose not to answer specific questions or to stop participating at any time.

Contacts for Additional Information

In case of any doubt or/and for additional information concerning the study you may contact the Principal Investigator; Evelyn Maame Ama Assan, University of Ghana, Legon. Telephone: 0242628789 or email address: evelynassan@gmail.com

Your rights as a Participant

This research has been reviewed and approved by the Institutional Review Board of Noguchi Memorial Institute for Medical Research (NMIMR-IRB). If you have any questions about your rights as a research participant you can contact the IRB Office between the hours of 8am-5pm through the landline 0302916438 or email addresses: nirb@noguchi.mimcom.org or hbaidoo@noguchi.mimcom.org.



VOLUNTEER AGREEMENT

The above document describing the benefits and procedures for the research title (**The influence of Psychological Factors and Human Capital on Career Development at Volta River Authority in Ghana: the moderating role of organisational support**) has been read and explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I agree to participate as a volunteer.

Date_____
Name and signature or mark of volunteer**If volunteers cannot read the form themselves, a witness must sign here:**

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

Date_____
Name and signature of witness

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

Date_____
Name and Signature of Person Who Obtained

Appendix 6: Study Questionnaire

QUESTIONNAIRE

Dear Valued Participant,

You are kindly invited to partake in an academic research being conducted by Evelyn Maame Ama Assan, an M.PHIL student at the Psychology department of the University of Ghana, in partial fulfillment of the requirements for the award of M.PHIL Industrial and Organizational Psychology Degree.

Title: "The influence of Psychological Factors and Human Capital on Career Development: moderating role of Organisational Support at Volta River Authority in Ghana."

Principal Investigator: Evelyn Maame Ama Assan

Principal Supervisor: Dr. Maxwell Asumeng

Department of Psychology, University of Ghana, Legon

Contacts for Additional Information

In case of any doubt or/and for additional information concerning the study you may contact the Principal Investigator; Evelyn Maame Ama Assan, University of Ghana, Legon. Telephone: 0242628789 or email address: evelynassan@gmail.com

PLEASE NOTE:

If you have been working in this organization for **more than one (1) year** please indicate your consent to partake in this study by ticking: Yes

If yes proceed to the next page below if not thank you for your time.



Section A

Please provide the following information about you by ticking where appropriate.

1. Sex: Male Female
2. Age.....
3. Highest level of education attained: Doctorate Masters Degree First Degree
GCE 'A' Level GCE 'O' Level Others (please specify).....
4. Position in Organization:
5. How many years have you been engaged in paid work:
6. How many years have you been working in this organization:
7. How many years of supervisory experience have you had:
8. Have you participated in training/educational activities for more than one week in the most recent six months? Yes No

Listed below and on the next several pages are statements that represent possible opinions that you may have about your job and organization. Please indicate the degree of your agreement or disagreement with each statement by ticking in the appropriate box that best represents your point of view.

Section B

SES

1 = strongly disagree 2 = disagree 3 = slightly disagree 4 = neither agree nor disagree 5 = agree 6= strongly agree

		1	2	3	4	5	6
1	I can handle a more challenging job than the one I'm doing						
2	I feel confident that my skills and abilities equal or exceed those of my colleagues.						
3	My job is well within the scope of my abilities.						
4	Personal qualities that distinguish me favorably from others are easy to display.						
5	I believe that I'm fully qualified for the job I'm doing.						



CRS

1 = Strongly Disagree 2 = Disagree 3 = Undecided 4 = Agree 5 = Strongly Agree

		1	2	3	4	5
1	I welcome job and organizational changes					
2	I am willing to take risks (actions with uncertain outcome)					
3	I can handle any work problem that comes my way.					
4	I look forward to working with new and different people.					
5	I am able to adapt to changing circumstances					
6	I have made suggestions to others even though they may disagree.					
7	I make and maintain friendships with people in different departments.					
8	I will design better ways of doing my work.					
9	I have outlined ways of accomplishing jobs without waiting for my boss.					
10	I accept compliments rather than discount them.					
11	I believe other people when they tell me that I have done a good job.					
12	I will evaluate my job performance against personal standards rather than comparing it with what others do					
13	I will take the time to do the best possible job on a task.					
14	I look for opportunities to interact with influential people					
15	My career goals are clear and I have a good idea of where I'm heading.					
16	I can identify three important accomplishments from my current/last job.					
17	My skills have been upgraded to keep pace with the current technique.					
18	I have adequate computer knowledge/skills to do my job.					
19	I explore trends in my field/industry and have identified various changes that are occurring.					
20	I have sought opportunities to take on new responsibilities in my work.					
21	I have sought opportunities to work with others or contribute to work teams.					
22	The skills and abilities that I need to be employable are clear to me.					
23	I have a network of people in and outside my field that can help my career.					
24	I have actively sought better assignments in my current or past jobs.					
25	Regularly, I try to identify the future direction of my field by making personal contacts, reading or attending professional meetings.					
26	I'm more comfortable than ever with the constantly changing world of work.					
27	If I identify what I need to learn, I will actively seek the learning opportunity.					
28	I like to read or attend conferences and workshops to learn new knowledge or skills.					



CIS

To what extent.....1 = Very slight extent 2 = Slight extent 3 = Large extent 4 = Very large extent

		1	2	3	4
1	Do you have a specific career goal?				
2	Do you have a specific plan for achieving your career goal?				
3	Do you feel you are aware of your skill strengths and weaknesses?				
4	Do you ask co-workers you respect for feedback on your performance?				
5	Have you changed or revised your career goals based on new information you have received regarding yourself or your situation?				
6	Have you sought job assignments that will help you obtain your career goal?				
7	Have you taken the initiative to discuss you career goals with your boss?				
8	Have you asked your boss to discuss your specific strengths and weaknesses?				
9	Do you spend your free time on activities that will help you do your job?				
10	Have you taken courses toward a job-related degree?				
11	Have you joined professional organizations related to your career goal?				
12	Have you kept current on company affairs?				
13	Do you stay abreast of developments in your line of work?				
14	Do you accept compliments rather than discount them?				
15	Do you believe other people when they tell you that you have done a good job?				
16	Do you reward yourself when you complete a project?				
17	Do you take the time to do the best possible job on a task?				
18	Do you set difficult but not impossible work goals?				
19	Have you designed better ways of doing your work?				
20	Have you accepted a job assignment for which you have little to no expertise?				
21	Have you made suggestions to others even though they may disagree?				
22	Do you look for opportunities to interact with influential people in your organization?				



23	Do you help co-workers with projects?					
24	Have you made and maintained friendships with people in different departments					
25	Have you outlined ways of accomplishing jobs without having to wait for your boss?					
26	Have you evaluated your job performance against personal standards rather than comparing it with what others do?					

SPOS

0= Strongly disagree 1 = Moderately disagree 2 = slightly disagree 3 = Neither disagree nor agree 4 = Slightly agree 5=Moderately agree 6= Strongly agree

1	The organization values my contribution to its well-being.	0	1	2	3	4	5	6
2	The organization fails to appreciate any extra effort from me.							
3	The organization would ignore any complaint from me.							
4	The organization really cares about my well-being.							
5	Even if I did the best job possible, the organization would fail to notice.							
6	The organization cares about my general satisfaction at work.							
7	The organization shows very little concern for me.							
8	The organization takes pride in my accomplishments at work.							

CDQ

1=Strongly disagree; 2 = disagree; 3 = slightly disagree; 4= Neither disagree nor agree 5 = Slightly agree ; 6= agree; 7= Strongly agree

1	I am satisfied with the success I have achieved in my career	1	2	3	4	5	6	7
2	I am satisfied with the progress I have made toward meeting my overall career goals							
3	I am satisfied with the progress I have made toward meeting my goals for income							
4	I am satisfied with the progress I have made toward meeting my goals for advancement							
5	I am satisfied with the progress I have made toward meeting my goals for the development of new skills.							
6	I am satisfied that I have a prestigious job and attained a high status.							



Appendix 7: Normal curve distribution of variables