UNIVERSITY OF EDUCATION, WINNEBA

PERSONALITY FACTORS, CAREER BELIEFS AND CAREER MATURITY ON CAREER DECISION-MAKING DIFFICULTIES AMONG STUDENTS OF UNIVERSITY OF GHANA, LEGON

GLADYS MAAME AKUA SETORDZIE

DOCTOR OF PHILOSOPHY

2020

UNIVERSITY OF EDUCATION, WINNEBA

PERSONALITY FACTORS, CAREER BELIEFS AND CAREER MATURITY ON CAREER DECISION-MAKING DIFFICULTIES AMONG STUDENTS OF THE UNIVERSITY OF GHANA, LEGON

GLADYS MAAME AKUA SETORDZIE
9150170002

A thesis in the Department of Counselling Psychology, Faculty of Educational Studies, submitted to the School of Graduate Studies in partial fulfilment of the requirements for the award of the degree of Doctor of Philosophy (Guidance and Counselling) in the University of Education, Winneba

JULY, 2020

DECLARATION

Student's Declaration

I, Gladys Maame Akua Setordzie, declare that this thesis, with the exception of quotations and references contained in published works which have all been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

Signature: …….

Date: …….....

Supervisor's Declaration

We hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of Thesis as laid down by the University of Education, Winneba.

Professor Stephen Antwi-Danso (PhD) (Principal Supervisor)

Signature…….……

Date: ……..…….

Professor Grace Y. Gadagbui (M.Sc.) (Co-Supervisor)

Signature…….……

Date: ……..…….

DEDICATION

This thesis is dedicated to the Glory of God and to my dear husband, Amenyo Kodzo Setordzie. Also, to my children; Mawunyo, Nutifafa, Akpene and Exornam.

ACKNOWLEDGEMENTS

This thesis would not have been possible without the kind support, endless encouragement, patience, mentorship and quick responses of my principal supervisor Professor Stephen Antwi-Danso of the Department of Psychology and Education, University of Education, Winneba. You kept me going through the toughest of times. I say thank you and God richly bless you. I am also grateful to my co-supervisor Professor Grace Gadagbui, Department of Special Education, University of Education, Winneba, for her efforts in giving me guidance and encouragement, quick responses, constructive criticisms and suggestions to shape this work. God richly bless you.

Special mention must be made of Rev. Dr. Mrs. Bridget Ben-Naimah, Ag. Director of Careers and Counselling Centre, University of Ghana, Legon. You encouraged me, lifted me and prayed for me. You believed in me through thick and thin. I love you, Mama Bee. Special thanks to Mrs. Mercy Haizel Ashia, Registrar of the University of Ghana, Legon. Your encouragement lifted me and inspired me above all. A big thank to Mr. Alex Wiafe. You made me believe that I could truly be successful and to never give up. I wish to acknowledge the support of Dr. Stanley Semarco, Dr. Yayra Dzakadzie, Dr. Anapley, Mrs. Lynda Hagan, Ms. Edwina Paintsil, Dr. Theresa Antwi and Mr. Mawusi Glozah for their kind support. I also acknowledge the support of all the staff of Department of Psychology and Education from the University of Education Winneba and all my colleague counsellors at the Careers and Counselling Centre, UG, Legon.

My utmost gratitude goes to my family and relations. I wish to express my appreciation to my husband, Mr. Amenyo Setordzie for his prayers, moral, material and financial support, sacrifices and the greater endurance he exhibited for the completion of this work. Finally, but most importantly, I thank God for helping me throughout this journey.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

DEFINITION OF TERMS

Career Decision-making refers to the ability to make career decisions after sufficiently considering information needed for the decision and the willingness to make such a decision correctly.

Career decision-making difficulties refer to the difficulties encountered by individuals while making career-related decisions.

Career Indecision is the state of being undecided about one's educational, occupational or career-related path.

Career beliefs is the perceptions, assumptions and generalizations people make about themselves and the world of work based on their experiences whether accurate or inaccurate.

Dysfunctional Career Beliefs: This is referred to as the prejudiced or unreasonable expectations, various career myths, negative estimations regarding the individual's actions and professions, which influence one's ambitions and actions, leading to self-defeating experiences.

Career Maturity is defined in this study as the degree to which students are prepared to make good educational or vocational decisions. It is usually seen as dependent on their knowledge of themselves and of the world of work, their ability to make decisions, and a positive attitude toward making career decisions.

Gender: Gender and sex is used interchangeably in this study and it refers to male and female.

Trait is an identifying habit, or trend or characteristic ways of behaving. Traits are responsible for one's personality.

Personality Traits are preferred ways of thinking, feeling, or behavioural tendencies that are typically considered as shaped in part by biological predispositions.

Openness is a measure of active imagination, aesthetic sensitivity, attentiveness to inner feelings, preference for variety, intellectual curiosity, and independence of judgment. Open individuals are unconventional, curious and are open to new ideas and novel experiences.

Conscientiousness is the control of impulses. It is a trait that measures, purposefulness, strong will determination and being well-organized.

Agreeableness is a measure of sympathy to others and eagerness to help them.

Extraversion is a measure of sociability and they, thus, enjoy being around people, work in large groups and prefer gatherings. They are talkatives and are active.

Neuroticism is the tendency to experience negative feelings such as fear, sadness, embarrassment, anger, guilt and disgust.

ABBREVIATIONS

BA	Bachelor of Arts
BFI	Big Five Personality Inventory
BSc	Bachelor of Science
CBI	Career Beliefs Inventory
CDDQr	Career Decision-making Difficulties Questionnaire Revised
CDM	Career Decision-making
CDMD	Career Decision-making Difficulties
CDSE-SF	Career Decision Self Efficacy-Short Form
FFM	Five Factor Inventory
ILO	International Labour Organisation
ISSER	Institute for Statistical, Social and Economic Research
OCEAN	Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism
RAISEC	Realistic, Artistic, Investigative, Social, Entrepreneurial and Conventional
UG	University of Ghana, Legon
UNESCO	United Nations Educational, Scientific and Cultural Organization
UPSA	University of Professional Studies, Accra

ABSTRACT

The current study examined the influence of the Big Five Personality Factors, Career Beliefs and Career Maturity on Career Decision-Making Difficulties. The theory of circumscription and compromise, self-concept over lifespan, social learning theory of career decision-making and the big five model underpinned the theoretical framework. The study used mixed methods by employing an explanatory sequential mode as a design. A sample of 494 students in various undergraduate programmes of the University of Ghana were selected through stratified, proportionate, simple random and systematic random sampling techniques for the quantitative phase. Using a purposive sampling method, ten (n=10) students were selected for the qualitative phase. All students completed the big five inventory, the career beliefs inventory, career maturity scale and the career decision making difficulties questionnaire for the quantitative phase and through one-on-one interviews for the qualitative phase. Reliability was established using Cronbach's alpha. Validity was established through face validity, content validity and construct validity. Factor Analysis was used to determine the dominant items in the standardized questionnaires before the final analysis was carried out. The Quantitative data was analysed using descriptive statistics, t-test, bivariate as well as multiple regression analytical techniques while thematic analysis was used for the qualitative data. Robustness of the qualitative study was built through prolonged engagement, persistent observation, triangulation and member check. Findings of the study established that personality factors predicted career decision-making difficulties with conscientiousness, neuroticism, and openness being the most influential predictors. Also, career beliefs predicted career decision-making difficulties with my current career situation, factors that influence my decision and effort I am willing to initiate improving self, were the main predictors of career decision making difficulties. Career maturity was found to be negatively correlated with career decision-making difficulties. Age and Sex were statistically not significant differentiators on career decision-making difficulties. From the study findings, it concluded that, personality factors are important in the career decision making process of undergraduates of the University of Ghana. Therefore, it was recommended that, Management of the University of Ghana should formulate policies that mandate students to visit the Careers and Counselling Centre in order to assist students to manage their careers based on self-assessments, education, training and labour market information.

CHAPTER ONE

INTRODUCTION

1.0 Overview

Difficulties encountered by young people in career decision-making may be influenced by several factors and these may include personality factors, career beliefs and career maturity. Against this background, this study focuses on personality factors, career beliefs and career maturity influencing career decision-making difficulties of students of the University of Ghana, Legon. This Chapter begins with the introductory section which provides background information to the study. This is followed by theoretical and conceptual framework. The statement of the problem and the objectives of the study are presented. The hypotheses to be tested are stated and the significance of the study is discussed. The delimitations of the scope of the study are also stated. This chapter concludes with a presentation on how the entire work is organised.

1.1 Background to the Study

The process of decision-making is one of the most complex mechanisms of human thinking, as various factors and courses of action intervene in it, with different results (de Acedo Lizárraga, de Acedo Baquedan & Cardelle-Elawar, 2007). Career decision-making is a significant issue in the developmental lives of young people because it is reported to be associated with positive as well as harmful psychological and socio-economic consequences that persist well beyond the youthful age into an individual's adult life (Bubić & Ivanišević, 2016). Often, making the right career decision can make the difference between enjoying and detesting the career in future. The complexity of career decision-making increases as age increases (Gati & Saka, 2001). As learners get older, they are more likely to describe their career choice as a

dynamic interplay of their developmental stage and the prevailing environmental circumstances (Howard & Walsh, 2011). Youth career decision-making is required to go through a process of understanding by defining what they want to do and exploring a variety of career options with the aid of guidance and planning (Porfeli & Lee, 2012). Proper handling of the process affirms individual identity and fosters wellbeing, job satisfaction and stability (Kunnen, 2013). Consequently, students need to develop their career decision-making skills in order to secure better sustainable employment, especially when moving from school to a work environment.

University students around the world, upon completion of their academic studies in varied fields, find themselves in a difficult position, as they are obliged to a stage of career decision-making (Sidiropoulou-Dimakakou, Mylonas & Argyropoulou, 2015). For many undergraduate students, career choice represents a difficult and complicated process that can lead to a state of indecision with negative, long-term consequences in their professional, personal and social life (Osipow, 1999). Research has also shown that over fifty per cent (50%) of university students experience difficulties with career decisions which could adversely influence their readiness for employment after school (Herr, 2013). Tremblay, Lalancette and Roseveare (2012) have contended that colleges and universities have a career education responsibility. Herr, Rayman and Garis (1993) pointed out that career indecisive students exist in colleges and universities in significant numbers and experience different problems, requiring different interventions. Dedicating oneself to career choices that are unattainable leads to frustration and ultimately unemployment (Pitan, 2010).

The Organization for Economic Cooperation and Development (OECD, 2010) reports that 30–40% of college graduates risk being unemployed after their college education. This seems to be the current happenings, more especially, in developing economies where economic growth has been very slow in most cases and at best stagnant in a few other countries, thus, creating very few employment opportunities (ILO, 2018). In Ghana, the scourge of unemployment typifies the situation in most of the developing economies. Policy makers have attempted to address the challenges of unemployment; however, lack of adequate data has made the task more difficult (ISSER, 2010). The devastating effect of unemployment is the rising prevalence of social vices among the youth and these include, among others, violent crimes, kidnappings, agitations and socially delinquent behaviour and armed robbery. These problems bring about acute psychological and economic discomfort to the individual and the entire society (Biney, 2015).

Today, young adults often need to advance through several successive decisions and frequently re-evaluate their previous career decisions and adjust their behaviours and goals. The difficulties encountered by young people around these periods may be due to changes in the developmental processes that they have to go through (Krumholtz, Folley & Cotter, 2013; Bright & Pryor, 2005).

Developmental indecision is a term that has gained attention in recent times and it has generally been used to denote a normative phase in vocational development. It is usually a stage many young adults who are about to make a career decision go through (Gati & Saka, 2001). This phase is resolved fairly easily, sometimes with the assistance of a career counsellor or the provision of the required information. However, career indecisiveness, on the other hand, involves more pervasive,

complicated and chronic difficulties in making career decisions (Meldah & Muchinsky, 1997; Osipow, 1999).

Gati, Krausz and Osipow (1996) proposed some difficulties that may be encountered by an ideal "career decision maker" in a taxonomy of career decision-making difficulties and divided them into three major categories. Firstly, Lack *of Readiness*, comprises four sub categories of difficulties that precede making a specific career decision. *Lack of Information* and *Inconsistent Information* are the second and third categories respectively. Both contain three sub-categories and these difficulties arise during the actual process of career decision-making. Sidiropoulou-Dimakakou et al. (2015) asserted that in many cases, students' efforts to make a specific career decision are interrupted because of the conflicts that are caused either by individual factors or by pressure from third parties or even by external factors, such as social, economic and political ones.

Career planning therefore, becomes a critical step in making career choice and is of utmost importance particularly for tertiary students who are at the cusp of entering into the professional world (Vuori, Koivisto, Mutanen, Jokisaari & Salmela-Aro, 2008). Commitment to a career choice is when an individual has a clear sense of his or her occupational preferences along with a firm attachment to a specific set of career goals, for example, developing a goal of going to medical school and becoming a medical doctor (Blustein, Ellis & Devenis, 1989). Individuals who attain a high degree of commitment to career are more likely to be prepared and well-poised to make a career choice and be in the position to confront any obstacles that may attempt to prevent them from realizing their goal (Krumboltz, Folley & Cotter, 2013).

The time students spend in school to acquire knowledge and skills through training is a very important developmental period in their lives. University students

experience a transition period in which they are confronted with making decisions that have future vocational outcome. During this stage students experience many changes in their academic, social, personal, and occupational lives. Studies carried out in different countries imply that, the difficulties in career decision-making at this stage is a common concern in many different cultures (Newman & Newman, 2017).

Bullock, Yowell, Andrews and Buzzetta (2012) asserted that, Career Decision-making Difficulties may stem from a variety of sources. For example, lack of self-insight (personality), lack of experience in varied life roles and lack of confidence in one‘s ability to perform a certain task (maturity), negative expectations associated with a particular pursuit (career beliefs) and the inability to decide on a particular career (indecision). Nathan and Hill (2006) emphasised that, students who do not seek career counselling, often cannot easily reach a decision because there is generally lack of information about a well figured-out self-perception and the lack of knowledge regarding the elements that constitute the individual‘s personality (Gati & Saka, 2001), such as interests and abilities. This may drive the individual into confusion and hinder the decision-making process.

Trait is an identifying habit or trend or characteristic way of behaving. Traits are responsible for one‘s personality (Goldberg, 1993). Therefore, personality traits are preferred ways of thinking, feeling, or behavioural tendencies that are typically considered as shaped in part by biological predispositions (McCrae & Costa, 2010). Personality may formulate human behaviour which may shape how individuals respond and interact with various life activities and how they adjust to the environment (Morris & Feldman, 1996). Personality has been proposed to depict consistent emotional and motivational differences between individuals (McCrae & John, 1992). Although some allowances are made for changes in personality, traits are

stable across time and situation, and they are relatively enduring (Caspi, Roberts & Shiner, 2005).

The Big Five Personality Scale or the Five Factor Model, with dimensions and prototypical characteristics include Extraversion (sociable, active, energetic), Agreeableness (cooperative, considerate, trusting), Conscientiousness (dependable, organized, persistent), Emotional Stability (calm, secure, unemotional), and Openness to Experience (imaginative, intellectual, artistic and sensitive). The trait of emotional stability is also frequently referred to by its inverse, neuroticism, which is emotional instability and is commonly associated with anxious or highly emotional personality types (Costa & McCrae, 1989).

Studies in vocational psychology have shown that personality plays a major role in career decision-making process. The evidence is pretty clear from the studies of monozygotic and dizygotic twins who were separated at birth and reared apart and they still exhibited similar vocational interest. This confirms that career interest is associated with genetic variations (Bouchard, Lykken, McGue, Segal & Tellegen, 1990). In a related study, Bouchard (2004) reported that vocational interests had a substantial genetic basis. The heritability coefficients range from a low of .31 for the enterprising interest to a high of .39 for the artistic interest.

Personality traits have been associated with career decision-making difficulties regardless of age or educational setting (Di Fabio, Palazzeschi, Levin, Gati, 2014). Individuals who have exhibited emotional stability are thought to experience less career decision-making difficulties both before and during the decision-making process (Albion & Fogarty, 2002). Research findings have revealed inverse relationships between career decision-making difficulties (Gati, Krausz & Osipow, 1996) and the traits of extraversion and emotional stability. Similarly, career

indecisiveness or chronic indecision amongst individuals have been associated with personality traits (Di Fabio & Palazzeschi, 2009). Neuroticism personalities have been found to be linked with career indecision (Di Fabio, Palazzeschi, Asulin-Peretz & Gati, 2013) however, in contrast, agreeableness, conscientiousness, and openness to experience were found to be associated with career decidedness (Kanfer, Wanberg, & Kantrowitz, 2001).

A better understanding of how different personal and interpersonal factors impact career indecision in students could help career counsellors develop more focused vocational and career guidance interventions. According to Rossier (2015), a relationship exists between relatively stable dispositions, such as personality traits and general cognitive abilities such as career-related decision or indecision. Therefore, there is the need for research that can take into account the personality constraints and allow people to adapt to their career expression based on their personality.

The fundamental premise of career beliefs is that people make several assumptions and generalizations about themselves and the world of work based on their experiences, whether accurate or not (Krumboltz, 1988). The assumption is, if people believe something is true, they act as if it is true and therefore, what appears to be inappropriate or self-defeating belief may be acted upon and may become a blockade to making the right career decision (Mitchell, 1993). Students experience failure and discouragement when they have unrealistic beliefs about themselves and the world of work. This affects their attitude or approach towards learning new skills, setting career goals, developing new interests, making career decisions and taking all the necessary actions toward career goal (Amundson, 1997; Mitchell & Krumboltz, 1996). Consequently, they set lower career goals to avoid failure or challenging experiences (Lent, Brown & Hackett, 1996).

Irrational beliefs and its significant role in career indecisiveness have been highlighted by previous literature (Chi, 1994; Enright, 1996; Luzzo, 1997). Other works focused on exploring the dynamics of ineffective career beliefs (Arulmani, Van Laar & Easton, 2003; Caspi & Turner, 2011). The conclusion is that maladaptive career beliefs lead to decision-making problems (Liu, 2003). However, positive career beliefs facilitate clients' movement through career decision-making process, create positive expectations, and contribute to effective problem-solving behaviour (Peterson & Einarson, 2001). In his assertion, Krumboltz (1983) pointed out that just because a belief is false does not necessarily make it troublesome. Instead, he suggested some twenty-five criteria for evaluating career beliefs that are likely to lead to future difficulties and offered counselling interventions as the solution to correct such faulty beliefs.

Career Development is a –continuous lifelong process of developmental experiences that focus on seeking, obtaining and processing information about self, occupational and educational alternatives, lifestyles and role options" (Hansen, 1976). To make the right career choice, certain basic competencies are needed. The concept that defines one of such competencies is career maturity (Atli, 2016). The concept of career maturity is defined by Super (1957) as the ability to plan for career choices, raise awareness about different careers and take responsibility to make a career choice.

Findings from a wealth of studies asserted that career maturity is crucial to a successful school to work transition in any context. Particularly, students who are more matured tend to also be more career decided (Brusoki, Gollin, Gallagher & Moore, 1993). In their study Bloor and Brook (1993) asserted that undergraduate students who reported a higher level of career maturity also reported greater

satisfaction with life and exhibited higher self-esteem than participants with less career maturity.

Luzzo (1995) and Gianokos (1999) noted that more career-matured students tend to express more confidence in their ability to successfully complete career decision-making tasks. Other researchers have also found that confidence in one‘s ability to complete career decision-making tasks plays a role in an individual‘s confidence in his/her ability to complete the educational or training requirements for jobs (Luzzo, 1995; Luzzo, Funk & Strang, 1996). According to Atli (2016), career maturity is a set of emotional and cognitive traits which include skills to handle situations concerning career choices and therefore, personality, is one of such traits that predicts career maturity positively and significantly.

Research has suggested that women and minorities are particularly susceptible to the negative effects of perceptions of career barriers, and that such perceptions can limit career options, consequently leading to career decision-making difficulties (Leal-Muniz & Constantine, 2005). Gati and Levin (2014) examined the construct of career-related decision-making difficulties among Israeli students. The results of the study indicated that males reported higher difficulties than females with respect to external conflicts and dysfunctional beliefs.

In Ghana, Ansong, Eisensmith, Okumu and Chowa (2019) explored the relationships between self-efficacy, academic aspirations, and academic achievement and concluded that gender gap narrows but only slightly. All students, but more so girls, will feel valued, and in turn, value their work if provided with a school environment that supports their feelings, enhances a positive perception, and includes school activities in which all students are encouraged to participate.

Wang and Degol, (2013), argued that the effect of gender and ethnicity on career decision-making may be underestimated and less documented, that, the processes of career decision-making may be more complex and restrictive for women than for men. However, some researchers have noted the need for career interventions to specifically address the effects of gender on career development (Harmon & Meara, 1994; Langowitz, Allen & Godwyn, 2013).

Research has also shown that demographic characteristics such as age, sex and their psychological variables have a significant impact on career development (Zhou & Santos, 2007). According to the Annual Review of Psychology (2007), skills in making decisions increase with age therefore, age presents some decisional advantage. Fabunmi and Adedayo (2017) asserted that career stability begins to be seen between ages of 20-22 years. However, other studies did not find any significant impact of students‘ sex and age on their career development (Hampton, 2006; Salami, 2008).

Career decision-making difficulties may come from a variety of factors. However, the subject of human personality continues to be of deep consideration and enquiry from vocational psychology. This current work is nested with the focus on personality factors, career beliefs and career maturity influencing career decision-making difficulties.

1.2 Statement of the Problem

Students all over the world are usually faced with the task of career decision-making (Moleke, 2004). The choice of careers, subjects, and courses of study in schools and of subsequent paths to follow, are always difficult problems facing prospective undergraduates (Pitan & Adedeji, 2014).

Data from a study conducted by the Institute of Statistics, Social and Economic Research (ISSER, 2017) of the University of Ghana indicated that it may, therefore, take up to 10 years for a large number of graduates to secure employment due to varied challenges. Consequently, Omotosho and Nyarko-Sampson (2012) contended that, ccareer aspirations of students have been poorly matched with the trends in the labour market. Again, research has also shown that over fifty per cent (50%) of university students experience difficulties with career decisions which could adversely influence their readiness for employment after school (Herr, 2013). Unemployment rate amongst holders of first degree was 5.9 per cent as at October 2013 (Ghana Statistical Service, 2014).

In a research conducted on the University of Cape Coast, Fabea (2012) focused on factors that influence career choice of students. The study investigated the educational, social, inherent and economic factors that predicted career decision among students. The study concluded that, inherent factors were the best predictors of career decision making of University of Cape Coast students. In a related study, Woasey (2015) investigated factors that influenced career decision-making of students in the Humanities at the University of Ghana. Results from the study revealed that Intrinsic factors reliably predicted career choice.

Fabea (2012) and Woasey (2015) focused on career decision- making using factors other than the big five personality, career beliefs and career maturity. According to Rossier (2015) personality should be one of the key considerations when conducting research in career decision-making. Studies have recognized the claims of the five-factor model (McCrae & Costa, 1999) which posited that personality traits can be explained by five higher-order personality dimensions (neuroticism, extraversion, openness to experience, agreeableness and conscientiousness).

This study sought to synthesize with empirical evidence of the five-factor model of personality, career beliefs and career maturity influencing career decision-making difficulties which will provide counsellors and researchers with an updated understanding of these factors as it appears within the Ghanaian socio-cultural context. Again, this study sought to use mixed methods design within a single study in so doing, benefiting from the research orientations of both quantitative and qualitative research designs.

The argument here is that, while students may experience similar career decision-making difficulties, it is also possible that differences exist amongst them. Empirical studies have also shown that perceptions, beliefs, and attitudes have substantial importance for understanding the intentions of students, regarding career decision (Ludwikowski, Vogel & Armstrong, 2009; Rochlen, Mohr & Hargrove, 1999). However, there is the need to know the relative impact of various types of beliefs and attitudes of undergraduate students that influence career decision-making difficulties (Braunstein-Bercovitz & Lipshits-Braziler, 2015). This study sought to put forward career-related beliefs that may predict career decision-making difficulties.

Data from the Careers and Counselling Centre of the University of Ghana, Legon (UGCCC, 2018) indicates that about 26% of students have challenges with choosing subject majors while another 37 % of students have no idea about what careers to pursue. Interestingly, only 22% of the student population patronize the career development services of the Careers and Counselling Centre. Consequently, the Centre has noted that, for five years after completing school, most former students of the University struggle with job placement and therefore, return to the Centre in search of job placement.

Even though it is not the only motivation for entering higher education, research suggests that the main reason many students want to go to university is to enhance their employability by making the right career choice (Shah, Pell & Brook, 2004). It is therefore, surpring why many undergraduates do not engage in the type of activities (e.g. early engagement with career decision-making) that would enable them to compete better in the graduate labour market.

The difficulties associated with student‘s career decision-making and the lack of readiness by students to access career counselling services to gain knowledge on the requisite vocational information, to attain sustainable employment, necessitated this research to be carried out on the University of Ghana, Legon campus.

1.3 Purpose of the Study

The main purpose of the study was to investigate career-related problems encountered by undergraduate students of the University of Ghana, Legon by examining personality factors, career beliefs and career maturity influencing career decision-making difficulties.

1.4 Theoretical Framework of the Study

One proposition is that, the search for good-fitting work is a mirage and the theories promoting that possibility have outlived their usefulness. The reason being that, neither people nor jobs are any longer stable (Kazuyuki & Kuo-lin, 2006). However, Lent and Brown (2013) argued that, although the social, political, economic and technological frame for work may well be shifting, those changes do not necessarily relegate career theories to the dust pile.

Krumboltz, Folley and Cotter (2013) stated, that –theory is a picture, an image, a description, a representation of reality. It is not reality itself, rather it is a way we can think about some part of reality so that we can comprehend it". Therefore, theories provide the _conceptual glue' and describes where and when, as well as describes the rationale behind the implementation of interventions for career counselling.

This study advances the understanding of personality factors, career beliefs and career maturity influencing career decision-making difficulties. In doing so, the study considered and reviewed multiple but related theories to serve as the theoretical structure that supported conceptual framework. The following theories were critically reviewed and served as an organizing framework for the conceptual model for this study, thus Gottfredson's theory of circumscription and compromise, Super's self-concept over lifespan, Krumboltz social learning theory of career decision-making and the big five or five factor model.

1.4.1 Gottfredson's theory of circumscription and compromise (1981)

This theory describes how career choice develops in young people. Gottfredson (1981) used the term circumscription in her developmental theory of occupational aspirations to describe career exploration as a process of eliminating and retaining occupational choices. The theory assumes that we build a cognitive map of occupations by picking up occupational stereotypes from those around us. Occupations are placed on this map using only a small number of dimensions: sex-type, prestige level and field of work and this was called the zone of acceptable alternatives (Gottfredson, 2002).

As young people build this map, they begin to decide which occupations are acceptable and which are unacceptable — those which fit with their own developing self-concept and those which do not. The first process is one of Circumscription — ruling out unacceptable options based on their perceived fit with one‘s developing self-concept. Circumscription was related to the developmental scheme within the theory through four stages (Blanchard & Lichtenberg, 2003).

Orientation to size and power (age 3–5). Children become aware that adults have roles in the world. They realise that they will eventually become adults and take on roles for themselves.

Orientation to sex roles (age 6–8). Children begin to categorise the world around them with simple concrete distinctions. They become aware of the more recognisable job roles and begin to assign them to particular sexes. They will start to see jobs which do not match their gender identity as unacceptable.

Orientation to social values (age 9–13). By now children have encountered a wider range of job roles and are capable of more abstract distinctions. They begin to classify jobs in terms of social status (income, education level, lifestyle, etc.) as well as sex-type. Based on the social environment in which they develop they will begin to designate some jobs as unacceptable because they fall below a minimum status level (tolerable level boundary) and some higher status jobs as unacceptable because they represent too much effort or risk of failure (tolerable effort boundary).

Orientation to internal, unique self (age 14+). Until this point circumscription has been mainly an unconscious process. As entry into the adult world approaches young people engage in a conscious search of the roles still remaining in their social space. In this process they use increasingly complex concepts such as interests, abilities values, work-life balance and personality to

exclude options which do not fit with their self-image and identify an appropriate field of work.

After circumscription has excluded options outside a perceived social and personal space, the next process is one of Compromise. In this stage, individuals may be inclined to sacrifice roles they see as more compatible with their self-concept in favour of those that are perceived to be more easily accessible. In this they are often limited by their lack of knowledge about how to access certain roles because of lack of information, lack of know-how and appropriate tactics, and lack of helpful social connections. Gottfredson proposes that when people are forced to compromise their career choices, they are more likely to compromise first on field of work, then on social level and lastly on sex-type as the amount of compromise increases. This prediction has been the most controversial with some research seeming to offer limited support (e.g. Blanchard & Lichtenberg, 2003) and some to challenge it (e.g. Hesketh et al., 1990).

The theory proposes that when people are forced to compromise their career choices, they are more likely to compromise first on field of work, then on social level and lastly on sex-type as the amount of compromise increases. This prediction has been challenged by Hesketh et al. (1990) who asserted that this part of theory lacks structure. However, Blanchard and Lichtenberg (2003) offer support for the theory arguing that its structure is comprehensive.

This theory relates to this study because dealing with career barriers in life is difficult, and the freedom to choose can be yet more daunting when stakes are high and conditions uncertain. The gift of occupational choice, although constrained, poses big challenges. Confused or overwhelmed, some people drift with their birth role, thereby abandoning the opportunity and responsibility they may have in their lives.

Others gradually exercise control, but too late to avoid irreversible loss of opportunity. Career counsellors can first help students avoid unnecessary, self-limiting circumscription and compromise. They can then help students identify and wisely invest in the genetic and social resources at their disposal to fashion satisfying career lives. Again, Counsellors can help students with self-insight to construct and conceptualize a future career path that is realistic and feasible, and to wisely invest in themselves to successfully choose preferred career options.

1.4.1 Self-concept over lifespan – Super (1950's).

Super (1957) acknowledged the valuable contribution of the trait-and-factor theory and the matching model to vocational theory and guidance practice. But he was also of the opinion that they were too static and insufficient in explaining the complexities of vocational behaviour (Cobb, 2001). According to Super (1957) the individual's self-concept plays a central role in their career choice. Super's self-concept theory considers career in terms of vocational preferences and competencies called "self-perception". The self-concept changes over time and develops as a result of experience. Super (1957), describes career development as a series of events in a predictable sequence. Each aspect of the sequence presents the individual with a particular set of problems to be solved (Osipow & Gold, 1968). Super (1957) stated that occupational choice should be viewed as a continuous process and not a point-in--time decision. In a bid to enhance the trait-and-factor approach, he constructed a comprehensive career theory in which (a) career development is seen as a lifelong process unfolding in a series of developmental stages and (b) career selection is not a one-shot decision but the cumulative outcome of a series of decisions (Santrock, 2004).

Super (1957) explains that the thought of self – concept changes over time, and develops as a result of experience. Consequently, Super developed the concept of vocational maturity, which may or may not correspond to chronological age. Career maturity is one‘s actual vocational behaviour and what is expected of that stage of development. Career maturity encompasses readiness to cope with developmental tasks at a given stage and it is both affective and cognitive. This means a Level 400 student at the University should be able to make a more appropriate career decision as a result of experience than a Level 100 student and this may or may not be related with age but rather experience.

Super (1957) emphasizes that career development consists of five different growth phases. The first growth, occurs within the fourteen- or fifteen-year-period (14, 15) following birth and is characterized by the development of associated self-concept aptitudes, attitudes, interests and needs. The exploratory stage (ages fifteen through twenty-four (15-24) sees career choices being narrowed, and the establishment stage (ages twenty-five through forty-four (25-44), is characterized by work experience. From ages forty-five to sixty-five (45-65), a person undergoes a perpetual adjustment process to improve the working situation called maintenance. Finally, during the decline phase (ages sixty-five and over (65+), work output reduces and retirement follows in eventual succession.

Actual life stage in relation to expected life stage provides one basis for judging vocational maturity (vocational maturity). The second way of evaluating vocational maturity is based on the behavioural repertoire which the individual has available for coping with the developmental tasks considered appropriate for his age and expected life stage (vocational maturity). The behavioural scale of career development referred to in these definitions of vocational maturity, has several

presumed dimensions Super and his associates (1957; 1971) have delineated and defined over the years vocational maturity, as part of the Career Pattern Study, a 20-year longitudinal investigation of career development from early adolescence (approximately age 15) to mid-life (age 35).

Super (1957) asserted that there are five, principal dimensions, each with several parts or indices, which have been hypothesized as applicable to career maturity:

1. **Orientation to Vocational Choice**: One mark of career maturity is the extent to which a young person is aware of the need to choose an occupation and the factors which enter into this decision.

2. **Information and Planning**: Another criterion of career maturity is the amount of reliable information an individual has at his/her disposal to make decisions about occupations and then to plan logically and chronologically for the future.

3. **Consistency of Vocational Preference**: Still another index of career maturity is how consistent an adolescent is in his /her preferences for different occupations from one point-in-time to another.

4. **Crystallization of Traits**: In mature career development, the psychological attributes of the individual relevant to decision-making, e.g., differentiable interest patterns, explicit values, and increasing independence, develop apace with the tasks which have to be accomplished.

5. **Wisdom of Vocational Preference**: More generally known as realism of vocational choice, this dimension of career maturity reflects how closely an individual's career decisions agree with various aspects of reality, such as the requisite

ability for the preferred occupation, the appropriate interests for the career field, and the availability of financial resources for relevant training.

Based on Super's theory of career development, which emphasizes general factors related to realistic career choice content and process, Crites (1974) develops the Career Maturity Inventory (CMI) based on conceptualization of career maturity. Higher CMI scores identify individuals with mature career decision-making approaches resulting in readiness to make informed career plans. Consistent with Crites's model of career maturity, the original CMI assessed five competencies (self-appraisal, occupational information, goal selection, planning, and problem solving). The Career Maturity Inventory (CMI) was revised in 1978 and in 1995.

In spite of its robustness and strength, Career Maturity has been criticized as a theatrical construct fraught with limitations. Savickas (1997) argued that the theory should incorporate learning and decision-making processes into the model and the replacement of the construct of maturity with career adaptability. However, Crites (1981) asserted that Super (1957) shifted his focus of career counselling away from the static, single-choice as a point- in –time concept of decision-making and added that, Super (1957) placed the study and field of career behaviour within the human development context. According to Miles (2008), Super (1957) maintained that time and life experiences influence vocational preferences and skills. Consequently, the concept of –career" is an on-going process that includes decision-making, education, change and adaption. Vocational choice should be seen as an expanding process and not as a point-in-time event. Therefore, career maturity is conceptualised as developmental stages in the life of an individual (Crites, 1981).

This theory is appropriate for this study because career development is progressive. During adolescence, a student should be able to make age appropriate career decision by making the right subject choice during Junior High and Senior High Schools. Most undergraduate students in the University are at the exploratory stage which is ages fifteen through twenty-four (15-24) where students choose subject majors that would eventually lead to a career choice. Counsellors should help students with goal-setting by helping students ascertain career alternatives and exposing them to appropriate experiences and exploratory activities. In order to define the appropriate educational or counselling goals for each student, it is first necessary to recognize the person's life stage and vocational maturity; then appropriate decision-making and goal-setting can follow. Counselling will actualize the skills, talents and interests of students' self-concept.

1.4. 3 Social learning theory of career decision-making, Krumbolz (1979).

Utilizing the Social Learning Theory of Bandura (1977), Krumboltz's Social Learning Theory of Career Decision-making (1979), proposed a system for understanding career-related behaviour. According to this theory, one's personality, choices, and behaviours are learned on the basis of two kinds of experiences:

Instrumental learning: It happens when one's behaviours are rewarded or punished. Consequently, one is likely to replicate the behaviours that are positively reinforced, but stay away from the behaviours that are penalized.

Associative learning: It takes place when one links the emotionally neutral incident/stimulus with an affective incident/stimulus, observe others' behaviours, or get new information through media. Krumboltz (1979) also discovered four types of factors that affect career development:

Genetic endowment: This refers to innate features that may shape one's capability to attain certain academic and occupational choices and skills. It comprises racial background, gender, physical outlook, abilities and disabilities.

Environmental conditions: These include economic, social, political and cultural factors which are not in one's control, but which may influence one's career development in some manner.

Learning experiences: Every person has distinctive learning experiences through associative and instrumental learning processes resulting in variety of career choices and goals.

Task approach skills: Interface among genetic endowment, environmental conditions, and learning experiences. People form their own task approach skills and use them for dealing with tasks or problems they face. These skills comprise performance levels, values, work patterns, cognitive schemas and emotional reactions.

The above four factors help to form one's overall belief systems. Krumboltz (1979, 1983) considered the belief system as personal generalizations in an effort to characterize their own perceptions of self and environment. People continually observe themselves and evaluate their performance against their own or others' ~~-e~~riteria". Consequently, this affects how they form their self-concept, or self-observation generalizations. Self-observation generalizations refers to one's values, interests and attitudes; and they may be explicit or implicit self-statements. People's assumptions about the environment are their world-view generalizations. They are formed from individuals' observations and interface with the environment. World-view generalizations are used to guess what will happen in the future.

Mitchell and Krumboltz (1996) asserted that people's beliefs about themselves and occupational world affect their attitude to learn new skills and ultimately influence their ambitions and behaviours. Krumboltz (1991) stated that individuals' interests and values are formed through one's learning experiences and both of them constitute self-observation generalizations. He illustrated that how one goes about career related activities is based on what one believes about oneself and the occupational world. For instance, if a student believes he/she has the capability and has an interest in understanding human beings and opt for psychology as a field or as a profession, then his beliefs are said to have influenced his choice of career.

Beliefs are the generalizations that are developed through the learning process. One's understanding of their abilities and beliefs affect perceptions (assumptions individuals' holds about career be it positive or dysfunctional). These beliefs system influences the career decision-making process. The resultant effects are unreliable information and contradictory opinions which makes the decision-making process harder. This is because if the belief system is positive and realistic then it facilitates the decision-making process, however, if the belief system is dysfunctional or irrational then it will lead to career decision-making difficulties.

The Social Learning Theory of Career Decision-making has been criticised by Pryor (1985) for the fact that, the theory heavily focuses on processes of learning and in doing so disregards biological and hormonal predispositions that may influence behaviours, regardless of past experience and expectations. Again, the theory assumes that changes in the environment will automatically lead to changes in the person, when this may not always be true.

In spite of the criticism labelled against the theory, the theory possesses some benefits for career decision-making process. Social learning theory addresses that thinking in a controlled way through analysis, synthesis, valuing, and execution, help clients conclude counselling process with well-reasoned career choices (Krumboltz, 1996).

This theory is related to this study because Krumboltz (1996) proposed that the role of career counselling is to help clients expand their learning and clarify beliefs that hinder and facilitate their career development. From the perspective of social learning theory (Krumboltz, 1996), career counsellors might constructively challenge students' faulty beliefs in education (i.e., perceptions of barriers) by expanding their learning about accessible sources of support (i.e., perceptions of support) for their school, work, and life goals.

1.4.4 The big five personality theory

The _Big Five' or Five-Factor Model (FFM) is the personality trait model constituted by the five factors or dimensions namely, Extraversion, Agreeableness, Conscientiousness, Neuroticism and Openness to Experience (Goldberg, 1993). This model emerged from applying the principles of the psycholexical approach to personality (De Raad, 2000). With literally thousand different ways of classifying people, Allport and Odbert (1936), began compiling a list of 18,000 words from a Webster dictionary that would be used to distinguish one person from the other. Using factor analysis, Cattell (1990) collapses the number into 16 traits. Previously Eysenck (1953) had proposed there are three types of personality thus Extraversion, Neuroticism and Psychoticism.

Over time, other theorists used Factor Analysis to theoretically start with the lexical hypothesis, holding the position that our common stock of words, our lexicon, embodies the Big Five distinctions or structure of personality. This hypothesis has been expressed in different ways by the personality psychologists (Cattell, 1943; Goldberg, 1981; Norman, 1963; John, 1990; Mc Crae & Costa, 1990).

Initially the structure consisted of Neuroticism, Extraversion, and Openness to Experience (NEO). However, Costa and McCrae (1992) added the two factors Agreeableness and Conscientiousness to their own model until the NEO-PI came into existence to measure the FFM dimensions (Santrock, 1994).

While the two largest factors (Anxiety/Neuroticism and Extraversion) appear to have been universally accepted in the pioneering factor-analytic work of Cattell (1990), the critique against the theory suggests, nevertheless, that the FFM provides a less than optimal account of human personality structure (Paunonen & Jackson, 2000). However, Lounsbury, Gibson and Hamrick (2004) asserted that a host of new lexical studies in various languages, are often supportive of the Big Five model, and this productive work provided the grounds for McCrae and Costa (2010) to build their Five-Factor Theory.

The Five Factor Model is related to this study because it helps the counsellor to understand that individually, these broad domains affect how students might interact with counsellors or approach work tasks and settings. For example, extraverts, who tend to be more sociable and active, might prefer people-oriented occupations and are more likely to be talkative and enthusiastic during counselling sessions. Those high on Openness frequently have wide interests, which may interfere with their ability to commit to one career option. Their openness to new ideas and imaginative qualities also increase receptivity to novel counselling interventions. Given their

attention to details and dutiful approach to tasks, conscientious individuals often demonstrate greater job performance. Moreover, highly conscientious individuals likely show greater motivation to engage in the challenging tasks involved in planning a career. The Big Five domains, provides more refined insights to career counselling. For example, levels of Openness and Conscientiousness can inform one's approach to learning. Those high on both may flourish in an academic setting because they are naturally curious, have greater aspirations, and are motivated to seek high goals. However, those high on Openness, but low on Conscientiousness, might struggle to realize their imaginative ideas due to lesser diligence or achievement motivation.

Leung (2008) asserted that the development of career guidance and development into a global discipline requires a set of theoretical frameworks with universal validity and applications, as well as culture-specific models that could be used to explain career development issues and phenomenon at a local level. Therefore, this study sought to develop a comprehensive system of conceptual theory and intervention strategies for career counselling in Ghana.

1.5 The Conceptual Frame Work

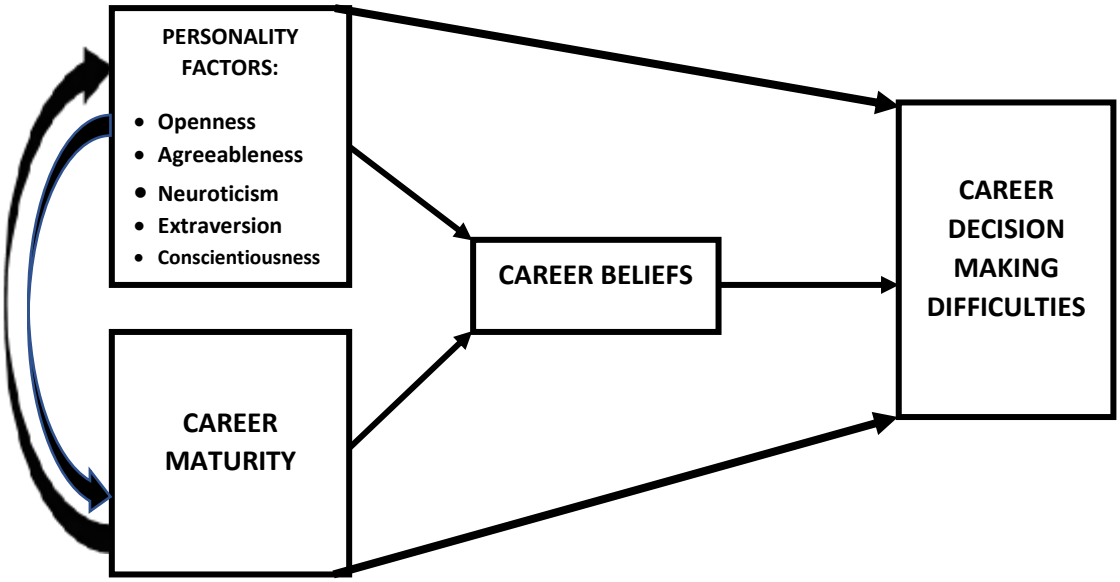

Figure 1: Conceptual Model of the study variables

The Conceptual framework was designed based on the concepts as well as the variables derived from the theoretical and empirical reviews. The rationale was to clarify the relationship between personality factors, career beliefs and career maturity as determinants of career decision making difficulties.

The model proposed that, personality factors (Openness, Conscientiousness, Extraversion Agreeableness, and Neuroticism) and career maturity have significant influence on career decision making difficulties. However, there is an interaction relationship between personality factors and career maturity. These personality factors, promote certain career related behaviours. For instance a student high on openess factor is likely to be intellecctually wired and would ask many questions and would want to plan ahead. These attributes are likely to contribute to proplem solving and planning which are signals of career maturity. This means personality and maturity interact and influences each other during the career decision making process and may have effect on the difficulties students may encounter during this stage.

The squared multiple constructs in this study thus personality and career maturity do have an effect on career beliefs which eventually have a direct bearing on career decision making difficulties. One's understanding of their abilities and beliefs affect perceptions (assumptions individuals' holds about career be it positive or dysfunctional). These beliefs system influences the career decision making process. When the belief system is positive and realistic then it facilitates the decision-making process, however, if the belief system is dysfunctional or irrational then it will lead to career decision making difficulties.

That said, personality and career maturity as individual constructs can have significant effect on career decision making difficulties without necessarily using career beliefs as a mediating variable. The model showed that the students' personality, career beliefs, and career maturity have a relationship with career decision making difficulties one way or the other.

1.6 Objectives of the Study

The objectives of the study were to:

1. Predict personality factors and career decision-making difficulties of undergraduates at the University of Ghana.
2. Explain the effect of students' career beliefs on career decision-making difficulties at the University of Ghana.
3. Establish relationship between career maturity and career decision-making difficulties of students.
4. Explore gender differences on career decision-making difficulties of undergraduates.
5. Differentiate between age and career decision-making difficulties.

1.7 Research Questions

Based on the objectives of the study, the following research questions were formulated to help guide the study**.**

1. What factors inform career beliefs of undergraduate students of the University of Ghana?
2. What are the views of undergraduate students on the relationship between career maturity and career decision-making difficulties?
3. In what ways would gender differentiate career decision-making difficulties?

1.8 Statement of Hypotheses

Hypotheses were tested at 0.05 significance level

1. H_0 = Personality factors are not statistically significant predictors of students' career decision-making difficulties.

   H_1 = Personality factors are statistically significant predictors of students' career decision-making difficulties.

2. H_0 = Career beliefs are not statistically significant predictors of students' career decision-making difficulties.

   H_1 = Career beliefs are statistically significant predictors of students' career decision-making difficulties.

3. H_0 = There is no significant relationship between undergraduate students' career maturity and career decision- making difficulties.

   H_1 = There is significant relationship between undergraduate students' career maturity and career decision-making difficulties.

4. H_0 = Gender is not a significant differentiator of career decision-making difficulties among undergraduate students of the University of Ghana.

H_1 = Gender is a significant differentiator of career decision-making difficulties among undergraduate students of the University of Ghana.

5. H_0 = Age is not a significant differentiator of career decision-making difficulties among undergraduate students of the University of Ghana.

   H_1 = Age is a significant differentiator of career decision-making difficulties among undergraduate students of the University of Ghana,

1.9 Significance of the Study

Making appropriate occupational decisions will require a high level of self-understanding (Niles & Harris-Bowlsbey, 2013). For this reason, choosing a **career** that matches one's personality is very important as it can translates into professional success. Therefore, providing students with information to understand themselves by uncovering their unique personalities, will enable them to make informed career decisions and avoid the miseries that come with person-career environment mismatch.

This is one of the few studies that has considered career decision-making difficulties from both positivists and constructivists perspectives within the Ghanaian socio-cultural context. Therefore, the study benefited from both positivists and constructivists perspectives in research.

Furthermore, the outcome of this research will equip school counsellors to plan for interventions when necessary with current information on personality traits, career beliefs and career maturity. Such interventions would help students take advantage of opportunities and be ready to deal with barriers and setbacks and make a smoother transition into the 21st century workplace.

Additionally, this study considered personality from the big five personality factors, namely Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism using the Big Five Personality Inventory. The study also explored the perceptions and assumptions students held about careers with the Career Beliefs Inventory and assessed students‘ level of career maturity or career readiness with the Career Decision Self Efficacy Scale- Short Form and used the Career Decision-making Difficulties Questionnaire to measure difficulties students encounter during the career decision-making process. Therefore, the study added to knowledge by testing the validity of these existing measures using Ghanaian population. This will serve as an important source of reference material for counsellors, psychologists, educational practitioners and students.

Finally, this study, is an evidence-based research material and will contribute to the host of reference materials at the Careers and Counselling Centre of the University of Ghana, Legon. It is expected to modify the career development training at the Centre and also serve as a valuable source of information to the Management of the University of Ghana in making policies, enacting rules and regulations, reviewing content of curricula that will persuade students to enrol in career development courses.

1.10 Delimitation

The subject matter of the study was delimited to personality factors, career beliefs and career maturity influencing career decision – making difficulties among students of the University of Ghana, Legon campus. Furthermore, career decision-making difficulties could be a concern for a wider variety of individuals, including high school students and professionals who are considering a change of career. However, this study only focused on undergraduates of the University of Ghana.

Therefore, the situation of other University students living in other geographic or cultural regions may not be identical to that of the sample of this study. This means that, geographically the study had some territorial delimitations which does not allow it to be extrapolated beyond the specific context and circumstances of its research population.

1.11 Summary

Chapter One focused on the introduction of the research area and laid down the foundation required for this study. It consisted of the background, the theoretical and conceptual framework. This was followed by the statement of the problem, the research objective and questions and the statement of the hypotheses. The significance and the delimitation of the study were all discussed in this chapter. On this basis, the study proceeded with a detailed description of the research, with a complete review of literature as provided in Chapter Two.

1.12 Organisation of the Study

The study is presented in six main chapters, each with subsections that are described below.

Chapter One presents the general background to the study, followed by these reviewed career development theories; Gottfredson‘s theory of circumscription and compromise, Super‘s self-concept over lifespan, Krumboltz social learning theory of career decision-making and the big five or five factor model and these served as theories on which the conceptual framework was built. A statement of the problem, purpose of the study, objectives of the study and research questions were described respectively. The hypotheses with the variables to be tested are stated and the significance of the current study is provided. Delimitations of the study are explained.

Chapter Two reviewed literature relevant to personality traits, career beliefs and career maturity on Career Decision-making Difficulties. Age and Sex and the effect they have on Career Decision-making Difficulties were also examined. The Chapter also identified gaps in the literature which the study sought to bridge.

Chapter Three contains details of the study institution, philosophical assumptions, the sample and sampling techniques, followed by research approach and the research design employed in the current study. The following aspects were also considered, data collection instruments, administering and scoring of the measurement or instruments, confidentiality and statistical analysis methods. The methods and interview process for the qualitative study are also provided.

Chapter Four outlines the results and analysis of the outcomes of the collected data and the descriptive statistics. Predictive ability of personality factors, career beliefs were statistically tested with regression analysis. Gender and age and their differences were also tested with the independent *t test* and the relationship between career maturity and career decision-making difficulties was tested using the Pearson Product Moment Correlation. The results of the qualitative study and views expressed by students during the interview sessions were also presented.

Chapter Five provides an analytical discussion on the results. Discussions on the comparisons and contrasts between the findings of the current study with findings in the relevant literature for both quantitative and qualitative are presented.

Finally, Chapter Six presents a summary of the major findings and conclusions are drawn. The results of the study are explained in the light of their educational significance and implications for career counselling. Recommendations are made and limitations to the study are presented. Contributions of the study to knowledge is

stated and reason for policy formulation for career counselling are provided. Suggestions for areas for future research are also presented.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter mainly deals with the review of existing and related literature on Personality factors, Career beliefs and Career maturity as on career decision-making difficulties. In a bid to gain adequate knowledge on the subject, some related empirical studies were reviewed. The analysis of a plethora of previous works provided the researcher a better understanding of the problem, the ability to identify where the gaps exist in literature and most importantly the capacity to adopt relevant methods to address the gaps.

The following subtopics were considered for literature review:

- Personality factors,
- Career beliefs,
- Career maturity,
- Sex and age and
- Career decision-making difficulties.

2.1 Empirical Review of Related Studies

One of the central aims of career counselling is to facilitate the career decision-making process of students and in particular, to help them overcome the difficulties they encounter during this process. Therefore, identifying the unique difficulties that prevent individuals from reaching a decision is an essential step in providing them with the help they need (Gati, Krausz & Osipow, 1996).

Since the earliest days of vocational psychology, personality has been a key component of understanding careers and how they affect an individual‘s life. The field of vocational psychology has developed over the years and has become a well-respected specialisation of the discipline in psychology. Work by Parsons (1909) and Holland‘s RIASEC model (1959) addressed ‗‗personal characteristics‘‘ as part of their approach to career development. According to the ―personal characteristics‖ theories, the cardinal goal of career or vocational counselling is to match clients to careers that provides the client with a rewarding as well as an interesting occupation in the immediate future. As such, researchers and practitioners have traditionally focused on career interest surveys as one way of attaining this goal. However, in the last 20–30 years, there have been an increasing interest in the relationship between career interests and personality (Larson, Rottinghause & Borgen, 2002).

2.1.1 Personality and career decision-making difficulties

According to Reed, Bruch and Haase (2004), personality is ―the coherent pattern of affect, cognition, and desires (goals) as they lead to behaviour‖. The American Psychological Association (APA) defines personality as ―individual differences in characteristic patterns of thinking, feeling and behaving‖ (APA, 2017). Citing such genetic and biological evidence, Cantor and Zirkel (1990), referred to personality traits as things that people "have." Therefore, congruence between career interests and personality affect motivation and performance (Hamer & Bruch, 1997).

The subject of personality has engaged the attention of psychologists for several decades and thus, takes a centre stage in many studies that focus on understanding human behaviour (Ryckman, 2013). The construction of the five-factor model emanated from the theoretical foundation which was grounded on the measure of traits that commonly describes behaviour in individuals (Lounsbury, Sundstrom,

Levy & Gibson, 2014). The model is a version of the trait theory most commonly utilized in personality trait research (McCrae & John, 1992). The trait theory sees the essence of human nature in individual differences (Terracciano, McCrae, Costa & Paul, 2010; McCrae & John, 1992).

Empirical studies provide evidence to the fact that, there is a relationship between personality and Career Decision-making difficulties (Gati, Osipow, Krausz & Saka, 2000). Therefore, career decisiveness and career indecisiveness have become an area of research interest to vocational psychologists (Osipow, 1999). Fuqua, Seaworth and Newman (1987) inspected the relationship between personality and career decisiveness of American students to determine the career decisiveness of the students. The findings of the study demonstrated that a relationship exists between some personality characteristics and career indecisiveness.

In Ghana, Annan (2006) conducted a study in the Shama Ahanta East Metropolis and the primary objective was to examine factors that affect career choice among Senior High School students. Using a descriptive survey design, the findings of the study showed that personality was the most influential factor that determined career choice among Senior High School students in that area. Similarly, Borchert (2002) researched on career choice factors of high School Students with the aim of finding out the influence of personality factors and environment on career decision-making. The findings corroborated the findings of Annan (2006) where personality factors were identified as the most important factor when choosing a career. Environmental factors were not significant in making their career decision however, students did not show outright disregard for them.

Onoyase and Onoyase (2009) conducted a study in the Federal Government Colleges in Nigeria with the aim of investigating the relationship between students' personality types and career choice in Nigeria. The findings from the analysis of the data showed that statistically significant relationships were found between personality characteristics and career decision-making difficulties among students. Similarly, Saka, Gati and Kelly (2008) found that, undergraduates with low self-esteem and high anxiety as a trait, showed greater difficulties in making a consistent career decision. It can be stated from the results of their study that, the psychological construct of efficient personality is associated with career decision-making by more mature and independent undergraduates, whereas the ~~"r~~elationships" dimension of the efficient personality (empathy, assertiveness) is more linked to career decision-making that depends more on the context surrounding the subject, be it social or family. Both high and low efficient personalities pay the same attention to future career opportunities and experience the same level of difficulty during their university studies when choosing their subject Majors.

Costa and McCrae (1992) posited that, among the personality models, the Big Five Personality Model is the most widely accepted and well-researched model. The model comprises of five personality factors and provides the basis upon which individuals can be characterized and are measured on a **continuum,** ranging from low to high levels of the trait.

The Neuroticism factor represents individuals' tendency to experience psychological distress and a general tendency toward emotional instability. Those who rank higher on neuroticism tend be more easily upset and less comfortable with themselves. Those who rank lower in neuroticism tend to be more secure and evenly tempered (Costa & McCrae, 1985).

The Extraversion factor consists of a broad group of traits including sociability and the tendency to experience positive emotions such as joy and pleasure. Individuals who are high in extraversion on a career test have a tendency to thrive on excitement, and are enthusiastic, action-oriented people. They like to be the centre of attention in groups. On the other side of the coin is a person who is more reserved, less likely to be social and tends to be uncomfortable with interacting with strangers is the trait opposite to the extraversion and is termed as introversion (Goldberg, 1993).

The Openness to Experience factor is defined as a tendency toward the imaginative and artistic, intellectual curiosity, behavioural flexibility, and being non-dogmatic in one‘s attitudes and values. A person with a high level of openness to experience in a personality test enjoys trying new things. They are imaginative, curious, and open-minded. Individuals who are low on openness to experience would rather not try new things. They are close-minded, literal and enjoy having a routine (Lounsbury et al, 2014).

The Agreeableness factor is primarily a dimension of interpersonal behaviour. Individuals who are high on agreeableness are trusting, sympathetic and cooperative, whereas individuals who are low on agreeableness are cynical, callous, and antagonistic (McCrae & Costa, 1992).

The Conscientiousness factor is defined by the attributes of orderliness self-discipline, deliberation, dependability and competence. A person scoring high on conscientiousness usually has a high level of self-discipline. These individuals prefer to follow a plan, rather than act spontaneously. However, individuals who are low in consciousness tend to be impulsive and spontaneous (Costa & McCrae, 1985; Hogan & Ones, 1992).

A longitudinal study by Smith (2011) explored personality traits and career decidedness among university students. The findings of the study replicated other studies done earlier by Lounsbury, Hutchens and Loveland (2005). The results of the study showed that –career decidedness" correlated positively with the broad Big Five Personality traits, openness, conscientiousness and agreeableness. Students high on Agreeableness tend to have lower levels of career indecision (Lounsbury, Tatum, Chambers, Owens & Gibson, 1999). However, there have been mixed results regarding findings on Openness to experience factor. Reed, Bruch, and Haase (2004) found that individuals who were higher in openness were less likely to engage in occupational exploration tasks On the contrary, Openness was found to be positively related to career decidedness (Lounsbury, Sundstrom, Loveland & Gibson, 2003). However, Page, Bruch, and Haase (2008) found no associations between openness and career indecision.

Wang, Jome, Haase and Bruch (2006) investigated the effects of personality and career decision-making self-efficacy on progress in career choice commitment in a sample of 184 college students. It was hypothesized that self-efficacy would mediate the relationship between neuroticism and extraversion and career choice commitment. Results revealed significant differences between white students and a composite group of students of colour on the study variables. For white students, self-efficacy fully mediated the relationship between extraversion and career choice commitment, whereas for students of colour, a partially mediated model fit the data in which neuroticism and extraversion were related to career choice commitment directly and indirectly through self-efficacy.

In a study, Guranda (2013) indicated that participants who exhibited high level of trait agreeableness were interested in profession in the social sciences. Agreeableness and mental openness were traits associated with creativity and people with such trait tended to be more receptive to changes and ready to try out new thinking alternatives as well as efficient in decision-making (King, Walker & Broyles, 1996). In terms of gender differences, females were high on agreeableness and openness as compared to males whiles males were high on conscientiousness and emotional stability. This finding was however in contradiction to the studies by Matthews, Deary, Whiteman (2005) which showed that women scored higher on conscientiousness and emotional stability.

Previous research suggested that the Agreeableness personality factor was negatively associated with career indecision (Lounsbury, Foster, Carmody, Kim, Gibson & Drost, 2012), on the contrary results from other studies indicated that higher levels of Agreeableness were associated with higher levels of emotional and personality-related career decision-making difficulties (Gati, Gadassi, Saka, Hadadi, Ansenberg, Friedmann & Asulin-Peretz, 2011). Although, other studies (for example, Evans & Dirks, 2001) demonstrated a significant correlation between Agreeableness and performance however, Smithers, Catano and Cunningham (2004) did not find this to be so. The work of Page, Bruch, and Haase (2008) supported a significant association between Extraversion and career decidedness.

There are people who seem to be more talkative, arguing for their opinions (Howard & Howard, 1995), interacting with every one so frankly and seek excitement in every bit of life. Extraversion is the personality traits which covers these kinds of people in our society (Ostendorf & Angleitner, 1992). Like Agreeableness trait, this quality of personality also makes people more social (Mount, Murray & Steve, 2005)

and will go out of their way to interact with people in the society. The Introverted are less likely to open up with others easily and would prefer to be self-centred and alone (Sucier & Goldberg, 1998).

Research suggests that Extraversion dimension has quite healthy role in predicting the success in a career (Judge, Higgins, Thoresen & Barrick, 1999). The work of Page, Bruch and Haase (2008) supported a significant association between Extraversion and career decidedness. Trait Extraversion is associated with problem-solving confidence and less decision-making difficulties (Judge et al., 1999). Other studies corroborated the finding that Extraversion personality factor was negatively associated with personality related career decision-making difficulties (Lounsbury et al., 2014) suggesting that individuals who are more sociable and active have greater tendency to experience positive emotions and are less likely to experience personality-related career decision-making difficulties. Contrary to these findings is that of Page, Bruch and Haase, (2008) who found that specifically, individuals who were undecided regarding their occupational choice, or who had higher levels of career indecision, also had lower levels of extraversion, which is the tendency to avoid social situations and feel more comfortable listening to others than needing to talk or be heard.

Pečjak and Košir (2007) examined the differences in personality, motivational factors and career decision-making difficulties between career decided and undecided students. The predictive value of some personality and motivational variables for secondary school students‘ career decision-making difficulties was also investigate and 641 students of the fourth class of grammar school participated in the study. The results show that there are differences between career decided and undecided students in most of the personality variables. Career decided students make their decisions

more self-confidently, are less panic-stricken and avoid decision-making less compared to undecided students. They are higher in extraversion, conscientiousness, openness and emotional stability, are more competent and report having more self-control and fewer career decision-making difficulties. The most important predictors of students‘ career decision-making difficulties are: a less panic-stricken and impulsive decision-making style, extraversion, emotional stability and competence in self-regulation.

Both career-related developmental indecision and chronic indecisiveness are manifested in the difficulties individuals experience when choosing a career. Developmental career indecision is often regarded as a normal stage that many individuals undergo, regardless of individual differences in various personality factors (Super, 1994). Testing this premise Di Fabio, Palazzeschi, Levin and Gati (2014) focused of their study specifically, the associations between career decision-making difficulties (Career Decision-Making Difficulties Questionnaire, a measure of developmental career indecision) and the Big Five personality factors were investigated among participants from three educational settings. In the study, 248 high school students, 167 on-the-job training (OJT) interns, and 186 university students were interviewed. The results revealed that university students experience less developmental career indecision than high school students and OJT interns, suggesting that individuals‘ educational setting affects the prevalence of such difficulties. However, the personality factors of Extroversion and Neuroticism consistently explained a significantly larger percentage of variance in participants‘ developmental career indecision levels in all three samples than did educational setting or age. These results suggest that developmental career indecision may in fact be more personality related than previously thought.

Although perfectionism has been linked to a variety of mental health problems, the relevance of perfectionism in other life domains is just beginning to receive attention. Given the evidence that personality plays an important role in career choice and adjustment, Page, Bruch and Haase (2008) evaluated whether aspects of perfectionism make any unique contribution to the prediction of career indecision beyond certain traits of the Five-Factor model that may also be related to career indecision. Results showed that both maladaptive and adaptive perfectionism accounted for unique variance in career decision-making self-efficacy beyond variance predicted by neuroticism, extraversion, openness, and conscientiousness. In contrast, only maladaptive perfectionism accounted for unique variance in certainty of career commitment beyond variance predicted by neuroticism and conscientiousness.

Penn and Lent (2019) examined the differential roles that career decision-making self-efficacy and the Big Five traits of neuroticism, extroversion, and conscientiousness may play in relation to career decision status and decisional difficulty. They also examined the possibility that the traits could function to moderate the relation of self-efficacy to the dependent variables. Employing a sample of 182 undergraduates, the study found support for a mediational model in which each of the personality traits relates to self-efficacy which, in turn, predicts career decidedness. In addition, conscientiousness was found to moderate the relation of career decision-making self-efficacy and extroversion moderated the relation of self-efficacy to decidedness.

Fong (2012) used the Five-Factor Model of Personality and the Theory of Planned Behaviour to examine the role of personality in affecting career choice commitment of university undergraduate students in Hong Kong. Adopting a quantitative research design, the study surveyed more than 280 undergraduate

students in universities in Hong Kong by anonymous questionnaire and useful data were collected. Using quantitative method and statistical techniques to analyse the data, the most important findings are that personality trait of a person is very fundamental to determine one‘s career choice commitment because four of the five personality traits namely extraversion, neuroticism, openness and conscientiousness influence one‘s attitude towards career goal very much. Therefore, the study concluded by asserting that understanding of one‘s personality proved to be very important to university students for career planning and development.

Lounsbury, Tatum, Chambers, Owens and Gibson (1999) drawing on research on careers, career indecision, and personality, examined career decidedness in relation to life satisfaction and the "Big Five" personality constructs of neuroticism, extroversion, openness, agreeableness, and conscientiousness. Both general and work-based Big Five measures were studied. Participants were 249 undergraduates at a large south-eastern United States University with representation from all four years. For both general and work-based Big Five measures, results showed that career decidedness was positively and significantly related to life satisfaction, agreeableness, and conscientiousness as well as negatively related to neuroticism.

Gunkel, Schlaegel, Langella and Peluchette (2010) while concluding their research on personality traits and career decisiveness in three countries including China, Germany and United States of America suggested that the Big Five personality traits are associated with broad range of career beliefs. Neuroticism, extraversion and conscientiousness were likely to be related to vocational behaviour in terms of occupational interests, career indecision and job satisfaction.

In a research conducted by Soraya, Elaheh and Masoud (2011), which aimed at studying the relationships between personality traits and academic achievement among students. Participants were 285 students (191 female and 94 male). Instruments used were NEO, Big Five Personality Factors and student‘s GPA. Results revealed personality traits were significantly related to academic achievement. Stepwise regression analysis indicated personality characteristics accounted for 48 percent of variance in academic achievement. Results also showed conscientiousness, which explained 39 percent of variance in academic achievement, and was the most important predictor variable.

Trait Conscientiousness involves orderliness and self-control in the pursuit of goals (Nettle 2005). The propensity to work in such a way that there are no flaws, where everything gets done rightly. However, when things are chaotic, it induces mental stress for those who are conscientiousness (Ostendorf & Angleitner, 1992). Conscientiousness has consistently shown strong correlation with career decidedness (Jin, Watkins & Yuen, 2009; Lounsbury, Hutchens & Loveland, 2005; Page, Bruch & Haase, 2008). It must be stated that another research finding did not report a significant correlation between conscientiousness and career decidedness (Lounsbury, Sundstrom, Loveland & Gibson, 2003). The standard discovery has been an inverse relationship with career indecision and positive association with being decided about a career.

Theoretically, someone who is conscientious would approach tasks in the career selection process with diligence and discipline that should pave the way for reaching a career decision. Inversely, other researches have had mixed results with trait conscientiousness. In their study, Gati et al. (2011) observed that two of the Big-Five personality traits, Conscientiousness and Neuroticism were correlated with the

two causal indicators, Lack of Motivation and Indecisiveness and also had significant direct effects on decision status and decision difficulties respectively on the career decision-making difficulties questionnaire.

In a related study Gati and Asulin-Peretz (2011) also conducted studies into the relationship between Conscientiousness personality factor and emotional and personality-related career decision-making difficulties. The findings also confirmed negative association between higher levels of Conscientiousness personality factor and emotional and personality-related career decision-making difficulties. Results obtained by several studies have confirmed a similar position that the general inclination to be self-disciplined, more orderly and dependable is associated with lower levels of career indecision (Lounsbury, Hutchens & Loveland, 2005; Lounsbury, Tatum, Chambers, Owens & Gibson, 1999; Page Bruch & Haase, 2008). It could also be the case that generally, conscientious individuals attach high level of seriousness to the decision-making process and therefore invest more cognitive resources into it.

Furthermore, Chamberlain and Catano and Cummingharm (2005) have added that Conscientiousness and its facets could predict academic performance. Some researchers sometimes subdivide the five major personality dimensions into component facets and findings have again confirmed that both the five factors and their component facets together have value in predicting school performance. However, Smithers, Catano and Cunningham (2004) discovered that Openness had a higher predictive value for academic success and not Conscientiousness as posited by other scholars. These findings, therefore, underscore the need for further studies to test the Big Five model to replicate the findings on conscientiousness.

The Big Five trait most commonly reported to be associated with career indecision is Neuroticism. For instance, Meyer, Dalal, Jose, Hermida, Chen, Vega and Khare (2014) compared three different career decision scales and found Neuroticism to be the trait most strongly connected to career decision-making difficulties. A more in-depth analysis by Chartrand, Rose, Elliot, Marmarosh and Caldwell (1993) and a mediation model from Shafer (2000) on the Big Five Personality confirmed that Neuroticism has the strongest and only direct predictor of affective elements of indecision. In addition, Neuroticism was specifically linked with problem-solving deficits.

Presumably, people who score high on neuroticism may be more likely to avoid engaging in career decision-making tasks because they doubt their abilities and feel vulnerable to stress. They may lose opportunities to experience success and thus have lower self-efficacy for engaging in career-related tasks. There is general evidence that people who are higher in neuroticism are more likely to evaluate other people and situations in a negative manner (Connolly & Viswesvaran, 2000). This negative appraisal associated with higher neuroticism would likely reduce one's self-efficacy.

Several other studies lend credence to the assertion that Neuroticism correlate positively with career indecisiveness (Lounsbury, Sundstrom, Loveland & Gibson, 2003; Page, Bruch & Haase, 2008). Stronger evidence was provided in the studies of Jin, Watkins & Yuen, 2009) by expanding these findings across cultures with evidence to suggest that negative career thoughts and feelings may be associated with neuroticism and career indecision.

Meyer and Weiner (1993) asserts that, whether the anxiety associated with indecision results from or is a cause of career indecisiveness is an open question that continues to receive attention in the literature. Career indecision and indecisiveness, as well as various difficulties arising during the decision-making process have been consistently traced to different facets of anxiety (Fuqua, Seaworth & Newman, 1987; Santos, 2001). Research backs the assertion that undecided and indecisive individuals report significantly higher levels of anxiety relative to those reported by decided ones and this anxiety is associated with neuroticism. Low neuroticism was associated with the well-adjusted information seeker (Kaplan & Brown, 1987).

The negative effects of neuroticism are well-known in the psychological literature, much more challenging issue, then, is finding any compensatory benefit for neuroticism. However, given the normal distribution observed in the human population, and the persistence of lineages demonstrably high in the trait, such a benefit seems likely (Nettle, 2005).

Turiano (2012) assets that there are healthy Neurotics. This is when there are high levels of Neuroticism and Conscientiousness. This combination leads to more thoughtfulness, scrutiny and orderliness. This affects decision-making positively and therefore likely to help with efficient career decision-making. Therefore, Neuroticism may not be a bad trait as perceived. It could be beneficial when intelligence is high.

In the past decade, career development researchers have shown an increased interest in studying the relevance of the big five personality traits for certain career behaviours. Tokar, Fischer and Subich (1998) reviewed a major portion of studies in personality and found that several of the big five personality traits showed consistent relationships with career development variables such as vocational interests, career maturity, and career decision-making as well as relationships with occupational

adjustment variables such as job satisfaction and job performance. Studies have also shown that the big five personality traits are predictive of career exploration behaviours (Reed, Bruch & Haase, 2004), and career transition behaviours (Heppner, Fuller, & Multon, 1998). In addition, the big five personality traits map onto predictable Holland occupational orientations in a consistent manner (Sullivan & Hansen, 2004).

Various studies have tabled very robust arguments and convincing researches to support the position that career development process cannot hold together without the discussion of personality and its role (Boudreau, Boswell & Judge, 2001; Judge, Higgins, Thoresen & Barrick, 1999; Seibert & Kramer, 2001). Elaborate factor analysis of these descriptors identified the presence of a recurrent five factors that comprehensively describe personality (John, Naumann & Soto 2008). As these factors were familiar to personality psychologists, the NEO inventories demonstrated the comprehensiveness of these recurring personality factors (Costa & McCrae, 1992).

The Five-Factor Model (FFM) is a widely accepted construct describing personality variation along five dimensions. Many researchers have argued that the structure of the FFM is a ―biologically based human universal" that transcends language and other cultural differences (Bouchard & Loehlin, 2001; McCrae & Costa, 2010). Not only does this theory of personality apply in multiple countries and cultures around the world there is a valid and reliable assessment scale for measuring the five factors (McCrae & Costa, 1992).

In spite of the increasing consensus supporting the FFM, there have been data to challenge the robustness of the five-factor structure, and some researchers have posited more than five personality factors within certain populations (e.g., Cheung &

Leung, 1998; Lee & Ashton, 2004). In several African countries, the five-factor structure did not emerge strong and therefore fared worse: Average Cronbach‘s alphas for Morocco, Tanzania, Ethiopia, and Congo were 0.62, 0.59, 0.48, and 0.48, respectively. Although the data showed low internal consistency, the African and South American samples showed high levels of congruence with the American normative factor structure statistically (Schmitt, Allik, McCrae, Benet-Martínez, Alcalay & Ault, 2007). McAdams and Pals (2006) have argued that although there have been impressive advances in recent years with respect to theory and research, personality psychology has yet to articulate clearly a comprehensive framework for understanding the whole person.

Lero Vie, (2013) asserts that the incongruence in the data could mean that, the Big Five Inventory structure does not imply that personality differences can be reduced to only five traits. Rather, these five dimensions represent personality at the broadest level of abstraction, and each dimension summarizes a large number of distinct, more specific personality characteristics.

Research in the area of career psychology has attempted to understand the reasons behind career decisiveness or career decision-making difficulties for the past decades (Newman, Gray & Fuogua, 1999). The link between personality and students' career planning has been seen as one the factors influencing career decision-making difficulties. Bacarli (2006) pointed out that personality characteristics may be seen as predictors for a student's career indecisiveness. Therefore, he recommended counselling as an intervention.

2.1.2 Career beliefs and career decision-making difficulties

Krumboltz (1991) defined career beliefs as assumptions and generalizations an individual hold about the self and the world of work, which affect one's career decision-making and career development. Peterson, Sampson, Reardon, and Lenz (1996) also defined career beliefs as positive and negative thoughts or assumptions people hold about themselves, occupations and the career development process. Career beliefs play a significant role in determining career related outcomes. One potential career barrier of students, one that has seldom been addressed in the current literature, may be their maladaptive beliefs in the career development process (Jackson & Fordham, 2006).

From learning experiences, Krumboltz (1991) proposes that individuals develop career beliefs (some helpful and others unhelpful) about themselves and their relationship to the environment that facilitate or hinder them from taking constructive action in their career and educational development. Dysfunctional career decision-making beliefs can impede individuals' ability to make career decisions. People's beliefs about themselves and the world of work influence their approach to learning new skills, developing new interests, setting career goals, making career decisions and taking action toward career goals (Mitchell & Krumboltz, 1996).

Ajzen (1975) considered beliefs as a person's personal opinions about oneself and one's environment. Therefore, theorized three types of beliefs including descriptive beliefs (developed because of one's direct observation and experience with an entity), inferential beliefs (formed on the basis of earlier beliefs about specific objects) and informational beliefs (presented by external sources, such as books, media, peers, colleagues). Beliefs provide a foundation to form a person's conceptual configuration. On the basis of significant beliefs, one develops a particular approach

towards an object, as a result, one forms a related intent that may affect one's behaviour. Individuals assesses the precision of their beliefs by judging against others' opinions and the feedback they get offers a basis for amending their original beliefs.

Kenny, Blustein, Chaves, Grossman and Gallagher (2003) conducted two studies with a sample of urban minority ninth graders (predominantly African American, Hispanic/Latino and Black/Caribbean). They found that students who perceived lower levels of barriers and higher levels of relational support, from family members and others, also reported higher levels of engagement with school and more positive attitudes with higher aspirations for their future careers. Kenny, Waldo, Warter, and Barton (2002) noted implications for career counselling interventions in schools, such as helping urban youth to identify their perceived barriers and develop counteractive strategies to build relational supports (e.g. Solberg, Howard, Blustein & Close, 2002).

In Pakistan, Kiani (2010) conducted research on high school students to find out the relationship between personality traits and vocational aspirations. He found a moderate correlation between personality traits and vocational interests. He suggested that there may be moderators intervening between personality and vocational interest relationship. This can be taken as one evidence for the motivation to study the mediating role of career beliefs in personality-career success relationship.

False and dysfunctional beliefs can also play a significant role in career development. Literature has extensively illustrated variety of faulty beliefs that create maladaptive career-related behaviours. The terms irrational career beliefs, negative career belief and career myths have been used interchangeably in literature. Career myths refer to false assumptions and generalizations about the career and related

decision-making process (Amundson, 1997). These myths are common beliefs internalized from family or societal messages. Thompson (1976) talked about seven fallacies found in his career counselling experience. These included viewing vocational planning as very accurate, considering career decisions as final, reliance on other sources for career decision-making, misconceptions about direct link between interests and abilities, irrationality about going through every possible choice in every career decision, dichotomization of career decision as success and failure and finally assuming that passing time leads to better decision-making.

Later, Lewis and Gilhousen (1981) added one more irrational belief suggesting that following a set of well-known strategies will lead to a superior life. This belief also presumed that the achievements of younger generation must be more than the parents. Nevo (1987) detected ten maladaptive career beliefs that add to clients‘ problematic career-related behaviour. Two faulty beliefs that are different from those already mentioned were the need to please other people by career choice and the assumption that entering into career would resolve all life dilemmas.

Existing literature has well supported that identifying individuals‘ career beliefs is important because having irrational assumptions can obstruct advancement toward career goals, thus leading to dissatisfaction. On the contrary, facilitative career beliefs play positive role in career related behaviours and experiences (Turner & Conkel, 2011). Liu (2003) provided the evidence that maladaptive career beliefs leads to decision-making problems in career and adaptive career beliefs lead to career resilience. Liu (1997) found negative career beliefs as the strongest factor impacting participants‘ indecision. In a related study, Neault (2002) found that positive career beliefs were the best predictors of career success.

Nutini (2002) showed with empirical evidence from a research that urban minority youth identified psychological resources (e.g., positive motivational beliefs, resilient personality characteristics, personal skills, and constructive problem-solving approaches) as sources of support for their educational and career development. Roll (2002) in his study examined perfectionistic beliefs, career thoughts, and self-efficacy of undergraduates involved in career counselling. The outcome of the study was that, undergraduates involved in the career decision-making process held both positive and negative beliefs about making career decisions. Perfectionism was also found to be an important consideration, particularly those with maladaptive perfectionism, having high standards but not the belief in their ability to achieve those goals. Also, perfectionists with high standards for themselves were found to have significantly greater self-efficacy beliefs than non- perfectionists.

Krumboltz (1991) observed that career decision-making process also encompasses problematic beliefs or thoughts that may arise during different stages. These beliefs may decrease the individual‘s self-esteem and perceived self-efficacy while increasing anxiety and perceived external locus of control, hence, such thoughts may decrease the individual‘s confidence in his or her ability to make decisions (Peterson, Sampson & Reardon, 1996). Negative thoughts might prevent the individual from thinking in a systematic and organized manner about the problem and making a rational decision, whereas the absence of dysfunctional or pessimistic thoughts promotes a better integration of knowledge about the self and potential occupations (Saunders, Peterson, Reardon & Sampson, 2000).

Bandura (1977, 1986, 1994) have argued that, when a client is exposed to stimuli that serve to enhance self-efficacy expectations within a particular behavioural domain, additional changes in the client‘s thought patterns and beliefs will also take

place. Findings from several empirical investigations addressing the career development of college students have supported this hypothesis (Hackett & Byars, 1996; Lent, Brown & Hackett, 1996; Luzzo, Funk & Strang, 1996). Interventions designed to produce changes in career decision-making self-efficacy have also produced significant changes in career-related beliefs and attitudes, such as career indecision (Foss & Slaney, 1986; Fukuyama, 1995), gender-typed traditionality of career choice (Foss & Slaney, 1986) and career decision-making attributional style (Luzzo, James & Luna, 1996).

Krumboltz (1991) in one of his research works identified twenty-five different career-related beliefs that are hypothesized to play an integral role in the career development of college students. Control, responsibility and working hard emerged as three of those career beliefs most likely to be affected by students. Therefore, career interventions should incorporate both performance accomplishments and verbal persuasion components. Additionally, Waqar (2015) asserted that college students-particularly those who are undecided about their career goals but painstakingly invest the necessary time to complete an interest inventory and receive feedback about their results are more likely to begin to realize that they are personally in control and responsible for their career decision-making progress than students who do not participate in such activities.

This is especially true when students receive treatments that include verbal persuasion components designed to encourage them to expend additional amounts of time and energy into the career decision-making process. As college students begin to recognize that accomplishing career goals is at least somewhat dependent on their willingness to engage in career exploration activities that involve a significant personal investment. It seems likely that there will be an increase in their sense of

responsibility and control over the career decision-making process as well as increase in their belief that, career decision-making requires hard work and effort (Luzzo & Day, 1999).

Literature shows that most of the researches on career beliefs were conducted on samples of students. Such as Murry (1989) in his study on undergraduates, found that career decidedness is associated negatively with undecided stigma. In another study, Ryan-Jones (1990) concluded that college students with low decidedness were inclined to believe that career decisions were based on external forces, and they were contented with their levels of career indecision. A study by Enright (1996) indicated that college students with higher levels of self-doubt about career decision-making faced higher levels of career indecision.

Similarly, Lunney (1993) conducted a study using the students of a Liberal Arts class and disclosed that, decided students expressed stronger career beliefs about hard work in their abilities to beat obstacles and in their control to deal with the consequences of their decisions. On the other hand, undecided students conveyed more readiness to depend on expert advice, but were much less eager to think about flexibility in career choice and to take risks. Chi (1994) found that students facing problems in career decision-making tended to agree more with obedience and avoidance; while students actively seeking career, counselling seemed to agree more with hard work and control. The latter also believed that interest is the same as ability and therefore, decision-making should be based on the personal attributes of the individual and the environment. Thus, there should be person- environment- fit.

In the same way, Luzzo (1997) observed that students perceiving more career barriers were less inclined to believe that they had control over the hurdles they are likely to face during career related decisions. On the other hand, confident participants

possessed adaptive career beliefs. They were confident and owned the career decision-making process as their responsibility.

Adaptive career beliefs have been found to be related to improved career decision-making process (Sadeghi, Baghban, Bahrami, Ahmadi & Creed, 2010). Relatedly, Leu (2000) indicated that, students facing problems in career-decision-making, tended to avoid challenges and rely on other sources for their decisions. They feared failure and therefore they set lower goals. Millar and Shevlin (2007) found that adolescents who believed that they had control over their career development process were likely to engage in career exploration activities as compared to those who believed in external forces affecting their vocational development.

Arulmani, Van Laar and Easton (2003) studied the relationship of Socio-Economic Status (SES) on the career beliefs of high school students in India and found significant differences in career beliefs between students belonging to high and low SES. These researchers provided the evidence that students from lower SES were likely to place a lower emphasis on learning and work skills proficiencies as compared to students from high SES. Students from high SES believed that they can create opportunities for themselves while students from low SES expressed low control over their lives. Similarly, students from high SES believed in persistence despite career goals difficulties while students from low SES believed in low persistence in such scenario. Over all, students from lower SES showed negative career beliefs.

Previous research has provided the evidence that Career Self Evaluation seem to be important in the career decision-making process. Individuals with higher levels of self-esteem and self-efficacy beliefs, may be more confident in making

occupational decisions and consequently show lower career decision-making difficulties (Di Fabio et al., 2014). Our socializing agents promote more stereotypical beliefs about careers, emphasizing that, some occupations as more respectful as compared to others. Most students have built career plans on the myths of what they think it should be rather than on the reality (Weiler, 1977). Gender preferences for careers is still dominant. Opportunities for career development also vary as per different employment settings (Al Zaabi & Ajmal, 2017).

Personal values and desires have seldom been realized without the active and conscious efforts on the part of students. The student must be motivated to orchestrate the outcome. If the student wants to work in the career choice process, the students must know and understand the realities of that process. Only when the students have developed awareness, can they begin to avoid dealing with the myths within the process as a whole. It is at that point the students develop a practical plan of action to get what they want from the decisions of their career choice.

Given the expense of time and resources associated with today‘s college experience, along with the increasing number of entering freshmen who are undecided on a major, it follows that the concept of career beliefs should be given consideration in career counselling offered at the University level (Jaenscha, Hirsch & Freund, 2015).

2.1.3 Career maturity and career decision-making difficulties

Making decisions regarding a career is an important task for young people. Consistent with developmentally focused career theories (e.g., Gottfredson, 1981; Super, 1957), therefore, career maturity is important during late adolescence when young adults have to make their initial career choices (de Raaf, Dowie & Vincent 2009).

As defined by Super (1957), career maturity is ―the course of events which constitutes a life; the sequence of occupations and other life roles which combine to express one‘s commitment to work in his or her total pattern of self-development". Therefore, career maturity refers to an individual‘s readiness to make informed, age-appropriate career decisions when dealing with certain career development tasks (Mubiana, 2010). As put forward by Super (1957) and Crites (1971), Career Maturity is a developmental continuum, while career decision status concerns the quality of the decision made at any one time, according to Crites (1971), career maturity is developmental and it would be expected that experienced students express higher levels of career maturity than inexperienced students. Crites (1974) suggested two dimensions in career maturity, namely attitude (affective) and competence (cognitive) career choice. Affective dimension consists of five aspects, namely involvement in decision-making, orientation toward work, the necessary concepts in decision-making, independence in decision-making, and liking for the kinds of jobs. Cognitive dimension consists of five aspects, namely problem solving, planning, employment information, self- assessment and goal choice.

Super (1957) has been very influential in the area of career development. His work, initially formulated in the early 1950s, has been widely tested, expanded, revised and refined until the present day. Portrayed as a segmental model, Super‘s (1990) unified set of theories utilizes the construct of career maturity (CM), which has become one of the most prevalent variables in research involving the career development of adolescents and young adults (Powell & Luzzo, 1998). The quality of decision-making is measured in terms of how definite (i.e., decided) an individual is and how comfortable they feel about their decision (Savickas, 2001).

Psychologists have stressed on the significance of goals in the development and preservation of well-being of individuals (Salmela-Aro 2001; Oishi & Diener, 2001) and academic achievement and adjustment to college (Krisher & Shechtman, 2015). Goal setting theory states that when an individual has commitment to goal and capability to attain goals, it leads to higher degree of task achievement, performance and career decision-making abilities (Locke & Latham, 2006). A positive sense of self, allows an individual to position oneself to engage in developing meaningful goals and sustain a sense of well-being and accomplishment.

Anderson and Brown (1997) found that career development attitude was able to predict Career Maturity for both rural and urban students. The research by Chen and Liew (2015) engrossed on factors that influence career decision-making among graduating students from Malaysian private higher educational institutions. Their research highlighted that there is a positive relationship between occupational exploration and career decision-making difficulties (CDMD). Research on occupational exploration and career decision-making among French and Korean adolescents (Sovet & Metz, 2014) established that there is a positive correlation between occupational exploration and career decision-making among students. Besides that, Hmileski and Baron (2008) surveyed how occupational exploration influences college students‘ career decision-making and ability to acclimatize in different environments. An interaction was observed between self-exploration, optimism, dynamism, to career decision.

Powell and Luzzo (1998) examined the Career Maturity of 253 high school students in relation to their career decision-making attributional style. The study found that those who had more personal control over their career decisions had more positive attitudes toward career decision-making, and they were more career aware.

In another investigation using a high school sample of 1,971 Australian adolescents, Patton and Creed (2002) found developmental differences with 15-17-year olds scoring higher on Career Maturity attitude and knowledge than the 12-14-year olds. The study also revealed a complex pattern of gender differences, which led these authors to conclude that, boys may benefit from increased attention to career knowledge and girls from attention to the appropriateness of career planning.

Super (in Seligman, 1994) asserted that career development during high school begins at the age of 15 up to 24 years. At this stage, students develop an awareness of themselves and the world, start to try new roles, and narrow down career choices. However, not all students are able to easily make career decisions, most of them experience confusion before finally making a choice (Creed & Yin, 2006). Consequently, Fouad, Cotter and Kantamneni (2009) revealed that the confusion of choosing a career has become an issue among students.

Career decision-making process often becomes a pressure for students. Anxiety and stress reaction cause students to delay career decision-making or leaves it to other parties (e.g. parents) to make a less than ideal decision on their behalf (Keller & Whiston, 2008). Consequently, Teuscher, (2002) showed by a survey that 59.76% of the students have difficulty choosing college majors. In addition, as many as 22.24% of students are unsure of the college majors that they have chosen.

Crites (1974) revealed that career maturity is the level of individual readiness, comprising of their attitudes and competencies in making career decision from the exploration to the declining stage of a career. Choosing and planning the right career requires career maturity that includes knowledge of self, knowledge of the job, the ability to select a job, and the ability to plan the steps towards the expected career (Crites, 1974). Therefore, Herr and Cramer (1979) suggested that the concept of

career maturity is used to indicate the level of career development, which is achieved by the individual from the exploration stage to the stage of decline. Subsequently, Brooks (1990) revealed that career maturity is the readiness of an individual, to address the developmental tasks that he or she must confront. This might be due to biological and social development as well as people's expectations from the community.

Nota and Soresi, (2003) stated that students will be considered to have career maturity when they can independently choose majors based on their abilities, talents, interests and available opportunities. Additionally, they are also ready to choose further education, both formal and non-formal. However, low career maturity can lead to errors in making career decisions, including errors in determining the direction of education.

Hirschi, Niles and Akos (2011) in a longitudinal study investigated predictors and outcomes of active engagement in career preparation among 349 Swiss adolescents from the beginning to the end of eighth grade. Latent variable structural equation modelling was applied. The results showed that engagement in terms of self- and environmental-exploration and active career planning related positively to interindividual increases in career decidedness and choice congruence.

Hidayat and Alsa (2018) observed among a sample of Iranian adolescents that career development increased with increment in grades. However, while career exploration, career planning and career decision increased with increasing grades, career information decreased at a latter grade. Despite these insights into how academic levels influence students career development, the study failed to examine other relevant factors that might influence adolescents' career development and

decision as other researchers did not find any significant change in career development across the grades (Creed, Patton & Prideaux, 2006).

In the United States of America, Amir, Gati and Kleiman (2008) found that sophomores (Second year students) at an American university faced increased levels of career decision-making difficulties compared to seniors because students were expected to declare their chosen major in their sophomore year. Bochner, (1994) asserted that because students in Malaysia need to decide on their intended field of study during their pre university studies, prior to applying for admission to university, it is at this stage of their career development that they are likely to encounter the increased difficulties in career decision-making.

One constructs often associated with career development and decidedness is career maturity. Positive relationships have been discovered between career maturity and career decidedness, with Rojewski and Schell (1994) reporting that career indecision was the single most important predictor of career immaturity. Career maturity or career decision-making Self-efficacy have both been identified as key predictors of one‘s intention to participate in career exploration activities (Ochs & Roessler, 2004).

Career maturity has been associated with realistic self-appraisal, environmental experience, family cohesion, and several personal characteristics such as intelligence, locus of control and self-esteem (Ohler, Levinson & Sanders, 1995). Demographic variables of socioeconomic status (King, 1990) and age (Stern, Norman & Zevon, 1991) have positively correlated with career maturity in the general population.

There is a growing case for career maturity to include cultural and time-specific contexts and to have other factors, such as planning, exploration and adaptation, taken into account (Luzzo, 1995). Research conducted by Lee (2001) shows that career maturity is influenced by cultural factors. For instance, in Korean societies emphasis is placed on the duty and opinions of the family or group more than the individual when it comes to occupational choice. However, Leong and Cheryinko (1996) contends that if important career decisions are made by an individual's family, that individual may lack career maturity, especially when it comes to independence, decisiveness and confidence. In South Africa the value of "Ubuntu" in black cultures is associated with collectivism that is in contrast to western societies who value individual achievement, satisfaction and actualization (Du Toit & De Bruin, 2002).

Bergeron and Romano (1994) identified three levels of vocational and education indecision (decided, tentatively decided, and undecided) were assessed in a sample of 125 undergraduates from a large midwestern university using the Career Decision-Making Self-Efficacy (CDMSE) scale. Significant differences were found in CDMSE among the 3 levels of vocational and college major indecision, but no relationship was found between gender and the 3 levels of vocational and college major indecision. A moderately strong relationship between CDMSE and vocational indecision and college major indecision was seen.

Hmileski and Baron (2008) observed that an interaction exists between self-exploration, optimism, dynamism, to career decision-making and that students with high self-occupational exploration have high levels of making a decision for employability. In addition, Koen et al. (2010) showed that occupational exploration has a relationship with career decision-making. Multon, Heppner, Gysbers, Zook and

Elliss-Kalton (1995) revealed that students with higher goal instability are relatively less involved in the career decision-making process.

Creed and Patton (2003) argues that longitudinal studies are required to augment this correlational evidence on career maturity and career decision-making difficulties and some equivocal findings need further investigation. For instance, an increase of career maturity with age has generally been demonstrated, but, for example, decision points in the educational systems have been shown to disturb maturation. Studies of career maturity and gender also produce inconsistent results. Females tend to score higher than males on career maturity, though some studies have found the opposite, and others have found no differences (Patton & Lokan, 2001).

Niles and Sowa (1992) affirmed the role of career maturity in career development theory and emphasized the need to consider it within a social context. A second author (Raskin, 2011) suggested that personality and decision-making style needed to be integrated into research on career maturity, while others (Vondracek & Reitzle, 1998; Schmitt-Rodermund, Silbereisen, Rainer, Gosling & Potter, 2013) demonstrated the need for considering cultural contexts, historical determinants and economic and political structures.

Creed, Patton and Prideaux (2007) presented a comprehensive report on research into the correlates of career maturity including age, gender, socio-economic status, culture, role salience, self-directedness, career indecision and work experience. They argued that the concept needs to be revitalized to make it ~~"~~more appropriate in times of changing career patterns and more applicable to a wider range of societal groups". Indeed, these authors stressed the importance of contextualism as reflected by Super's original conception of the construct, joining calls from others for more consideration of this factor. They viewed such a re-formulation as the key to

providing theoretical momentum for future work with the construct while also advocating the retention of its general principles.

The findings from the study show that there is significant relationship between occupational exploration and career decision-making. Therefore, it is very important for students to explore with careers in order to make them more confident in preparing themselves for their careers. Therefore, it is important for university students to enhance career exploration skills. They should also pay more attention when they are preparing for the working life. Practitioners such as guidance counsellors can help students to understand themselves and others based on self-knowledge and occupational exploration, and career decision-making process.

2.1.4 Gender on career decision-making difficulties

Gender is viewed as the division of people into two categories, men and women, based on their biological differences (Jamabo, Enebeli & Ester, 2012). Since Sex is used to distinguish between males and females, it implies that there are a number of attributes that go with Sex as defined by society and there are also different roles for men and women.

As with other psychological phenomena, sex and age are among the variables that affect decision-making, or rather, that allow one to establish individual differences (de Acedo Lizárraga, de Acedo Baquedan & Cardelle-Elawar, 2007). The fact is that our decisions are affected by our beliefs about the characteristics that differentiate the sexes (Hatala & Case, 2000. Despite the fact that society is progressing towards social and labour equality between men and women, it is necessary to continue to examine from a psychological perspective whether there are sex differences in factors that determine career decision-making process (de Acedo Lizárraga, de Acedo Baquedan & Cardelle-Elawar, 2007).

Corrigall and Konrad (2007) stated that traditionally, individuals in America believed that a woman‘s role is to be a homemaker and that a man‘s role is a breadwinner. However, there is a paradigm shift as more American egalitarian individuals believe that women should share in the financial support of the family and that men should participate in childcare and other traditionally feminine aspects of household labour. In other words, women have the capacity to engage in male dominated careers and men engage in what are perceived as women‘s jobs as defined by the society.

Klapwijk and Rommes (2009) asserted that in the Netherlands, technical and natural sciences are still male dominated despite efforts to encourage females to study them. In spite of the fact that, in the Netherlands, girls have wide ranging professional values and form a heterogeneous group, the masculine image remains an important and persistent obstacle. Like in many other countries, the belief that girls do not like to work with physical objects is also quite pervasive in the Netherlands.

Jamabo, Enebeli and Ester (2012) also purport that, generally, Nigerian girls are interested in literacy, clerical, artistic, musical and social activities while boys indicated preferences for outdoor, mechanical, computational, business and industrial professions. The belief that boys and girls choose careers based on gender lines is built during adolescence when gender roles manifest (Klapwijk & Rommes, 2009), for girls, the gender bias may result in an aversion to all technical occupations since they represent masculinity. Similarly, in Britain, boys tend to choose more traditionally male subjects and girls more traditionally female subjects which are likely to influence their choices of gender-based careers (Favara, 2012).

In a related study Chung and Van der Horst (2018a)) evaluated the Career Decision-Making Self-Efficacy Scale-Short Form using the Career Commitment Scale as criterion measure. Responses from 165 undergraduates found no gender or ethnic differences. Females scored higher than males on the Career Commitment Scale. Several studies, for example, in America (Ahuja, Ogan, Herring & Robinson, 2006), in South Africa (Mwamwenda, 2013), in Nigeria (Ehigbor, & Akinlosotu, 2016), in Kenya (Simiyu, 2015) and in Zimbabwe (Mutekwe & Modiba, 2012) have shown the influence of gender in career decision-making difficulties.

In contrast, the results of other researches are somewhat ambiguous because, although some significant differences have been identified, most of them are minimal (Hatala & Case, 2000; Hawkins & Power, 1999; Venkatesh & Morris, 2000). It seems that women are more affected by the environment; they look for more information, and dedicate more time to the decision process (Gill, Stockard, Johnson & Williams, 1987). Men, on the contrary, are more dominant, assertive, objective, and realistic (Martin, Wood & Little, 1990). In a study, Eyo and Edet (2011) revealed that gender has a significant influence on the occupation preference among counselled and uncounselled Nigerian students. Whether the student received counselling or not, the gender influence continues to manifest in students.

However, these differences have been interpreted as the result of the incidence of sex-related social norms and stereotypes that are transmitted in the form of values, traditions and behavioural expectations. Together with some other educational factors, these probably foment and maintain some of the differences associated with certain aspects of decisions (Bussey & Bandura, 1999). Therefore, although till now the findings have been somewhat limited, it is relevant to continue to investigate these differences and determine how they are formed.

Luzzo (1995) identified students‘ perceived barriers as another reason why students may experience career decision-making difficulties in the transition to adulthood. The study found that women perceived more career related barriers than their male counterparts. Vocational psychologists have argued that women's career development is qualitatively different from that of men (Betz & Hackett, 1981).

Talib and Kit-Aun (2009) examined in their study some predictors of career decision-making difficulties among college students, and examined factors such sex, high academic achievement, low occupational information and vocational identity. The results showed that being a female significantly predicted students‘ career indecision. In Malaysia, Zhou and Santos (2007) identified in a research that those demographic characteristics such as age, sex and their psychological variables had a significant impact on career development. However, other studies did not find any significant impact of students‘ sex and age on their career development (Hampton, 2006; Salami, 2008).

To determine whether there are significant gender differences in students‘ career decision-making difficulties Mdikana, Seabi and Rammutla (2009) sampled a total of 156 Black South African high school students and made them to complete questionnaires that measure the study variables. Results showed no statistically significant differences between male and female students in their career decision-making. Thus, gender plays less influential role in career decision-making among Black South African students. In their study, Katic, Ivanisevic, Grubic-Nesic and Penezic (2017) provided empirical evidence from their study and showed that there are gender differences relating to career development, t (460) ¼ 3.24, $p < .001$, with men achieving higher scores than women.

Several studies examining the connection between gender and career indecision have established with evidence that gender is not related to career indecision (Neice & Bradley, 1979; Osipow, 1990; Taylor & Popma, 1990). However, there are some cultural and regulatory dictates in some environment that could create a strong association between gender and career decision. For instance, there are communities where culture states that female students are not given the same opportunities to make career decisions as men (Mau & Bikos 2000). In a research on career decision difficulties, Gati et al. (1996) found no gender differences in their sample. However, when comparing British and Chinese international students studying in two British universities, Zhou and Santos (2007) reported that female students experienced significantly more difficulties compared to male students among British participants while there were no significant gender differences among Chinese participants.

Research on Career Decision Self Efficacy (CDSE) have produced mixed results. Several studies found either minimal or no gender-based differences in CDSE among college students (Luzzo & Mc. Whirter, 2001; Taylor & Betz, 1983; Taylor & Popma, 1990). In studies investigating career interventions, Scott and Ciani (2008) found that female students reported greater intervention gains in CDSE compared to male students. However, upon examining two career courses for college students in Taiwan, Peng (2001) found that gender had no bearing on intervention effects.

In their study Buddeberg-Fischer, Klaghofer, Abel and Buddeberg (2006) went a step further, to investigate career decisions in respect of specialized medical profession. The aim was to investigate the influence of gender, personality traits, career motivation and life goal aspirations on the choice of medical specialty. It was found out that gender had the strongest significant influence on specialty choice,

followed by career motivation, personality traits and life goals. Multivariate analyses of covariance indicated that career motivation and life goals mediated the influence of personality on career choice. Personality traits were no longer significant after controlling for career motivation and life goals as covariates. The effect of gender remained significant after controlling for personality traits, career motivation and life goals.

In an exploratory fashion Tekke and Ghani (2013) also investigated possible gender differences across the assessed constructs and relations among them. Existing research indicates that girls generally report more career maturity than boys in terms of occupational knowledge (Patton & Creed, 2002) while some studies did not find significant differences in terms of career engagement attitudes and behaviours (Creed, Patton & Prideaux, 2007; Kracke, 2002). However, it might be possible that environmental and personal factors have different effects for boys and girls regarding their career engagement and career choice outcomes.

Trauth, Quesenberry and Huang (2008) researched into A Multicultural Analysis of Factors Influencing Career Choice for Women in the Information Technology (IT) Workforce. This Study presents an analysis of cultural factors influencing the career choices of women in the IT workforce. They employed the individual differences theory of gender and IT. The study revealed that a woman‘s choice of an IT career was greatly determined by the value system and several additional socio-cultural factors. Thus, gendered career norms, social class, economic opportunity, and gender stereotypes about aptitude. Trauth, Quesenberry and Huang (2008) asserted that the results lend further empirical support to the emergent individual differences, theories of gender, values and culture endeavours to theorize within-gender variation with respect to issues related to gender and IT.

Moumoula (2013) did a comparative study between Burkina Faso, a West African country and Switzerland in Europe. Consistent with previous studies, no overall gender difference was observed in Switzerland regarding career decision-making difficulties (e.g. Gati, Osipow et al., 2000; Kleiman, Gati, Peterson, Sampson, Reardon & Lenz, 2004; Vertsberger & Gati, 2016). However, in Burkina Faso, women scored higher than men, which could mean that men are encouraged to make a career choice more quickly. Indeed, in African societies, men are traditionally in charge of the family and therefore, this responsibility to make a career decision is as result of social pressure that impels them to decide on their career path earlier compared to women. This strong social pressure on men leads them to make career decisions much sooner and to express less doubt than women, who often express more indecision. In their studies, the authors (Sovet & Metz, 2014; Vignoli, 2009), explained that the lower career indecision reported by men was as a result of gender role socialization and encouragement by parents. This helped men to engage early in career exploration, to be more confident when making a career decision, and therefore to express higher levels of self-esteem.

Niles and Harris Bowlsbey (2009) asserted that the significant difference in career indecision and readiness between males and females from their study contradicts earlier research which seems to suggest that gender is not related to career indecision (Lunneborg & Lunneborg, 1975; Osipow, 1999; Taylor & Pompa, 1990). A research by Zhou and Santos (2007) reported that British female students experienced higher levels of decision-making difficulties compared to males, although no significant differences were found for Chinese students.

In a patriarchal collectivist society such as Malaysia, however Bochner (1994) asserted that, male students may experience greater pressure to choose courses and careers in the sciences and technology fields, should a male student want to pursue a career in the Arts, there may be greater lack of readiness, specifically in the area of motivation in making such a choice. Therefore, Bochner (1994) conclude that, the main contribution of the study to intervention research concerning gender is that, it is crucial to take into consideration the specific concerns of male and female students in order to provide the help they need.

Niles and Harris-Bowlsbey (2009) argued from the results of their study on the effects of intervention that, of the three constructs investigated, gender differences were observed to be associated with career indecision. Males exhibited greater levels of indecision, and to some extent, lack of readiness, than females. Although significant differences in indecision were observed between male and female students prior to the intervention, these differences disappeared after the intervention, suggesting that, the intervention had a greater impact on males in reducing career indecision. The results also showed that prior to the intervention, male students displayed greater difficulties in terms of lack of motivation than female students, but this was also no longer significant by time. A clear understanding of the influence of gender in career decision-making is critical to providing appropriate career guidance and effective career development interventions.

However, from the perspective of social psychology, the differences could be considered as a result of reciprocal determinism among cognitive, behavioural and environmental factors (Bandura, 1977). However, these differences have been interpreted as the result of the incidence of sex-related social norms and stereotypes that are transmitted in the form of values, traditions, and behavioural expectations.

Together with some other educational factors, these probably foment and maintain some of the differences associated with certain aspects of decisions (Bussey & Bandura, 1999).

As with sex, researchers' debate, without much conviction, about whether there are differences in the quality of the processes of career decision-making difficulties. However, some authors believe there are differences (Gardner, Scherer & Tester, 1989; Dror, Katona & Mungur, 1998) and others disagree (Chen & Sun, 2003; Moshman, 1993). Despite this, the variable age should be taken into account, especially when attempting to investigate from a naturalistic perspective, because this focus is specifically based on subjects' experience and competence, which are normally acquired with age (de Acedo Lizárraga, de Acedo Baquedano, Cardelle-Elawar, 2007).

2.1.5 Age on career decision-making difficulties

Majority of college and university career development and career counselling programs have traditionally focused on the needs of students roughly between the ages of 18 and 22, there is a growing need to respond to college students by developing age-appropriate career development programs (Ginter & Brown, 1996; Griff, 1987; Mounty, 1991). The first step to establishing effective treatment strategies requires an increased understanding of some of the career decision-making differences that exist between college students.

In terms of developmental needs that are specifically linked to vocational issues, Super (1984) theorized that non-traditional college students are likely to possess fewer career-related needs than traditional students. Super (1984) believed that most older college students are engaged in recycling, the process of re-experiencing earlier stages of career development. This is because non-traditional

students are expected to use their accumulated knowledge from previous experience. Several investigations conducted over the past 10 to 15 years have provided evidence for Super (1984) notion that the age of college students is associated with their career decision-making needs and presenting problems (Luzzo, 1995).

Numerous investigations have revealed that age is positively correlated with college students‘ attitudes toward career decision-making (Blustein, 1989; Guthrie & Herman, 1982; Healy, OShea & Crook, 1985; Luzzo, 1993b). Older students‘ attitudes toward career decision-making process demonstrated a lack of anxiety and fear, whereas younger students are more likely to exhibit attitudes indicative of insecurity and general concern about making career decisions. Research by (Healy, 1991) and his colleagues Healy and Mourton (1987) and Healy & Reilly (1989) studied the relation of career attitudes to age and career progress during college. Participants completed the Attitude Scale of the Career Maturity Inventory and a demographic form that asked for information regarding age, grade point average (GPA) and occupational status. Results revealed a positive correlation between age and career decision-making attitudes ($r = .48$, $p < .01$). This has been especially useful in helping career counsellors gain a clearer understanding of the role that age plays in the career development of college students (Luzzo, 1995).

Two investigations (Luzzo, 1993b; Peterson, 1993) examined the relationship between the age of college students and their career decision-making self-efficacy. Findings from the studies revealed a significant relationship between age and career decision-making self-efficacy among college students, indicating that older students are somewhat more likely than younger students to possess confidence in their ability to engage in the career decision-making process. Craik and Salthouse (1992), for example, maintain this same interpretation in a study on information processing in

older people, and observe that judgments are more tranquil in retired people, probably because of their difficulties with the working memory.

Findings regarding gender and age on career decision-making difficulties suggest that more research is necessary to fully understand the impact of these variables on interventions aimed at enhancing career decision-making. Therefore, it is crucial to take into consideration the specific concerns of male and female and age variations of students in order to provide the help they need.

2.2 Summary

From the empirical studies reviewed, the researcher noticed that the overall direct impact of personality on career decision-making difficulties is well documented, but the respective impact of each personality dimension on career decision-making difficulties vary between studies. Thus, more research is needed to better describe the relationship between personality traits and career decision-making difficulties. This where this study comes in to fill the gap. Again, given the limited availability of empirical findings on career beliefs, perceptions, experiences, and outcomes of students in African countries, more studies are needed to gather empirical data to evaluate the applicability of existing theoretical framework across countries and provide new insights in Ghana to understand how career beliefs impact the career decision-making process. Researchers argue that career maturity indeed have a relationship with career decision-making difficulties. However, there is the need to contextualise this career maturity construct to various socio-cultural contexts. The debate on gender on career decision-making difficulties has yielded some controversies without much conviction.

Therefore, it is imperative for more research in this regard to ascertain whether sex differences truly exist in career decision-making difficulties. It was observed that majority of the studies have been done in the America, Europe, Asia and some part of Africa. This justifies a need for a research on personality factors, career beliefs, career maturity as influencing career decision-making difficulties within the Ghanaian socio-cultural settings. Additionally, it was also observed that most researchers concentrated on quantitative methods thereby being eluded by the benefits that comes with qualitative studies. This study intended to explore the meanings and interpretations students put on personality factors, career beliefs and career maturity.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

According to Creswell (2003), research methodology refers to the methods adopted in carrying out a research. This Chapter provides the methodology used in this research, the justification for the choice, and the design strategies supporting this study. A description of the instruments used, data collection procedures, analysis and methods chosen are presented in this Chapter. This Chapter is structured as follows: firstly, a discussion of the philosophical stance, that is, the ontology and epistemology guiding this research is presented. This is followed by a discussion on the study design, research setting, population, sample and sampling procedure, instruments used, and data collection methods. Secondly, there was a presentation on the pilot-testing of measures or instruments and reliability and validity of instruments. The data analytical methods used are also presented. These include hypotheses testing procedures (including descriptive statistics, inferential statistics, partial correlation and multiple regression) and control of extraneous variables. Finally, ethical considerations involved in this study conclude the Chapter.

3.1 The Study Institution

Four universities in Accra were considered for the study. However, three of these universities did not have Careers and Counselling Centres or Units. The main justification for the choice of the Institution for this thesis was based on ethical reasons. The British Psychological Society (2010) has stated the following; firstly, researchers must ensure that those taking part in research will not be caused distress. They must be protected from physical and mental harm. Normally, the risk of harm must be no greater than in ordinary life, i.e. participants should not be exposed to risks

greater than or additional to those encountered in their normal lifestyles. Secondly, the researcher must also ensure that if vulnerable groups are to be used, they must receive special care. Thirdly, researchers are not always accurately able to predict the risks of taking part in a study and in some cases, a therapeutic debriefing may be necessary if participants have become disturbed during the research.

Considering the above reasons, it was prudent for the study to be conducted in a setting where students can have access to counselling should the need be. The University of Ghana has a well-established and functioning Careers and Counselling Centre and in order to provide participants an avenue to address any concerns with Psychologist or counsellors should the need arises from the study, University of Ghana, Legon Campus therefore became the institution the research setting.

The study was conducted in the University of Ghana, Legon. The University is under Ga East Municipal District. Ga East Municipality is located in the northern part of Greater Accra Region. It is one of the Sixteen (16) Districts in the Greater Accra Region and covers a land area of about 85.7 square kilometres. The University of Ghana, Legon is the oldest and largest of the thirteen Ghanaian public universities. It was founded in 1948, in the British colony of the Gold Coast, as the University College of the Gold Coast, and was originally an affiliate college of the University of London, which supervised its academic programmes and awarded degrees. It gained full university status in 1961, and now has over 49,000 students. The original emphasis was on the liberal arts, social sciences, law, basic science, agriculture and medicine. However, as part of a national educational reform program, the university's curriculum was expanded to provide more technology-based and vocational courses as well as postgraduate training. The University is mainly based at Legon, about 12 kilometres northeast of the Centre of Accra. Its medical school is located at Korle Bu

(a suburb of Accra), with a teaching hospital and secondary campus in the city of Accra called the Accra City Campus. It also has a graduate school of Nuclear and Allied Sciences at the Ghana Atomic Energy Commission, making it one of the few universities on the African continent offering programs in nuclear physics and nuclear engineering.

The vision of the University is to become a world class research-intensive University by 2024, while its mission is to create an enabling environment that makes the University increasingly relevant to national and global development through cutting-edge research as well as high quality teaching and learning. Furthermore, the University aims to produce the next generation of thought leaders to drive national development. Through research institutes and other centres of learning and research, faculty members are involved in studies that support policy making for national development, often in collaboration with other international institutions.

University of Ghana has over 43,000 students and is run on a collegiate system comprising of the following colleges: College of Basic and Applied Science, College of Education, College of Health Sciences and College of Humanities. In addition, the University has several research institutions, centres for learning and research, including Noguchi Memorial Institute for Medical Research (NMIMR), Institute for Statistical, Social and Economic Research (ISSER), Institute for African Studies, Centre for Gender Studies and the Career and Counselling Centre.

3.2 Philosophical Underpinnings

The philosophical study of the nature‘s reality can be defined as ontology (Singh, 2019).Consequently, Sikes (2004) asserts that if the ontological assumption is that knowledge is real, and unbiased out there in the world to be captured, then inquirers can study, measure and quantify it. Nevertheless, if it is supposed to be

empirical, personal and biased, then they will have to ask questions of the people involved.

When the researcher has settled on the type of reality, the ensuing level is how to know and understand that reality. The branch of study that deals with different methods of knowing is called epistemology (Singh, 2019). Epistemological assumptions are concerned about how knowledge can be created, acquired and transferred (Scotland, 2012). Therefore, since research itself deals with unravelling new knowledge, the ways in which that knowledge is advanced stems from the epistemology (Snape & Spencer, 2003). First, epistemology, influences the relationship between researcher and participant and whether participants are viewed as active contributors or subjects to be studied. Secondly, epistemology influences the way in which the quality of methods is demonstrated such as the types of action undertaken to ensure data collection and analysis is rigorous (Snape & Spencer, 2003).

Against this background, this current study‘s ontological and epistemological orientations with regard to pursuant of the virtues of reality and truth were based largely on pragmatism paradigm therefore values the assumptions of both positivist and constructivist. Consequently, knowledge is examined using the best tool that is suited for the problem.

The researcher for this study welcomed a social reality that considered social facts as objective with manifold dimensions of reality and shared on these numerous realities by employing multiple forms of evidence from different individuals‘ perspectives and experiences. Personality, career beliefs and career decision-making difficulties can be verified and quantified. Psychometric assessments, a set of rules and procedures were used for this procedure.

Hence in order to ascertain the full range of personality factors, career beliefs, career maturity on career decision making difficulties of students, empirical testing of the proposed hypotheses were stated, questionnaires were administered and statistically analysed, and results were collaborated. There were no preconceived ideas from the researcher on what that range might include. Furthermore, the objective worldview adopted in the present study afforded the researcher to make systematic and logical deductive reasoning premised on the theoretical framework while centring on the applied research approach to suggest solutions to the practical problem of students‘ career decision making. Although personality attributes, Career beliefs and career maturity and career decision making difficulties are viewed as individual biased tendencies, they were quantified into numbers and measured in an unbiased form, for instance, how much of a tendency does a person require for a particular belief. Owing to this, personality, career beliefs, career maturity and career decision making difficulties were considered as a conceptualization of a person and measured impartially using standardised psychometric tools and were statistically analysed with concrete results deduced from the work.

On the hand, constructively, personality, career beliefs, career maturity and career decisions making are based on students‘ multiple realities that are based on individuals‘ social construction and can be considered as their biased preferred ways of interacting with the world. How individuals relate to the world, make sense from a personal perspective in relation to career decision. Career decision making involves individual engagement in seeking solutions through an active process whereby the activity is crucial for students to reason, think, apply, discover, communicate and critically reflect on their careers.

3.3 Research Approach

Following from the philosophical position rooted in this study and adopted in the earlier section, it demands that the study adopts an approach that allows for what works for the study.

Mixed methods encourage the researcher to use all methods possible to address a research problem. The consequence of this is that the research is driven by the research objectives rather than the methodological preferences. Mixed methods designs are procedures for collecting, analysing, and mixing both quantitative and qualitative data in a single study or in a multiphase series of studies (Johnson, Onwuegbuzie & Turner, 2007). Its central premise is that, the use of quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach alone.

The reasons for using the mixed methods approach were that; it provides strengths that offset the weaknesses of both quantitative and qualitative research and furthermore, when one type of research (qualitative or quantitative) is not enough to address the research problem or answer the research questions (Feilzer, 2010). Mixed methods research encourages theoretical richness, choices and multiple opportunities. Shared meaning, joint action, and respect between different perspectives are all emphasised (Madill & Gough, 2008).

The mixed method approach was considered to be effective for addressing this study‘s objectives, research questions and hypotheses. Basically, the empirical testing of the proposed model of career decision-making difficulties aims primarily to see how three vocational constructs interact with career decision-making difficulties.

In this regard, researching the issue of personality factors, career beliefs and career maturity on career decision-making difficulties is complex and the use of only one approach cannot adequately supply all the answers. Thus, requiring the use of a qualitative method to effectively help to explain the quantitative results. For this reason, a mixed method approach was considered most appropriate for this study.

This study sought to test 5 research hypotheses in chapter one to investigate into the relationships between several factors, namely personality factors, career beliefs, career maturity gender, age and career decision-making difficulties. Thus, to test for these hypotheses, a quantitative approach was considered appropriate (Creswell, 2013). However, the study also aimed to solicit views, perceptions, beliefs and explanations students have on the research topic. These research questions require subjective responses from some selected group of students. To collect precise information from a large group of respondents elicit only subjective responses (Bryman, 2012), thus requiring the use of a qualitative method to effectively help to explain the quantitative results.

The mixed methods approach was therefore considered most appropriate for this study because integrating quantitative and qualitative research techniques to achieve the research objectives advanced in chapter one can answer a broader and more complete range of hypotheses and research questions in chapter one. Furthermore, one method alone is often not sufficient to give a holistic picture (Freshwater, 2007). Therefore, applying the mixed methods approach can improve insights into and understanding of the data, which might be missed when using a single approach. Again, mixed methods often help researchers make more meaningful interpretations as well as more opportunity for insightful listening and understanding (Madill & Gough, 2008). The approach was also appropriate because it is common

knowledge that no single source of knowledge engages subjects in a research to validate the knowledge obtained (Creswell, 2003; Mertens, 2012).

3.4 Research Design

This study employed the mixed-methods design called Explanatory Sequential Design which is characterized by collecting and analysing first quantitative and then qualitative data in two consecutive phases within one study for the broad purposes of breadth and depth of understanding and corroboration (Johnson, Onwuegbuzie & Turner, 2007).

The choice of the Explanatory Sequential Mixed Method Design for this study was because neither the quantitative nor qualitative research methods sufficiently answer the research questions. Again, this method provided diversity of views, thus combining researchers‘ and participants‘ perspectives through quantitative and qualitative research respectively, and uncovering relationships between variables through quantitative research while also revealing meanings among research participants through qualitative research. This method also helped in achieving multiple participation and social justice, by determining what works for whom and the relevance of context, including comparing multiple perspectives and data regarding a phenomenon.

Quantitatively, the study used a survey method with extraneous and intervening variables statistically controlled. Four psychometric measures namely the Big five personality Inventory, The Career Beliefs Inventory, the Career Maturity Scale and the Career Decision-making Difficulties Questionnaire were used to test the hypotheses. Analysis was run using different statistical methods. Based on results obtained, some of the findings were inconclusive. Therefore, there was the need for the views of students to be solicited to better explain some of the findings. For

example, students‘ experiential beliefs on career satisfaction could be best explained by an interview.

Qualitatively, this research employed a non-statistical method of inquiry and analysis of social observable facts by drawing on inductive processes, using detailed descriptions from the perspective of the research participants to examine the influence of personality factors, career beliefs and career maturity on career decision-making difficulties. Questions for the qualitative study were made up of open–ended questions and inductive thematic analysis was employed. This process consisted of reading through textual data, identifying themes in the data, coding those themes, and then interpreting the structure and content of the themes (Guest, MacQueen & Namey, 2012). The qualitative aspect of the study provided evidence on personality factors, career beliefs and career maturity as influencing career decision-making difficulties which are contextual and therefore enhanced the quantitative data.

3.5 Research Population

Neuman (2006) defined research population as ―an abstract idea of a large group of many cases from which a researcher draws a sample and to which results from a sample are generalized”. According to Asiamah, Mensah and Oteng-Abayie (2017), there are three types of populations and they are general, targeted and accessible population. They defined general population as ―an entire group about which some information is required to be ascertained”. On the other hand, a targeted population includes all the members of a real or hypothetical set of people, events or objects to which a researcher would like to generalize the results of a study whereas accessible population is the individuals who realistically can be included in the sample. The targeted population for this study consisted of all undergraduate students who were registered students of the University of Ghana, Legon, during 2018/2019

academic year. The total number of the targeted population for this study was 42,874 while the accessible population is recorded as 40,688 undergraduate students (Academic Affairs Directorate, University of Ghana, Legon, 2019).

The accessible population was limited to undergraduate students from the Colleges of Humanities, Education and Basic and Applied Sciences. The purpose for selecting the three colleges over the other academic constituencies of the University was that most undergraduate students from the three colleges have been identified as the main and dominant users of the services of Careers and Counselling Centre of the University of Ghana, Legon (UGCCC, 2018). A probable explanation could be that, students in the Health Sciences have their careers already defined and therefore a decision regarding career choice might have already been made. Thirdly, the Careers and Counselling Centre at the time of study was located on Legon main campus only. Ethically, it was important for students to have access to the services of the Careers and Counselling Centre should the need arise during the research. Therefore, Legon main campus became the most favourable option.

Summary of the targeted population as at the time of the study (2018/2019 Academic Year) is presented in Figure 2.

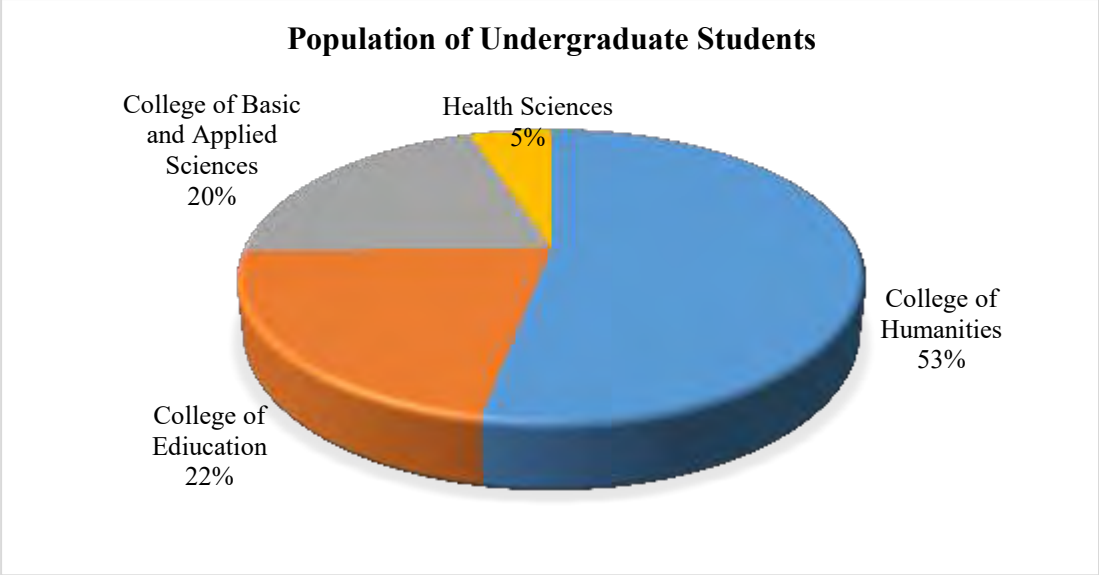

Figure 2: Population of Undergraduate Students from the Four College (Source: Academic Affairs Directorate, University of Ghana, Legon (2018/2019)

According to the 2018/2019 students' population (Academic Affairs Directorate, 2019), four colleges namely, Education, Health Sciences, Humanities, and Basic and Applied Sciences recorded a total population of 42,874 on all the campuses of the University. Figure 3, shows that 53%% (n = 22,720) of the students were from the College of Humanities; followed by 22%% (n = 9,256) from the College of Education. Similarly, 20% (n = 8,692) are from the College of Basic Applied Sciences; and 5% (n = 2,206) from the Health Sciences.

Summary of the accessible population as at the time of the study (2018/2019 academic year) is presented Table 1.

Table 1: Statistics of Undergraduate Students within the 2018/2019 Academic Year

College	Female	Male	Total
Humanities	12,044	10,676	22,720
CBAS	3,521	5,171	8,692
Education	4,195	5,061	9,256
Total	**19, 760**	**20,908**	**40,668**

Source: Academic Affairs Directorate, University of Ghana, Legon (2018/2019)

Table 1 indicates that for college of Humanities there 22,720 students with 12044 males and 10,676 males. The College of Basic and Applied Sciences had 8,692 students comprising of 3,521 females and 5,171 males. The College of Education had 9,256 students with 4,195 females and 5,061 males.

3.6 Sample Size

Sample is a subset of the population being studied. In statistics, a sample refers to the observations drawn from a population (Crossman, 2013). According to Cohen, Manion and Morrison (2000), having the right sample size is crucial in finding a statistically significant result. The larger the sample size, the more reliable the results. According to Krejcie and Morgan (1970), for a population of 50,000 a sample of 381 should be considered appropriate. Therefore, the study projected a sample size of 500 students out of a population of 40,668 students, from three colleges, thus Colleges of Humanities, Education and Basic and Applied Sciences of the University of Ghana. A sample of 500 students for this study could therefore, be considered adequate.

3.7 Sampling Technique

Based on the primary purpose of the study, the researcher used multiple sampling techniques (mixed methods sampling design) to select a sample that characterizes the population of interest so that the researcher could better analyse the impact of personality factors, career beliefs and career maturity on career decision-making difficulties of undergraduate students of University of Ghana. The justification for employing the multiple sampling technique was to offer each undergraduate student of the target population an equal chance of selection. Again, in satisfying the conditions of randomness, the researcher could not simply pick

undergraduate students arbitrarily as unintended biases could be introduced into the selection process. Multiple sampling techniques were again used for the study as the undergraduate students on the University of Ghana campus belong to different colleges, schools, and departments. As explained by Sarantakos (2013) in multiple sampling, the selection of sample units begins with the identification of a larger sample, then proceeds with new samples taken in succession from those previously selected samples, thus facilitating the construction of a more suitable and more effective choice.

The researcher used the stratified sampling technique to select respondents for the study. First, the various academic divisions (colleges) on the University of Ghana Main Campus were selected. According to the University of Ghana Statutes (Statute 27, Section 1), a college is a cluster of schools and departments in related disciplines established by Council. College of Humanities, College of Education and College of Basic and Applied Sciences constituted the three colleges considered for this study. Each of these colleges had schools and departments under them. A list of all schools and departments in each of the colleges was obtained from the Registrar's office of the University and used as the sampling frame. In the view of Cohen, Manion, & Morrison (2007) stratified sampling involves dividing the population into homogenous groups, each group containing subjects with similar characteristics. Therefore, the stratification provided the researcher a homogenous sample by colleges.

Secondly, the simple proportionate sampling was conducted for the next stage. The sample with proportionate stratification was chosen such that the distribution of observations in each stratum of the sample is the same as the distribution of observations in each stratum within the population. This process was primarily useful

because it made the sample representative of the main population to reflect the characteristics within the main population.

The formula by Chao (2012) was adopted for the calculation of the proportionate sampling. In this formula the sampling fraction, which refers to the size of the sample stratum divided by the size of the population stratum (nh/Nh), is equivalent for all strata. For a finite population with population size N, the population is divided into H strata (subpopulations) according to certain attributes. The size of the hth stratum is denoted as Nh. Therefore, a proportional sampling refers to a design with total sample size n such that:

$$n_h = n\frac{N_h}{N}$$

Hence the proposed number of students for the research was 500 students. The number of students per each college as shown in Table 1 in this study was used for the calculations. Therefore, going by the formula the following calculations were done.

College of Humanities

$$nh = 500 \times \frac{22720}{40688} = 279$$

College of Basic and Applied Sciences (CBAS)

$$nh\ 500 \times \frac{8,692}{40688} = 107$$

College of Education

$$500 \times \frac{9.256}{40.688} = 114$$

Subsequently, the researcher examined the structure under the college and realised that each of the three colleges had a number of schools under it. Therefore, simple random sampling lottery method was used to select 2 schools from each college. Two schools were selected because the researcher wanted to draw a

manageable sample which will be very representative of the population. The researcher wrote the names of each of the schools on pieces of papers and place them into three separate containers according to their academic divisions – college. After shuffling the pieces of papers in each container, an independent volunteer (student) was requested to help select 2 pieces of papers from each container. The schools that were selected from the three containers became the sample frame for the next phase of the sampling process. In all, six schools were selected.

The next stage, the researcher reclassified school into departments as determined by the university. In order to have access to a manageable subdivision under the departments, the researcher employed simple random sampling method to draw one department from each school. Six student volunteers were requested to facilitate the process in order to avoid any form of biases on the part of the researcher. The result of the process meant that six departments were arrived at and they served as the sample frame for the study at this stage.

The departments were subdivided into year groups (Level 100, 200, 300 and 400) and each department had four levels. It therefore, meant that the six departments together had 24 levels ($6 \times 4 = 24$). The researcher selected all the 24 levels for the study. All the levels in each of the six departments were selected because the researcher wanted to draw enough and rich information in order to explore and explain the influence of personality factors, career beliefs and career maturity on career decision making difficulties. Purposive sampling, according to Fraenkel and Wallem (2009), starts with a purpose in mind of the researcher and the sample is thus selected to include people of interest and exclude those who do not suite that purpose.

Lastly, researcher employed a Systematic Random sampling to select the students from each Level. The steps taken in applying the systematic random sample was as follows:

1. Calculate the skip interval k = $\frac{N}{n}$
2. **Choose a random start, r, between 1 and k.**
3. Select the r^{th} unit in the list and every k^{th} unit thereafter:

Formula = r; r + k; r + [2×k]; r + [3×k]; r + [4×k]; r + [5×k];...; r + [(n-1)×k].

For example, after rearranging students of Department A – Level 100 in alphabetical order, serial numbers (1 – 378) were assigned to each name, the researcher then divided the sum total of the students in that level by the number required to be sampled, that is, 378/29 = 13.03. Based on the caveat given (The value of k is usually not an integer). In this case, the researcher rounded the value of k to the nearest integer), the researcher rounded up the number to 13. At this stage, numbers 1 – 13 were written on pieces of papers and placed in a box. The researchers shuffled and asked a volunteer student to pick one piece of a paper from the box. The number written on that paper was 4. Therefore, r = 4, and k = 13.

Consequently, the first serial number sampled for the study was the 4^{th}. The next one was the 17^{th} ([r + k] 4 + 13 = 17). The third was the 30^{th} ([r + 2×k] 4 + 2 ×13= 30) and the process was repeated till the total number of 29 students were drawn from the Department.

In all 494 questionnaires were successfully collected from students, this represented a return rate were 98.8% ($^{494}/_{500}$ = 0.988; 100 × 0.988 = 98.8). Table 3 shows the return rate per levels and numbers and percentages.

Table 2: Response rate per levels and percentage

Academic Level	Number of Students	Percentage %
Level 100	137	27.7
Level 200	121	24.5
Level 300	128	25.9
Level 400	108	21.9
Total	**494**	**98.8**

3.8 Data Collection Instruments

In order to collect data for the study, standardized vocational instruments were used. These tools were deemed appropriate for the study as it answers the need of the study and offered the researcher the opportunity to test existing measures in the Ghanaian context. They were quicker to use in gathering information in an academic setting, this is because all the participants were literate which made reading and understanding much easier.

The questionnaires were made of four different vocational measures. It started with a session that collected demographic data on the background characteristics of students. Areas considered included, Sex, Age Academic program eg B. A, BSc, and Others as well as the Academic Level 100, 200, 300 and 400. The Instruments gathered data on Personality Factors, Career Beliefs, Career Maturity and Career Decision-making Difficulties.

Four pre-validated questionnaires such as the Big Five Personality Inventory were used to measure personality factors. The Career Beliefs Inventory was used to measure Career Beliefs, the Career Decision-making Self-Efficacy Short Form was used to measure Career Maturity and Career Decision-making Difficulties Questionnaire Revised was used to measure Career Decision-making Difficulties. Details of the different measures are provided as follows:

3.8.1 The Big Five Personality Inventory (BFI)

The most prevalent personality framework is the Big Five, also known as the five-factor model of personality ((McCrae & Costa, 1992). The Big Five Personality Inventory (BFI) was developed as an operational tool for the Five Factor Model of personality, representing a comprehensive framework for structure of traits. It evolved as a result of many years of elaborate development and research (McCrae & Costa, 2010). Elaborate factor analysis of these descriptors identified the presence of a recurrent five factors that comprehensively describe personality (Jones, Courts, Sandow & Watson 1997). As these factors were familiar to personality psychologists, the Big Five Personality inventories demonstrated the comprehensiveness of these recurring personality factors (Costa & McCrae, 1992).

The inventory employed in this study, the Big Five Personality Test from *IPIP.ori.org*, is a revised version of the Big Five Personality Inventories. It is made up of 50-item inventory that measures an individual on the Big Five Factors of personality namely, openness to experience, conscientiousness, extroversion, agreeableness and neuroticism. The Big Five Personality Inventory has demonstrated an applicable utility in clinical, applied and research settings (Lounsbury *et al.*, 2003).

3.8.1.1 Administration and scoring of the big five personality inventory

Administration and scoring of the BFI can be performed by individuals who do not have any formal training in clinical psychology, personality analysis or related fields of clinical psychology (Costa & McCrae, 1992). The 50 -items of the BFI are equally distributed over the personality domains thus 10-items were allocated for each domain. For each item, there is a five-point Likert scale response ranged from 1=strongly disagree, 2=disagree, 3=neutral, 4=agree and 5=strongly agree. The respondents were instructed to fill in the correct box for each item and circle 1 if they

strongly disagree or if the statement is definitely false, circle 2 if they disagree or the statement is mostly false, circle 3 if they are neutral on the statement, if they cannot decide, or if the statement is about equally true or false, circle 4 if they agree or the statement is mostly true and 5 if they strongly agree or the statement is definitely true. The total score for the personality domain is the sum of the scores earned for the 10 items of that domain. The scores calculated should be between zero and forty (0 and 40). Below is a description of each trait.

The raw score of the domain is the sum of the 10 items in that column as follows:

E=20 + (1)__-(6)__ +(11)__-(16)_+(21)__-(26)__+(31)___-(36)_ +(41)__-(46)__=___

A=14 -(2)__+(7)__-(12)__+(17)__-(22)__+(27)__ (32)_+(37)__+(42)__+(47)__=____

C=14+(3)__-(8)__+(13)__-(18)__+(23)__-(28)__ +(33)__-(38)__ +(43)__+(48)_=____

N=38-(4)__+(9)__-(14)__+(19)__-(24)___-(29)__-(34)__-(39)__-(44)__-(49)__=____

O=8 + (5)__-(10)__+(15)_-(20)__+(25)__-(30)__+(35)__+(40)___+(45)__+(50)_=___

The following reliability was reported measuring extraversion (α = .87), agreeableness (α = .82), conscientiousness (α = .79), neuroticism (emotional stability) (α = .86), Openness (α = .84) at the construct level, with the published internal consistencies in parentheses (Goldberg, 1990). See Appendix 1 for the test instrument.

3.8.2 Career Belief Inventory (CBI)

The Career Beliefs Inventory (CBI) by (Krumboltz, 1994a) was devised as a tool to enhance individual‘s insight about their career beliefs and to evaluate the possible effect of these beliefs on career related behaviours during counselling process. The CBI can help counsellors initiate explorations of the career assumptions on which their clients operate (Mitchell & Krumboltz, 1996).

Theoretically, the CBI is an application of cognitive psychology and cognitive therapy (Bandura, 1977; Beck, 1976; Ellis, 1962). The CBI can identify categories of beliefs that may lead to the discovery of specific, troublesome beliefs (Krumboltz, 1991).

For this study, CBI materials were purchased from Mind Garden (Mind Garden, Inc., *www.mindgarden.com*). The packet included item booklets (that is the questionnaire and a professional Manual. The CBI had 96 items organized into 25 scales. These 25 scales were organized under 5 subscales headings:

My Current Career Situation: This includes four scales: Employment Status, Career Plans, Occupations of Uncertainty and Openness. This grouping helps the counsellor determine the basic current employment status, career plans, any anxiety about the uncertainty of career planning and the willingness to talk freely.

What Seems Necessary for My Happiness: This heading consists of five scales: Achievement, College Education, Intrinsic Satisfaction, Peer Equality, and Structured Work Environment. These groupings help the counsellor to examine the requirements clients may be placing on themselves with regard to the importance of high achievement, a college education, interesting work tasks, a desire to excel others, or a structured work environment to the client.

Factors That Influence My Decisions: This contains six scales namely Control, Responsibility, Approval of Others, Self-other Comparison, Occupation/College Variation and Career Paths Flexibility. This grouping helps the counsellor examine what clients are taking into account as they make decisions. Who's in charge? What do they expect of "experts?" Whom are they trying to please? Who do they emulate?

How much complexity do they perceive in occupational and educational environments? How rigid is their career path?

Changes I Am Willing to Make: Three scales are under this heading: Post training Transition, Job Experimentation and Relocation. This grouping helps the counsellor address the clients' flexibility. Are they willing to move beyond their initial training? Are they willing to try new occupations? Would they move?

Effort I Am Willing to Initiate: This includes seven scales: Improving Self, Persisting While Uncertain, Taking Risks, Learning Job Skills, Negotiating/ Searching, Overcoming Obstacles and Working Hard. This grouping helps the counsellor to explore what, if anything, may be preventing clients from taking action to solve their own problems. Maybe they don't want to improve their skills? Maybe they want a final decision before starting to work, when some hard work would help them make the decision? Maybe they are paralyzed by the thought of failure? Maybe they hate job training? Maybe they don't see how they could negotiate a better deal for themselves in their present job? Maybe some obstacle is blocking them? Maybe they believe that hard work is irrelevant to their success? Uncovering a key assumption in any one of these areas could free a client to take some needed action.

3.8.2.1 Administration and scoring

The administration of the CBI is virtually self-explanatory. Each respondent was given a copy of the test and an ordinary HB pencil or pen. In a group setting the directions were read aloud by the test administrator. After a response is selected, the appropriate box on the answer sheet is ticked using the response scale where 1= Strongly Disagree 2 = Disagree 3 = Uncertain 4 = Agree 5 = Strongly Agree. Some

items, however, are reverse scored so that strongly agreeing is weighted 1and strongly disagreeing is weighted 5.

Scores on each of the 25 scales range from 10 to 50. The scale scores are 10 times the average item weight on each scale. A score of 50, for example, means that the respondent answered every item on that scale by strongly agreeing with the positively worded items and strongly disagreeing with the negatively worded items. Every item on that scale would be weighted 5; therefore, the scale score would be 10 times 5. A score of 40 means that, on the average, the respondent agreed with the positive items and disagreed with the negative items. Any score less than 40 indicates at least some uncertainty about the belief represented by a high score on that scale. Any score less than 20 indicates a strongly felt endorsement of the belief represented by a low score on that scale. Lower scores on a scale alert the counsellor to explore specific beliefs in that category with the client and to examine their consequences (Krumboltz 1994a). The reliabilities for each of 25 subscale scale in the fall college sample yielded between .71 and .72 (Krumbolz, 1996). See Appendix 2 for the test instrument.

3.8.3 Career maturity scale

Crites (1974) in his model of career maturity hypothesized that ―good" career decisions will be facilitated by competence with respect to five career choice processes such as accurate self-appraisal, gathering of occupational information, goal selection, making plans for the future and problem solving. The Career decision-making self-efficacy scale-short form was developed by Betz, Klein and Taylor (1996). According Taylor and Betz, (1983) the concept of career maturity model as proposed by Crites' (1974) provided the scale with a framework for deciding how to define and operationalize the skills required in career decision-making. The construct

that served as the basis for the five competencies that characterise the Career Decision Self Efficacy Scale-Short Form (CDSE-SF) are self-appraisal, occupational information, goal selection, planning and problem solving. Hence the study adopted the CDSE-SF to measure career maturity.

3.8.3.1 Administration and scoring

Administration of the Career Decision Self Efficacy Scale followed a standardized testing procedure, including a review of the instructions provided at the beginning of the scale. The scale was administered on a standard scale (as provided by Mind Garden, Inc., www.mindgarden.com). The Career Decision Self-Efficacy Scale (CDSE or CDSE-SF) is administered using the 5 possible response options, that is 1 to 5, corresponding to No Confidence at All = 1, Very Little Confidence = 2, Moderate Confidence = 3, Much Confidence = 4 and Complete Confidence = 5 (Chaney, Hammond, Betz & Multon, 2007).

The CDSE-SF yields six scores – subscale scores for the five components of career decision self-efficacy and a total score. Each subscale score comprises five (CDSE-SF) items, and scoring is cumulative. The items associated with each component of the scale are: Self-Appraisal, Occupational Information, Goal Selection, Planning, and Problem Solving are shown in the scoring keys. For the full CDSE, response values for the five items for each scale are summed and then divided by 5. Scoring 1.0 to *2*.5 indicates low to little confidence, this means the individual needs intervention. A score of 2.5 to 3.5 indicates moderate confidence, this means the individual may be comfortable exploring or may need some help. A score of 3.5 to 5.0 indicates good confidence, this means the individual may be comfortable with this skill set.

The following Cronbach alphas were yielded for reliabilities for the five subscales. Self-Appraisal (.α=81), Occupational Information (.α=82), Goal Selection (.α= 87), Planning (α=.84), and Problem Solving (.α= .81) (Paulsen & Betz, 2004; Smith, 2001). See Appendix 3 for the test instrument.

3.8.4 Career decision-making difficulties questionnaire revised (CDDQr)

Gati, Krausz and Osipow (1996) proposed a theoretical framework which is a hierarchical taxonomy, where distinction is made between difficulties experienced prior to and during the decision-making process. This taxonomy relies on the theoretical construct of the ideal career decision maker (i.e., an individual who understands the need to decide, is eager to make such a decision and capable of making the ~~"r~~ight" one). Considering the complex nature of career decision-making procedure, it is assumed that most students are far from the profile of the ideal career decision maker, hence, any deviation from an ideal decision is a potential problem, which may affect the process. Based on this postulation, Gati et al. (1996) classified the potential difficulties into ten discrete, but not independent, categories which are further categorized into broader three categories.

With a written permission sought from Professor Gati, the researcher was given the permission to use the CDDQ for this study (Copyright (c) 2000-2010 Itamar Gati and Samuel Osipow. All rights reserved).

3.8.4.1 Administration and scoring

The Career Decision-making Difficulties Questionnaire (CDDQ) consisted of 34 items/statements investigating difficulties in decision-making regarding the career path. Participants respond to a 9-point Likert type scale (1=does not describe me through to 9=describes me well), where 1- indicates low difficulties and 9- indicates

high difficulties. The first category, Lack of Readiness, includes three subcategories of difficulties: (1) lack of Motivation (RM), (2) general Indecisiveness (RI), and (3) Dysfunctional beliefs (RD). The second category, Lack of Information, includes four subcategories: (4) lack of knowledge about the steps involved in the Process of career decision-making (LP), (5) lack of information about the Self (LS), (6) lack of information about the various Occupations (LO) and (7) lack of information about the ways of obtaining Additional information (LA). The third major category is Inconsistent Information and includes three subcategories: (8) Inconsistent Information (IU), (9) Internal conflicts (II) and (10) External conflicts (IE).

The responses of each scale are summed up and divided by the number of items to arrive at the mean for the subscale scores. The main scale is scored by the total of the mean of the ten subscales thus (Rm+Ri+Rd+Lp+Ls+Lo+La+Iu+Ii+Ie)/10. A rule of thumb for interpreting the mean score on each scale on the CDDQ has been given by Gati, Krausz, and Osipow (1996). According to the interpretation guidelines, a given difficulty is considered salient if it has a mean scale of 6.67, moderate if it is between 6.66 and 3.34 and negligible if it is below 3.33 (Gati, Krausz & Osipow, 1996).

Using the Cronbach alpha statistic to determine the internal consistency reliability, Lack of readiness .71, Lack of information .74 and inconsistent information .74 and the total questionnaire as .80 (Gati et al. 1996). See Appendix 4 for instrument.

3.9 Pre-testing of Instruments

The development of questionnaires, surveys and psychometric scales is an iterative research process that includes several carefully planned stages. Pre-testing is a method of checking that questions work as intended and are understood by those

individuals who are likely to respond to them. Mittal, Chaudhary & Alavi (2017), additionally asserted that, pre-testing is a very important step in survey research. It is a necessary step to ensure that all kinds of errors that are associated with the survey research are reduced. It helps to improve the quality of data significantly. Therefore, pre-testing is done on a small sample of respondents from the target population (Field, 2009).

University of Professional Studies Accra was chosen for the pre-testing because it shared common characteristics with the University of Ghana, Legon. Both are institutions of higher academic learning with undergraduate students who are making subject choice and career decisions. Secondly, they are geographically located at Legon. Finally, they both have similar students, organisational structure, and academic staff.

In view of this, the four sets of questionnaires for the present study were piloted on undergraduate students of the University of Professional Studies, Accra (UPSA). The researcher had informal interaction with the students and discussed general issues pertaining to the study. Fifty (50) students from Level 100 to 400 took part in the pre-test. The questionnaire was administered by the researcher with assistance from staff of UPSA who was already trained in administering research questionnaire. A brief review on data collection techniques, the aims and objective of the current study was discussed with the research assistant. The researcher stayed with students throughout the session to answer questions or concerns any students might have. In all 50 questionnaires were administered and the same number was retrieved. It took 30 to 45 minutes to answer a questionnaire.

3.10 Validity and Reliability of the Instruments

According to Converse and Presser (1986), to determine the effectiveness of your survey questionnaire, it is necessary to pre-test it before actually using it. Pretesting can help you determine the strengths and weaknesses of your survey concerning question format, wording and order. A pre-test was conducted and this was for the purposes of validating and to significantly enhance the instruments used for the study.

Validity, in the context of this study, refers to how accurately the set of questionnaires administered and the interviews conducted were able to collect the responses from the respondents and participants as intended by the researcher in order to tackle the objectives. Internal Validity of the instruments was assessed to determined how well it measures the concepts it is intended to measure and to rule out alternative explanations for the findings usually, sources of systematic error or 'bias.

In relation to content validity, the Study ensured that all the items calibrated on the instruments covered the domain that the instruments purport to measure. This step focused on finalizing the items with the help of experts. In this step, the items developed were given to three subject experts. The experts were experienced researchers in Clinical, Organizational and Educational psychology fields. All three were PhD. Scholars. The three psychologists scrutinized all the items carefully aiming to discard the duplicated ideas and retain the appropriate items. The statements showing same themes were merged into one item. They provided feedback on items and suggested to discard some of the items and to rephrase few items.

With regards to face validity, two psychology lecturers from University of Education, Winneba and University of Cape Coast and the present researcher analysed the items. Members analysed each item, so as to check if items carry the

exact meaning with reference to context, grammar and wording, but the emphasis was given to conceptual equivalence in order to provide for common meaning and legitimacy.

The next stage of validity focused on exploring factor structure of the four questionnaires. Factor Analysis is a statistical technique to identify the structure of a set of variables and to reduce a data set to a more manageable size while retaining as much of the original information as possible (Field, 2005). According to Nunnally and Bernstein (1994), factor analysis is used to retain dominant questionnaire items measuring a construct, whilst eliminating redundant items in construct measures. Similarly, Kline (1998) argues that the most simplier use of factor analysis is item consistency of latent variables. Field (2009) argues that for achieving parsimony by explaining the maximum amount of common variance in a correlation matrix, one uses the smallest number of explanatory constructs in the social sciences. Several criteria have been recommeended for retaining questionnaire items in factor analysis ranging from 0.3 (Tabachnick & Fidell, 2013) and above 0.4 (Stevens, 2002) for exploaration reasons. The current study adopted the criterion of 0.5 coefficient scores for retaining items for explorative pupose. Inspection of most coefficienct loadings appeared strong (above 0.7) in Appendix 6 – though few factor loadings fell below 0.5, they can be accepted for explorative reason (EFA). Other statisticians have argued that 50 sample size and above are suitable for factor analysis (Everitt & Hothorn, 2011). Therefore, 50 sample size used in this study can be described as a good enough sample size for factor analysis.

The objective of using factor analysis in this study were to determine total variance explained, questionnaire items extracted, number of components (sub-themes), and retaining dominant items. According to Field (2009), factor variances

represent the internal consistency of items used for measuring a construct based on matrix algebra. Field (2009), further states that components extracted above enginvalue of 1 should be considered dominant for a substantive component. Hence, three constructs were successfully extracted unto various components out of the four (CDDQ, CDSE, BF, and CBI) with total variance explained between 47% (CDSE Factor) and 66% (CBI Factor).

Though the 96 items measuring the CBI factor explained the highest variance explained of 66.048% variance, the BFI also explained 58.703% variance with 50 questionnaire items. Refreshingly, the CDDQ construct with 34 items also explained 61.459% variances and six sub-themes categorized. Finally, the CDSE factor with its 25 items recorded 47.793 variances and four sub-themes successfully extracted (Appendix 6).

Further, item-total correlations and alpha coefficients were also calculated as evidences psychometric properties of scale. The Cronbach alpha was found to exceed the recommended lower bound for an acceptable estimate of internal consistency ($\alpha >$ .70 for the Instruments. The internal consistency for the various instruments used has been recorded as follows: for Career Decision Self- Efficacy (CDSE) was α= .83; The Big Five Inventory (BFI) with (50) items measuring the five (5) Domains reported for internal consistency α= .71. The Career Decision-making Difficulties Questionnaire Revised (CDDQr) recorded α=.78. The Career Beliefs Inventory (CBI) was α=.75.

3.11 Interview Guide

In-depth interviews are useful when you want detailed information about a person‘s thoughts and behaviours or want to explore new issues in depth (Rashid, Hodgson & Luig 2019). They may also provide a more relaxed atmosphere where information could be collected thus people may feel more comfortable having a

conversation with you about themselves as opposed to filling out a survey (Boyce & Neale, 2006).

Qualitative interviewing is useful tool for a range of methodological approaches and may therefore be applied to address several research questions (Roulston, 2014), however qualitative research interviews are preferable when the researcher strives to understand the interviewee's subjective perspective of a phenomenon.

This study sought to allow participants tell their own story on their own terms. An unstructured or semi-structured interview guide allowing the interviewer to explore issues brought forward by the quantitative results. The interview started with a few "easy" questions to make the interviewee comfortable and to familiarize him/her with the subject of the interview. One example was: "Please tell me, how long have you been a student on this campus?" Since the researcher would be asking participants to reflect on matters that are potentially important to the study, there was a test interview which was undertaken with her peers and volunteers who furnished the researcher with an opportunity to explore language, the clarity of the questions, and aspects of active listening.

An assessment of the cultural dimensions as well as power dimensions is necessary prior to the interview (Nimmon & Stenfors-Hayes, 2016). As a counsellor interviewing students, the researcher was aware of both explicit and implicit power relationships and was conscious that students are not trying to comply with expectations of providing, what is perceived to be, a correct response.

The researcher had a feedback and suggestions from PhD supervisors on the interview guide. This offered time for discussion and revisions and restructuring of some of the questions in order to elicit the right responses from participants. An open-

ended interview guide containing sixteen (18) questions was developed and these listed questions helped to solicit the views of students during the interviews. Questions on students' views on personality, beliefs and perceptions about careers, maturity and career decision-making difficulties were asked. The questions within each of these major areas, were sensitive to the ethical dimension of interviewing. The language used was appropriate to the level of the participants and this offered the researcher the opportunity to probe further. This also permitted repeated examinations of the interviewees' answers. Usually, these qualitative interviews last about an hour, although sometimes much longer (Simon-Kumar, 2005).

Roulston (2014) proposed how qualitative interview questions can be organized and presented 5 areas that the questions should cover, thus experiences and behaviours, opinions and values, feelings, knowledge, and sensory observation. The following steps were adopted from Roulston (2014) in formulating the interview guide for this study.

Focus of questions	**Example of an interview question**
Experiences and behaviours	Tell me how did you come to know about personality preferences? Describe how personality influences career decision making difficulties?
Opinions and values	Tell me what you see as the role of gender in career decision making? Would you say a particular gender has an advantage in career decision making over the other?
Feelings	Do you entertain any fears about your career? If Yes why? If No why?
Knowledge	Tell me in what ways does career maturity? influence career decision making difficulties?
Sensory observations	Do you see age as an advantage when it comes to career decision making? Why?

3.12 Sampling for Qualitative Phase

Purposive sampling technique was used to select participants who can provide in-depth and detailed information about the phenomenon under investigation. It was subjective and was determined by the researcher for generating the qualifying criteria each participant must meet to be considered for the research study. There were two selection criteria (a) must be an undergraduate student at the university of Ghana. (b) must have participated in the quantitative phase. This was to ensure that participants have a similar foundation.

The researcher took the various class lists and in no specific order students were randomly called and asked if they would want to participate in a second round of the research. Those who agreed to participate were scheduled for an interview.

Sample size was fixed at 25 students, however by the 10 participants there was theoretical saturation, the point in data collection when new data no longer bring additional insights to the research questions.

3.13 Positionality

This study researched on personality factors, career beliefs and career maturity influencing career decision-making difficulties amongst students of University of Ghana. My interest in this subject has developed from my experience as a Counsellor at the University of Ghana. Despite the different approaches to working with Ghanaian and International students at different levels, students seem to have similar and work-related identities with a few variations in career beliefs. Therefore, it is of interest to me to understand personality factors, career beliefs and career maturity on career decision- making difficulties from students‘ perspectives without imposing my frame of understanding on them.

In reflecting on my own positionality as a female and a Counsellor at the University of Ghana, I reckon that I am not only defined by these attributes. I have life experiences, beliefs, and historical contexts that also factor into my positionality. During the study, I guarded myself against allowing my experiences, background and biases to influence the research process of rapport building with respondents, data collection and data analysis. The strengths of the quantitative data augment any possible influence of bias of positionality and subjectivity, for which triangulation with the qualitative data enhances the robustness of the study.

The inclusion criteria of the sample are appropriate and therefore, assured that the participants have all experienced the same or similar phenomenon of the study. It is also assumed that participants will answer the interview questions in an honest and candid manner. It is assumed that participants have a sincere interest in participating in the research and do not have any other motives, such as getting a better grade in a course if they agree to be in this study. The students in this research are not my counselees and probably might not have met them before and may never meet them until they are done with their education.

3.14 Methods for Verification of Trustworthiness

When qualitative researchers speak of trustworthiness it simply poses the question _Can the findings be trusted?' Several definitions and criteria of trustworthiness exist but the best-known criteria are credibility, transferability, dependability, confirmability and reflexivity (Guba & Lincoln, 1994). These are an integral part of ensuring the transparency and quality of qualitative research.

3.14.1 Credibility

Credibility is the equivalent of internal validity in quantitative research and is concerned with the aspect of truth-value strategies. To ensure that there is credibility, there must be prolonged engagement, persistent observation, triangulation, and member check (Korstjens & Moser, 2017).

3.14.1.1 Prolonged engagement

Prolonged Engagement means being present on the site where the study is being done long enough to build trust with the participants, experience the breadth of variation and to overcome distortions due to the presence of the researcher on the site (Childers, 2012). This involves spending adequate time observing various aspects of a setting, speaking with a range of people, and developing relationships and rapport with members of the culture. Development of rapport and trust facilitates understanding and co-construction of meaning between researcher and members of a setting (Cosgrove, 2020).

In this study several distinct questions were asked regarding topics related to personality, career beliefs, career maturity and career decision-making difficulties. The researcher spent at least an hour per participants observing while asking questions. When participants were unable to finish answering the questions another date was rescheduled to allow for a more suitable time. This offered the researcher the opportunity to observe participants long enough in the comfort of their environment.

3.14.1.2 Triangulation

Triangulation refers to the use of multiple referents to draw conclusions about what constitutes truth. The aim of triangulation is to ~~"o~~vercome the intrinsic bias that comes from single-method, single-observer, and single-theory studies" (Denzin,

1994). Triangulation can also help to capture a more complete, contextualized picture of the phenomenon under study (Guba & Lincoln, 1994). In this study, data triangulation was secured by using the various data sets that emerged throughout the analysis process thus raw materials, codes, concepts, interpretations and theoretical saturation. By the 10th person there was saturation therefore there was the need to end the interview session.

3.14.1.3 Persistent observation

High-quality data collection in qualitative studies also involves persistent observation, which concerns the salience of the data being gathered. Persistent observation refers to the researcher's focus on the characteristics or aspects of a situation that are relevant to the phenomena being studied. As Lincoln and Guba (1985) noted, "If prolonged engagement provides scope, persistent observation provides depth" (p. 304).

Persistent observation is to identify those characteristics and elements in the situation that are most relevant to the problem or the issue being pursued and focusing on them in detail. In this regard, the researcher stayed with the participants at least one hour during the interview process. The researcher studied the data from their raw interview material. The aim of this section was to use semi-structured interview to collect qualitative data to help explain in greater depth the issues that were emerging from the quantitative phase of this research. Therefore, themes further emerged deductively from data after transcription. This was studied and meanings and nuances were drawn from the information gathered.

3.14.1.4 Member check

Traditionally, member checking is defined as sharing either a brief summary of the findings or sharing the whole findings with the research participants (Koro-Ljungberg, 2010). Halfway through the study period, the researcher held a meeting with those who had participated in the interviews, enabling them to correct the interpretation and challenge what they perceived to be _wrong' interpretations. This offered the researcher the opportunity to capture the information from the perspectives of the participants and correct any erroneous impressions.

3.14.2 Transferability

Transferability is analogous to generalizability and it is the extent to which qualitative findings have applicability in other settings or groups. Lincoln and Guba (1985) noted that, the investigator's responsibility is to provide sufficient descriptive data that readers can evaluate its applicability to other contexts: –Thus the naturalist cannot specify the external validity of an inquiry. He or she can provide only the thick description necessary to enable someone interested in making a transfer to reach a conclusion about whether transfer can be contemplated as a possibility" (p. 316).

In this study the researcher provided a rich account of descriptive data, such as the context in which the research was carried out, its setting, sample, sample size, sample strategy, demographics, socio-economic characteristics, interview procedure, topics, and excerpts from the interview guide.

3.14.3 Dependability and confirmability

Dependability refers to the stability (reliability) of data over time and over conditions. The dependability question is _Would the study findings be repeated if the inquiry were replicated with the same (or similar) participants in the same (or similar)

context?‘ (Cosgrove, 2020). Credibility cannot be attained in the absence of dependability, just as validity in quantitative research cannot be achieved in the absence of reliability (Korstjens & Moser, 2017).

Confirmability concerns the aspect of neutrality. One need to secure the inter-subjectivity of the data. The interpretation should not be based on your own particular preferences and viewpoints but needs to be grounded in the data. Here, the focus is on the interpretation process embedded in the process of analysis. For this criterion to be achieved, the findings must reflect the participants‘ voice and the conditions of the inquiry and not the researcher‘s biases (Yin, 2014).

The strategy needed to ensure dependability and confirmability is known as an audit trail. In this study the two supervisors examined the analytical process, the records and the minutes of meetings for accuracy and assessed whether all analytical techniques of the grounded theory methodology had been used accordingly. The Supervisors also reviewed the analysis, i.e. the descriptive, axial and selective codes, to see whether they followed from the data (raw data, analysis notes, coding notes, process notes, and report) and were grounded in the data.

This was done to confirm the accuracy of the findings and to ensure the findings are supported by the data collected. All interpretations and conclusions were examined to determine whether they are supported by the data itself. Inquiry audits was beneficial because they allowed an outside researcher to examine, explore, and challenge how data analysis and interpretation occurred. This provided the research with an objective view barring bias.

3.14.4 Reflexivity

Reflexivity involves awareness that the researcher as an individual brings to the inquiry a unique background, set of values, and a professional identity that can affect the research process. Reflexivity involves attending continually to the researcher‘s effect on the collection, analysis, and interpretation of data (Yin, 2014). In order to check for reflexivity, the researcher acknowledged the importance of being self-aware about her own role in the process of collecting, analysing and interpreting the data and the pre-conceived assumptions she brings to the research. Therefore, interviews, observations, and all analytical data were supplemented with reflexive notes which included the researcher‘s subjective responses to the setting and the relationship with the interviewees.

3.15 Data Collection Procedure

The data for the study was collected from undergraduate students at all levels at the University of Ghana, Legon with the help of a research assistant who was qualified to administer the instruments. Permission was sought from the lecturers and teaching assistants of the various courses and the objectives of the study were explained to them. The objectives were also explained to the students and those who agreed to participate were given the questionnaire packets. The time allowed was between 30 – 45 minutes.

The participants were assured of confidentiality and anonymity by allocating codes to the packet. Communication among participants was minimal as questions were addressed to the researcher and research assistant. A set time was allocated to the research team by the lecturers before or after the lecture to collect the data. However, some students were unable to answer all the questions at the said time, so

they were allowed to take it away and returned it during the next lecture. Unfortunately, some students did not return it.

The objective of the study was solely for academic purposes. The participants were assured of no right or wrong answers. Together with the research assistant, the researcher distributed a total of 500 questionnaire packets to the students and was able to retrieve 494 within four weeks from 27th February to March, 2019. The questionnaire packets were collected immediately after completion. The qualitative research involved 10 participants who were sampled with a variety of techniques, which included small group discussions and informational interviews. The in–depth interviews started with orally informed consent of the interviewee. The researcher re-explained the purpose of the interview, why the participants were chosen, expected duration of the interview, whether and how the information will be kept confidential, and the use of a note taker and/or tape recorder.

Once interviewee has consented, an agreed date and time was negotiated. For clarity and easiness of conversation, a serene environment was located by both parties for the interview. The interview session took one hour or an hour and fifteen minutes. Sometimes the meeting had to be rescheduled when participants were unable to finish answering all the questions within the stipulated time. This approach allowed the students to express at length and breadth, their various views on the career development processes as there was no distractions. The responses from participants forming the key data were summarized and verified with participants and recordings were played immediately after the interview. This was to ensure that participants were comfortable with the information shared.

The data for the qualitative study was collected through in-depth interviews under the guidance of a semi–structured interview guide. Therefore, primary data formed the basic information used for the study. The questions in the interview guide were designed to gather information on students‘ perceptions, beliefs, stereotypes and assumptions about personality factors, career, maturity and career decision-making difficulties. With the semi–structured format, it afforded the researcher the opportunity to have a one–on–one interaction and the nuanced examination of the subjective issues within the cultural context. As part of ensuring integrity, credibility and trustworthiness, the data was transcribed by another person and also with the help of the researcher to inculcate the notes that were taken during the conversation.

3.16 Data Analysis

To find the effect of an independent variable on some dependent variable, all other variables that may have a significant relationship with the dependent variable and are not of interest need to be statistically controlled (Field, 2005). The present Study did statistically control such variables as academic level and program. This was to ensure that the effect of the independent variables (personality factors, career beliefs, career maturity, age, and sex) represent the change in career decision-making difficulties over the time period under consideration.

Quantitative data analysis was conducted in three steps. First, the means, standard deviations, correlation matrix and internal consistency estimates (Cronbach‘s alpha) were computed for each of the variables. This was followed by partial correlation analysis, which was used to examine the links among the five main personality domains and Career beliefs. Thirdly, a series of statistical analyses were conducted which included multiple (hierarchical) regression analysis, bivariate correlational analysis, simple regression and t-test were used to test each of the

hypotheses. The multiple regression allowed the present study to undertake a more sophisticated exploration of the interrelationship among the set of variables examined (Pallant, 2001) while controlling for other relating variables (Welbourne, Johnson & Erez, 1998). The SPSS version 23 was employed in the statistical analysis.

Prior to conducting the linear regression for hypotheses One (1), the assumptions of normality of residuals, homoscedasticity (equal variable) of residuals, absence of multicollinearity and lack of outliers were examined. The normality was assessed with a Shapiro-Wilk test and a Q-Q scatterplot, homoscedasticity was assessed with residuals scatterplot, multicollinearity was checked using a correlation matrix of all the determinants and collinearity diagnostic output from SPSS which is made up of the Variance Inflation Factor (VIF) and Tolerance statistic and outliers were evaluated using a studentized residual plot.

The first assumption which was tested was the normality of residuals. The normality was assessed with a Shapiro-Wilk test and a Q-Q scatterplot. The result of the Shapiro-Wilk test was not significant $W = 0.95$, $p = 0.569$, indicating the assumption of normality was met. The normality assumption was also assessed visually with a Q-Q scatterplot. The Q-Q scatterplot compares the distribution of the residuals (the difference between the observed and the predicted values) with a normal distribution (a theoretical distribution which follows a bell curve). In the plot, it could be observed that most of the distribution are reasonably clustered around the straight diagonal line from bottom left to top right which suggests a normal distribution of some sought.

The second assumption which was assessed was the homoscedasticity (equal variable) of residuals. The homoscedasticity was evaluated for each model by plotting the model residuals against the predicted model values (Osborne & Walters, 2002).

This assumption was met as most of the points appeared randomly distributed with a mean of zero and no apparent curvature.

Another important step in a multiple regression analysis is to ensure that the assumption of no perfect multicollinearity has been met. Multicollinearity is a statistical phenomenon in which two or more predictor variables in a multiple regression model are highly correlated (Hoffmann, & Shafer, 2015).

The subsequent two methods for checking multicollinearity of the predictive variables were assessed. The tolerance levels and the Variance Inflation Factor (VIF). VIFs greater than 5 are cause for concern whereas VIFs of 10 should be considered the maximum upper limit (Menard, 2011). According to Lorch and Myers (1990) a Tolerance statistic below 0.1 indicate serious problems with the regression model. Findings from the collinearity are presented in Table 3.

Table 3: Collinearity Statistics for Predictor Determinants

Factor	Tolerance	VIF
1: Extraversion	0.941	1.063
2: Agreeableness	0.810	1.235
3: Conscientiousness	0.815	1.226
4: Neuroticism	0.934	1.071
5: Openness	0.765	1.307

a. Dependent Variable: CDDQGS

From Table 3, the Tolerance ranges from 0.765 to 0.941 which are all substantially greater than 0.1 and all the VIF values which also ranged from 1.063 to 1. 307 are significantly less than 10. Therefore, since the predictor determinants correlated weekly, VIF values are less than 10 and Tolerance values are all greater than 0.1. There is no perfect multicollinearity among the predictor determinants and hence there is no violation of the no perfect multicollinearity assumption. Based on

these and other assumptions underlining multiple regression tested, the researcher concluded that the data were tenable for the analysis.

Finally, the last assumption that was tested were outliers (very high or very low scores). Tabachnick and Fidell (2001, p. 122) define outliers as "those with standardised residual values above about 3.3 or less than –3.3". Outliers were evaluated using a studentized residual plot. To identify influential points, studentized residuals were calculated and the absolute values were plotted against the observation numbers. The result suggests that there are no obvious outliers on the plot. This is because all the values were less than the absolute value of 3.3.

For Hypothesis two (2) assumptions underlining multiple linear regression were conducted and assessed to ensure the suitability of the data set for the analysis. Among others, the assumptions of normality of residuals, homoscedasticity (equal variable) of residuals, absence of multicollinearity and lack of outliers were examined. The findings from the assessment of the assumption reveal that the assumptions underlining the normality of residuals were not violated. This assertion was arrived at based on the result of the Shapiro-Wilk test which was not significant $W = 0.99$, $p = 0.176$, indicating the assumption of normality was met. The normality assumption was also assessed visually with a Q-Q scatterplot. The Q-Q scatterplot compares the distribution of the residuals (the difference between the observed and the predicted values) with a normal distribution (a theoretical distribution which follows a bell curve). In the plot it was observed that most of the distribution were reasonably clustered around the straight diagonal line from bottom left to top right which suggests a normal distribution of some sought. The next assumption that was assessed was homoscedasticity (equal variable) of residuals. The homoscedasticity was evaluated for each model by plotting the model residuals against the predicted

model values (Osborne & Walters, 2002). This assumption was met as most of the points appeared randomly distributed with a mean of zero and no apparent curvature.

Again, the analysis shows that the tolerance levels and the Variance Inflation Factor (VIF) were within range according to the rule of thumb as set by Lorch and Myers (1990). According to Lorch and Myers (1990), if the VIF is greater than 10 then multicollinearity may be biasing the regression model and a Tolerance statistic below 0.1 indicate serious problems with the regression model. The result of the collinearity (tolerance levels and the Variance Inflation Factor) is presented in Table 5.

Table 4: Collinearity Statistics for hypothesis 2 predictors

Factor	Tolerance	VIF
1: MCS	0.940	1.064
2: WSNH	0.782	1.279
3: FTID	0.835	1.197
4: CIWM	0.840	1.191
5: EIWIIS	0.653	1.532

a. Dependent Variable: CDDQGS

The last assumption that was tested was checking for outliers. The outliers were evaluated using a studentized residual plot. To identify influential points, studentized residuals were calculated and the absolute values were plotted against the observation numbers. The result suggests that there are no obvious outliers on the plot. This is because all the values were less than the absolute value of 3.3.

The aim of the third research hypothesis was to test whether there existed a significant relationship between subscales of students‘ career maturity (Self-appraisal, Occupational Information, Goal Selection, Planning and Problem-Solving) and their career decision-making difficulties (CDDQGS). In light of this, a Pearson Product Moment Correlation was conducted between undergraduate students‘ career maturity

and career decision-making difficulties. Kothari's (2004) interpretation of the strength of the correlation coefficient was used such that if the correlation coefficient is greater than 0.3 but less than 0.5, then the relationship is moderate; the relationship is weak if the correlation coefficient is less than 0.3; and the relationship is strong if the correlation coefficient is 0.5 or greater.

In order to test the fourth research hypothesis, an independent samples t-test was conducted to compare mean scores between the samples to examine the effect of sex as a differentiator for career decision-making difficulties. The hypothesis was formulated and tested at 0.05 level of significance. Before testing the hypothesis, assumptions underlining independent samples t-test were tested. The first assumption that was tested was obtaining descriptive statistics on the various variables. According to Pallant (2005), to obtain descriptive statistics for categorical variables, one should use frequencies However, for continuous variables one is to use descriptive statistics such as mean, median and standard deviation. This assumption was met since descriptive statistics on all the variables (categorical and continuous) have been generated to address the description of the demographic characteristics of the respondents and providing answers to the research questions. The second assumption assessed was Levene's test of homogeneity. This assumption was assessed by inspecting the Levene's test for equality of variance and the result indicates that the assumption was not violated.

The first assumption that was tested was obtaining descriptive statistics on the various variables. According to Pallant (2005) to obtain descriptive statistics for categorical variables one should use frequencies, however, for continuous variables one is to use descriptive statistics such as mean, median, standard deviation. This assumption was met since descriptive statistics on all the variables (categorical and

continuous) have been generated to address the description of the demographic characteristics of the respondents and providing answers to the research questions. The second assumption assessed was Levene's test of homogeneity.

For hypothesis five an independent samples t-test was conducted to examine whether the mean difference between students' age and career decision-making difficulties of the students was significantly different from zero. A Shapiro-Wilk test was conducted to determine whether the difference in students' age and career decision-making difficulties could have been produced by a normal distribution. The result of the Shapiro-Wilk test was significant and was based on an alpha value of 0.05, $W = 0.85$, $p < 0.01$. This suggests the difference in students' age and career decision-making difficulties are unlikely to have been produced by a normal distribution indicating the normality assumption was violated. According to Pallant (2005), a non-significant result (Sig value of more than .05) indicates normality. In this case the Sig. value is .000 for each group, suggesting violation of the assumption of normality. This is quite common in larger samples (Pallant, 2005).

Levene's test of homogeneity was conducted to assess whether the variance of career decision-making difficulties of the students was significantly different. The result of the Levene's test was not significant and was based on an alpha value of 0.05, $F = 4.543$, p> 0.05 (readiness), $F = 10.610$, p> 0.05, $F = 4.414$, p> 0.05, and $F = 9.504$, p> 0.05. The results suggest it is possible that career decision-making difficulties of the students were produced by distribution with equal variance, indicating the assumption of homogeneity was met.

3.17 Ethical Issues Considered in the Study

Research ethics are about identifying certain norms and standards of behaviour that researchers are expected to follow (Connolly, 2003). In carrying out this research, the researcher took cognisance of the ethical guidelines in order to protect the participants and the researcher. An official discussion was held with the Registrar of the University of Ghana, Legon where the researcher indicated the interest to carry out a research on the Legon camps. This discussion was followed with a letter to the Director of Careers and Counselling Centre to carry the research on Legon campus indicating the itinerary and how the research would be carried and for how long. The Institutional Review Board (IRB) of the University of Ghana, Legon has the responsibility of reviewing, all research prior to its initiation involving human participants (whether funded or not) to make sure the rights of students are not violated. The IRB of the University of Ghana looked at the thesis area and the participants involved. This process was to ensure that participants rights are not violated. Upon careful review and measures put in place by the researcher to protect participants, the thesis was approved to be carried out on University of Ghana, Legon campus.

Additionally, permission was sought from respective lecturers whose students were selected for the study. After permission was granted the researcher then engaged the class representative who eventually announced to the class about the presence of the researcher and the intention.

As part of conducting every study, there are rules and guidelines to be followed. With regards to this study, informed consent was sought from all participants. It was to ensure that participants had clear understanding of the purpose of the study, about the interviewer conducting it, how the data will be used, and what

participation will mean for them. An informed consent form was attached to the questionnaire packets which stated the objectives, aims, benefits of the study. Withdrawal from the study was allowed at any point in time which did not attract any repercussions. Completion of questionnaires was conducted within 30-40 minutes.

In the qualitative study, the conversations were recorded with the permission of the participants. Anonymity and confidentiality were ensured by keeping the audio files safe and the names of the participants were not allowed in the transcripts. Confidentiality was observed as part of the ethical consideration. Participants were assured that the information provided are just for the purpose of research and under no circumstance would it be used against them. Additionally, their names and identity would not be revealed, instead pseudonyms were used. Students who felt the need to have a feedback session after the data collection and the in-depth interview sessions were encouraged to do so with the help of the counsellors at the Careers and Counselling Centre who provided them with the needed counselling.

3.18 Summary

This chapter presents the research methods used in the study in detail. It examined the research approach and design, study institution, population, sample and sampling and sampling procedure, sources of data collection and instrumentation of the study. The study was sequential explanatory mixed methods design, therefore, both quantitative and qualitative data were collected. The statistical analyses used to test the propositions of the study were also elaborated and the thematic analysis for the qualitative data was also presented.

CHAPTER FOUR

RESULTS

4.0 Overview

The aim of this chapter is to present, analyse and discuss findings obtained from the research study which aims at examining the influence of personality factors and career beliefs on career decision-making difficulties. The chapter is organized under three sub-sections, A, B, and C. The first part (Section A) presents the results of the demographic characteristics of the respondents. The second (Section B) and third (Section C) parts present the findings to the hypothesis and research questions respectively.

Based on the objectives of the study, the following research questions were formulated to help guide the study**:**

1. What factors inform career beliefs of undergraduate students of the University of Ghana?
2. What are the views of undergraduate students on the relationship between career maturity and career decision-making difficulties?
3. In what ways would gender differentiate career decision-making difficulties?

Hypotheses

The following hypotheses were formulated to guide the study and were tested at 0.05 level of significance:

1. $\boldsymbol{H_0}$ = Personality factors are not statistically significant predictors of students' career decision-making difficulties.

   $\boldsymbol{H_1}$ = Personality factors are statistically significant predictors of students' career decision-making difficulties.

2. H_0 = Career beliefs are not statistically significant predictors of career decision-making difficulties.

   H_1 = Career beliefs are statistically significant predictors of career decision-making difficulties.

3. H_0 = There is no significant relationship between undergraduate students' career maturity and career decision- making difficulties.

   H_1 = There is significant relationship between undergraduate students' career maturity and career decision-making difficulties.

4. H_0 = Gender is not a significant differentiator of career decision-making difficulties among undergraduate students of the University of Ghana.

   H_1 = Gender is a significant differentiator of career decision-making difficulties among undergraduate students of the University of Ghana

5. H_0 = Age is not a significant differentiator of career decision-making difficulties among undergraduate students of the University of Ghana.

   H_1 = Age is a significant differentiator of career decision-making difficulties among undergraduate students of the University of Ghana,

4.1 Descriptive Statistics of the Sample

A brief profile of the participants (undergraduate students of the University of Ghana) was collected and this included sex, age group, academic level and programmes. The purpose of collecting these demographic characteristics from the respondents was to help describe the category and purposively aggregate participants who took part in the study in order to appreciate the results from such groups' perspectives. Findings from the demographic characteristics are presented in Table 5.

Table 5: Summary of the Demographic profile of the Participants in the Study

Variables	Frequency (n)	Percentage (%)
Sex		
Male	264	53.4
Female	230	46.6
Age Group		
18 – 23 years	434	87.9
24 – 29 years	48	9.7
30 – 35 years	8	1.6
36 + years	4	0.8
Academic Level		
Level 100	137	27.7
Level 200	121	24.5
Level 300	128	25.9
Level 400	108	21.9
Academic Programme		
Bachelor of Arts	165	33.4
Bachelor of Science	326	66.6

Source: Field Data (2018)

Results from Table 5 show that more male respondents (n = 264, 53.4%) than female respondents (n = 230, 46.6%) took part in the study. The results on the gender variable of the sample indicate that both male and female were given opportunity to take part in the study. The results show skewness toward the male undergraduate students. It must however, be mentioned that the skewness was not statistically significant to have made the results one-sided. The findings from Table 5 further revealed that most of the respondents in the study were between the ages of 18 and 23 years representing 87.9% of the total sample with the remaining 22.1% of the respondents being 24years and above. The composite analysis of the academic level distribution of the University of Ghana undergraduate students indicates that 123 (24.9%) were in level 100, 123 (24.9%) were in level 200, 124 (25.1%) were in level

300 and 124 (25.1%) were in level 400 as at the time of the study. The majority (67%) of the respondents in this study were in the Bachelor of Science (BSc) programmes followed by students offering Bachelor of Arts (33%). The diverse demographic characteristics of the respondents is an indication that the data came from respondents with wide-range of characteristics which confirms that the data was rich and representative. Besides, most of the background characteristics were used as variables in the analysis which helped to examine the influence of personality factors, career beliefs and career maturity as influencing career decision-making difficulties of undergraduate students of University of Ghana, Legon. Verbatim narration for research queatins were reflection of participants voice. However, excess sounds and sighs were slightly altered for presentation purporses.

4.2 Hypothesis 1: Personality Factors and Career Decision-making difficulties

H_0 = Personality factors are not statistically significant predictors of students‘ career decision-making difficulties.

A linear regression was conducted to predict personality factors and career decision-making difficulties (CDDQGS) of undergraduate students of University of Ghana. The _Enter‘ method was chosen for the linear regression model which included all predictors (extraversion, agreeableness, conscientiousness, neuroticism and openness). Field (2009) asserted that if there is no perfect multicollinearity in the data then there should be no substantial correlations (r > .8 or .9) between predictors. Multicollinearity was checked using a correlation matrix of all the determinants and collinearity diagnostic output from SPSS which is the Variance Inflation Factor (VIF) and Tolerance statistic (1/VIF) as suggested by literature (Bowerman & O‘Connell, 1990; Field, 2009). Results from the correlation analysis are presented in Table 6.

Table 6: Correlation Matrix Table for Hypothesis 1

No		1	2	3	4	5	6
1	CDDQGS	1.000					
2	Extraversion	-0.123	1.000				
3	Agreeableness	-0.242	0.139	1.000			
4	Conscientiousness	-0.309	-0.010	0.286	1.000		
5	Neuroticism	-0.326	0.194	-0.141	0.150	1.000	
6	Openness	-0.290	0.094	0.390	0.383	0.095	1.000

As displayed in Table 6, Pearson product moment correlations were calculated among the five predictive variables. The findings indicate that, extraversion (Factor 1) has a considerable weak negative relationship (r = -0.123) with career decision-making difficulties of the respondents. Additionally, a negative correlation (r = -0.242) of agreeableness (Factor 2) was recorded against career decision- making difficulties of the respondents. Moreover, conscientiousness (Factor 3), neuroticism (Factor 4) and openness (Factor 5) of the personality factors all recorded a correlational coefficient of r = -0.309, r = -0.326 and r = -0.290, with career decision-making difficulties of the respondents respectively. The results on the correlation analysis indicate that none of the correlations coefficient reached the 0.80 or 0.90 threshold. The analysis shows that no two variables are closely related and therefore assumption of no perfect multicollinearity has been met (Field, 2009).

In light of meeting the assumptions underlining regression (as indicated in Chapter 3), the study conducted the multiple regression to determine the linear combination of predictor variables on career decision-making difficulties in this study. The results are presented in Table 7.

Table 7: Standard Regression Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	*df1*	*df2*	Sig. F Change	
1	.463[a]	.214	.206	1.439	.214	25.375	5	465	.000	2.071

a. Predictors: (Constant), extraversion, agreeableness, conscientiousness, Neuroticism, Openness

b. Dependent Variable: CDDQGS

The Standard Regression Model Summary (Table 7) showed that the multiple correlation was $R = 0.463$. This shows how well all the independent factors combined moderately and positively correlated with the dependent factor (CDDQGS). The coefficient of determination, the adjusted R^2 of 0.214, was recorded for the regression model which was statistically significant (F (5, 465) = 41.44, $p < 0.01$). Relating to Table 7, the five factors in combination contributed 21.4% of variances in career decision-making difficulties. The result of the ANOVA of regression significance is presented in Table 8.

Table 8: ANOVA of Regression Significance

	Model	Sum of Squares	*df*	Mean Square	*F*	*Sig.*
1	Regression	262.719	5	52.544	25.375	.001[b]
	Residual	962.888	465	2.071		
	Total	**1225.608**	**470**			

a. Dependent Variable: CDDQGS

b. Predictors: (Constant), extraversion, agreeableness, conscientiousness, Neuroticism, Openness

The study further examined the influence of each of the five personality factors on career decision-making difficulties. The beta values are shown in Table 9.

Table 9: Regression Coefficient of Five Standard Regression Models

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	*T*	Sig.	95.0% Confidence Interval for B Lower Bound	95.0% Confidence Interval for B Upper Bound
1	(Constant)	8.865	.413		21.462	.000	8.053	9.676
	Extraversion	-.011	.010	-.047	-1.120	.263	-.031	.008
	Agreeableness	-.020	.011	-.084	-1.847	.065	-.042	.001
	Conscientiousness	-.049	.012	-.186	-4.082	.000	-.072	-.025
	Neuroticism	-.059	.010	-.262	-6.164	.000	-.078	-.040
	Openness	-.040	.012	-.156	-3.325	.001	-.063	-.016

a. Dependent Variable: CDDQGS

The five beta values were negative with two non-significant factors: Extraversion (β = -0.047, t = -1.120, p = 0.263 or p> .05) and Agreeableness (β = -0.084, t = -1.847, p = .065 or p> .05). The other three factors individually contributed statistically significantly to the dependent variable: conscientiousness (β = -0.186, t = -4.082, p = .000 or p< .05); Neuroticism (β = -0.262, t = -6.164, p = .000 or p< .05) and Openness (β = -0.156, t = -3.325, p = .001 or p< .05). Therefore, in order of magnitude, neuroticism, conscientiousness and openness were the major contributing factors to students' career decision-making difficulties among undergraduates of the University of Ghana. The findings suggested that there was an inverse relationship between all personality factors (extraversion, agreeableness, conscientiousness, neuroticism and openness) and career decision-making difficulties among the undergraduate students. This implies that students with lower scores personality factors, were expected to have higher career decision-making difficulty level. On the other hand, when these undergraduate student personality factors are conducive (have higher scores), it reduces the tendency for higher career decision-making difficulty. Consequently, the study model leads to a structural equation as presented as follows:

$Y_i = b_0 + b_1$ Extraversion $+ b_2$ Agreeableness $+ b_3$ Conscientiousness' $+ b_4$ Neuroticism $+ b_5$ Openness $+ \varepsilon_i$

Where Y_i is outcome variable, b_0, b_1, b_2, b_3, b_4 and b_5 are the regression coefficients and the error term ε is normally distributed with mean 0 and variance σ^2.

Therefore, the Unstandardized Regression Equation:

CDDQGS = 8.865 – (0.011 × Extraversion) – (0.020 × Agreeableness) – (0.049 × conscientiousness) – (0.059 × Neuroticism) – (0.040 × Openness)

4.2.1 Hypothesis 2: Career beliefs and career decision-making difficulties.

H_0 = Career beliefs are not statistically significant predictors of students' career decision-making difficulties.

The study tested the causal effect of career belief factors on career decision-making difficulty (CDDQGS). In order to ensure that the value transformations are within the same range, the weighted average of the variables in question were used in deriving the aggregated career belief variable. The _Enter' variable selection method was chosen for the linear regression model which includes all decomposed selected predictors.

In testing for the assumption of no perfect multicollinearity, the results on the Pearson product moment correlations suggest that all the decomposed career belief factors (MCS, WSNH, FTID, CIWM, and EIWIIS) were weakly, negatively and significantly correlated with the criterion variable (career decision-making difficulty [CDDQGS]). Table 10 presents the result on the correlation analysis.

Table 10: Correlation Matrix Table for Hypothesis 2

No		1	2	3	4	5	6
1	CDDQGS	1.000					
2	MCS	-0.293	1.000				
3	WSNH	-0.237	-0.146	1.000			
4	FTID	-0.347	-0.095	0.280	1.000		
5	CIWM	-0.171	0.054	0.167	0.229	1.000	
6	EIWIIS	-0.396	-0.192	0.447	0.371	0.365	1.000

Note: **MCS** = My Current Situation; **WSNH** = What Seems Necessary for my Happiness; **FTID** = Factors that is Influence my Decisions; **CIWM** = Changes I am Willing to Make and **EIWIIS** = Effort I am Willing to Initiate Improving Self

The results as in Table 10 suggest that MCS (Factor 1) has a considerable weak negative relationship (r = -0.293) with the career decision-making difficulties of the respondents. Moreover, a negative correlation (r = -0.237) of WSNH (Factor 2) was recorded against career decision-making difficulties of the respondents. Furthermore, FTID (Factor 3), CIWM (Factor 4) and EIWIIS (Factor 5) of the personality factors all recorded a correlational coefficient of r = -0.347, r = -0.171 and r = -0.396, with career decision-making difficulties of the respondents respectively. The findings showed that none of the correlation coefficient reached the 0.80 or 0.90 threshold, the analysis shows that no two variables are closely related and therefore assumption of no multicollinearity has been met (Field, 2009).

The examination of the results on the assumptions further reveals that all the assumptions underlining multiple linear regression were met making the data set tenable for the intended analysis. Based on these results, the study concluded that the data were suitable for the multiple regression analysis of linear combination of predictor variables (EIWIIS, MCS, FTID, CIWM and WSNH) with the career decision-making difficulties presented in Table 11.

Table 11: Standard Regression Model Summary for Hypothesis 2

Model Summary										
				Std. Error	Change Statistics					
Model	R	R^2	Adjusted R^2	of the Estimate	R Square Change	F Change	$df1$	$df2$	Sig. F Change	Durbin-Watson
1	.501[a]	.251	.243	1.393	.251	31.391	5	468	.000	1.918

a. Predictors: (Constant), EIWIIS, MCS, FTID, CIWM, WSNH
b. Dependent Variable: CDDQGS

The five predictors produced Adjusted $R^2 = 0.243$; which implies that the model had explained 24.3% variance in dependent variable and with close to about 75.7 % unexplained variance. Generally, the model was statistically significant (F (5) = 31.391, $p < 0.01$) See Table 12.

Table 12: ANOVA of Regression Significance

Model		Sum of Squares	*Df*	Mean Square	*F*	*Sig.*
1	Regression	304.579	5	60.916	31.391	.000[b]
	Residual	908.183	468	1.941		
	Total	1212.762	473			

a. Dependent Variable: CDDQGS
b. Predictors: (Constant), EIWIIS, MCS, FTID, CIWM, WSNH

The study further examined the influence of each individual predictive variable on the dependent variable. Using the enter method of multiple regression, the following predictive variables were examined: EIWIIS, MCS, FTID, CIWM and WSNH. Analysis was conducted to test the unique contribution of each predictive variables on the dependent variable by assigning coefficients to each predictive variable in Table 13.

Table 13: Regression Coefficient of Five Standard Regression Models

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	*t.*	Sig.	95.0% Confidence Interval for B Lower Bound	95.0% Confidence Interval for B Upper Bound
1	(Constant)	8.977	0.927		9.686	0.000	7.156	10.798
	MCS	-0.021	0.004	-0.224	-5.417	0.000	-0.013	0.029
	WSNH	-0.002	0.004	-0.027	-0.591	0.555	-0.011	0.006
	FTID	-0.015	0.003	-0.218	-4.981	0.000	-0.021	-0.009
	CIWM	-0.006	0.006	-0.039	-0.892	0.373	-0.018	0.007
	EIWIIS	-0.012	0.003	-0.245	-4.957	0.000	-0.017	-0.008

a. Dependent Variable: CDDQGS

As displayed in Table 13, the beta weight and statistical significance of these factors were significant except with lower coefficient of determinations (R^2). Based on the results of the beta weights, two out of the five predictive variables showed no significant effect with the dependent variable. That is: WSNH (β = -0.027, t = -0.591, p = 0.555 or p> .05) and CIWM (β = - 0.039, t = -0.892, p = .373 or p> .05). The other factors individually contributed statistically significantly to the dependent variable: MCS (β = -0.224, t = -5.417, p = .000 or p< .05); FTID (β = -0.218, t = -4.981, p = .000 or p< .05) and EIWIIS (β = -0.245, t = -4.957, p = .000 or p< .05). Therefore, in order of magnitude, career belief factors such as EIWIIS, MCS and FTID were the major contributing factors to career decision-making difficulties of the undergraduate students. The findings show that there was an inverse relationship between all career belief factors (MCS, EIWIIS, FTID, CIWM and WSNH) and career decision-making difficulties among the respondents. Based on these findings it is expected that when scores on career decision such as MCS, EIWIIS, FTID, CIWM and WSNH were increasing (higher scores) career decision-making difficulty level among the student will be decreasing (low or minimised). Consequently, the study model leads to a structural equation as presented as follows:

$$Y_i = b_0 + b_1\,\text{MCS} + b_2\,\text{WSNH} + b_3\,\text{FTID} + b_4\,\text{CIWM} + b_5\,\text{EIWIIS} + \varepsilon_i$$

Where Y_i is outcome variable, b_0, b_1, b_2, b_3, b_4 and b_5 are the regression coefficients and the error term ε is normally distributed with mean 0 and variance σ^2. Therefore, the Unstandardized Regression Equation:

CDDQGS = 8.977 – (0.021 × MCS) – (0.002 × WSNH) – (0.015 × FTID) – (0.006 × CIWM) – (0.012 × EIWIIS)

4.2.3 Hypothesis 3 Career maturity and career decision-making difficulties

$\boldsymbol{H_0}$ = There is no significant relationship between undergraduate students‘ career maturity and career decision- making difficulties.

The aim of the third research hypothesis was to test the relationship between students‘ career maturity (Self-appraisal, Occupational Information, Goal Selection, Planning and Problem-Solving) and their career decision-making difficulties (CDDQGS). The study used Pearson Product Moment Correlation for hypothesis 3. Kothari‘s (2004) interpretation of the strength of the correlation coefficient was used. Applied coefficient greater than 0.3 but less than 0.5, are interpreted as moderate, weak if the coefficient is less than 0.3; and strong if the correlation coefficient is 0.5 or greater. The results are shown in Table 14.

Table 14: Bivariate Correlation between Students' Career Maturity and CDDQGS

Variables	*M*	*SD*	1	2	3	4	5	6	7
1. CDDQGS	4.53	1.62	1						
2. Self-appraisal (AP)	3.78	0.84	-0.28**	1					
3. Occupational Inform. (OI)	379	0.91	-0.16**	0.45**	1				
4. Goal Selection (GS)	3.63	0.83	-0.25**	0.36**	0.44**	1			
5. Planning (P)	3.76	0.83	-0.30**	0.52**	0.47**	0.48**	1		
6. Problem-Solving (PS)	3.58	0.82	-0.18**	0.44**	0.63**	0.34**	0.43**	1	
7. CMGS	3.71	0.64	-0.31**	0.73**	0.80**	0.69**	0.77**	0.75**	1

n = 494 * $p < 0.05$, ** $p < 0.01$, (2-tailed). **Note: CDDQGS**= Career Decision-making Difficulties Global Score. **CMGS**= Career Maturity Global Score

Significant negative correlation was observed between subscales of students' career maturity and the CDDQGS Self-appraisal and CDDQGS (r = -0.28, n = 494, p < .01, 2-tailed). The correlation coefficient between Self-Appraisal (AP) and CDDQGS was -0.30 indicating a moderate inverse relationship. Furthermore, there was a weak negative correlation between Occupational Information (OI) and career decision-making difficulties (CDDQGS) (r = -0.16, n = 494, p < 0.01, 2-tailed) of students. There was also weak significant negative relationship between Goal Selection (GS) and career decision-making difficulties (CDDQGS) (r = -0.25, n = 494, p < 0.01, 2-tailed). Planning (P) as a subscale of career maturity significantly correlated moderately (r = -0.30, n = 494, p < 0.01, 2-tailed) with career decision-making difficulties (CDDQGS). There was a weak negative significant correlation (r = -0.18, n = 494, p < 0.01, 2-tailed) between Problem-Solving (PS) as a subscale of career maturity and students' career decision-making difficulties (CDDQGS). Finally, when the two main scales of career maturity (CDSEGS) and career decision-making difficulties (CDDQGS) of the undergraduate students were correlated, it was found that there was a moderate negative significant relationship between the two

main variables (r = -0.31, n = 494, p < 0.01, 2-tailed). This means that the lower the level of students' career decision-making difficulty, the higher their career maturity.

4.2.4 Hypothesis 4 - Gender and Career decision-making difficulties

H_0 = Gender is not a significant differentiator of career decision-making difficulties among undergraduate students of the University of Ghana.

In order to test the fourth research hypothesis, an independent samples t-test was conducted to compare mean scores between the samples to examine the effect of sex as a differentiator for career decision-making difficulties. At 0.05 level of significance. Assumptions underlining independent samples t-test was tested obtaining descriptive statistics on the various variables. According to Pallant (2005), to obtain descriptive statistics for categorical variables one should use frequencies, however, for continuous variables one is to use descriptive statistics such as mean, median, standard deviation. This assumption was assessed by inspecting the Levene's test for equality of variance and the following results indicate that the assumption was not violated: Readiness (F = 3.95, p> 0.05), Lack of information (LI) (F = 7.5, p > 0.05), Inconsistent information (F = 6.16, p> 0.05), and CDDQ Global (F = 1.6, p> 0.05). The result on the assumption indicates that the data is tenable for the analysis. Table 15 presents the results of the t-test analysis.

Table 15: Independent t-test of Sex Differences in Students' CDDQGS

Variables	Male	Female	*df*	*t*	*Sig*
Readiness (R)	4.91	4.87	492	0.27	.79
Lack of information (LI)	4.47	4.55	492	-0.41	.68
Inconsistent information (II)	4.29	4.10	492	1.07	.28
CDDQ Global	4.55	4.51	492	0.23	.82

The results as presented in Table 15 revealed that there was no statistically significant difference between male and female in terms of career decision-making difficulties. Therefore, sex did not emerge as significant differentiator of students' career decision-making difficulties t (494) = .23, p = .82, η^2 = 0.0015. On the other sub-domains of career decision-making difficulties questionnaire, sex was not a significant factor on readiness (t (494) =.27, p = .79, η^2 = 0.0035); Lack of information (t (494) = -0.41, p = .68, η^2 = 0.0023) and Inconsistent Information (t (492) = .1.07, p = 28, η^2 = 0.0001). Based on these findings the study failed to reject the null hypothesis. This means male and female students experience similar levels of career decision-making difficulties.

4.2.5 Hypothesis 5 - Age and career decision-making difficulties

H_0 = Age is not a significant differentiator of career decision-making difficulties among undergraduate students of the University of Ghana.

An independent samples t-test was conducted to examine whether the mean difference between students' age and career decision-making difficulties of the students were significantly different from zero. A Shapiro-Wilk test was conducted to determine whether the difference in students' age and career decision-making difficulties could have been produced by a normal distribution. The result of the Shapiro-Wilk test was significant based on an alpha value of 0.05, W = 0.85, p < 0.01.

Levens's test of homogeneity was conducted to assess whether the variance of career decision-making difficulties of the students were significantly different. The result of the Levens's test was not significant based on an alpha value of 0.05, F = 4.543, p> 0.05 (readiness), F = 10.610, p> 0.05, F = 4.414, p> 0.05, and F = 9.504, p> 0.05. The results suggest that it is possible that career decision-making difficulties of the students were produced by distribution with equal variance, indicating the

assumption of homogeneity was met. The result of the independent t-test on the difference between students' age and their career decision-making difficulties, is shown in Table 16.

Table 16: Independent t-test of age Differences in Students' CDDQGS

Variables	18-23years	≥ 24years	*t.*	p-value
Readiness (R)	4.89	4.92	-.20	.84
Lack of information (LI)	4.53	4.33	.70	.48
Inconsistent information (II)	4.22	4.08	.51	.61
CDDQGS	4.54	4.43	.50	.62

Table 16 showed that age of the students did not have any statistically significant effect on students' overall career decision-making difficulties at the .05 level of significance, $t\,(492) = .50$, $p = .62$, $\eta^2 = 0.0005$. It was also observed that age of students did not have any statistically significant effect on any of the sub-domains of students' career decision-making difficulties as presented in Table 16. Specifically, there was no statistical significant difference between 18 – 23 years and students aged over 24 years and above when readiness was examined $t(492) = -0.20$, $p > 0.05$. This result led to small magnitude of the effect size ($\eta^2 = 0.0008$). Furthermore, the difference in the mean scores of the ages of the respondents in relation to lack of information were also not statistically significant $t(492) = 0.70$, $p > 0.05$. The difference was not significant, and this led to a small magnitude of effect size ($\eta^2 = 0.0010$). Finally, there was no significant difference in the scores of students aged between 18 – 23 years and students aged over 24 years [$t(492) = 0.5$, $p > 0.05$]. The degree of the difference in the means was very small (beta squared = 0.0005). Therefore, based on the results from Table 16, the study failed to reject the null

hypothesis and concluded that Age is not statistically significant differentiator of undergraduate students Career Decision-making Difficulties.

4.3 Research Question One: Factors that Inform the Career Beliefs of Undergraduate Students of University of Ghana

For the relative importance or contributing factor of career beliefs to career decision-making difficulties, the study solicited for participants perception or assumptions about career during the one-one-one interview. Career decisions were constrained by certain kind of beliefs, for example, Employment status, Educational considerations, intrinsic satisfaction, family influence, flexibility, relocation and economic need.

4.3.1 Employment and career uncertainties

Most of the respondents were unemployed. None of the 10 respondents from the qualitative study was employed. Seven (7) of them were supported by their parents, two (2) of them were supported by their siblings and the other one (1) was supported by a family member. Indeed, students expressed fear about the uncertainties in corporate Ghana. Participants spoke freely about their fears about the recent banking reforms and the already overwhelming numbers of unemployed youths already in the system, this was a cause for concern for some of the participants

A female participant advanced the following:

> *Even though I am in school now I am worried. My seniors who finished school 5 years ago are at home. After school we will all be looking for the same job. Students who read the same course like me from other universities and my course mates from Legon we will all look for the same work. The competition is serious, and I am afraid.* [P2]

The views of participants indicated that, the uncertainties in the corporate space have generated some form of anxiety in some of the participants such that their

major concern has been whether they would be able to get a job at entry level position after school.

4.3.2 Beliefs about educational considerations

Participants‘ beliefs are motivated by their goals to get a University degree and then later they would formulate their career goals. Even though participants valued education very much, career achievement was not their primary goal for now. This means that though participants may focus on their studies, their primary goal is to get a degree. Participants also believe that, education is necessary for a good job. This is probably so because all the participants were university students. Impliedly, students believe that college education is not only desirable but also necessary. This belief induced excessive pressure on some participants to study just any course at all they were offered by the university. This could mean that students are just not aware of the alternatives available to them apart from university education. Therefore, participants were inclined to read courses they might not be interested in or not knowing the career prospects for the courses they read. More than half of the respondents said they are reading courses they are not interested in but they took the courses offered them because there were no alternatives. Participants believe that having a University degree is important for career success. Therefore, irrespective of the course you are offered you just must come to school and read it.

As evidenced in the following statement made by a female participant:

> *It has been very difficult in this University, but I just want to finish school even though the course I am reading I don't even know where I can get a job. But once I graduate may be a job may come* [P5].

A female participant also said

> *I was offered Linguistics and it is now my major. Tell me where can I get a job with linguistics? I don't even know but I am here studying*

> *linguistics. Anyway, a university degree is good. Once I graduate, I may get a job or madam you will employ me?* [R8].

4.4.3 Beliefs about intrinsic satisfaction

The views and beliefs of students held about what account for life satisfaction was also explored through the interview. Some of the participants indicated that they would feel satisfied in life when they have pursued their dream careers since it would bring them happiness. They believe career satisfaction contributes to life satisfaction. Being in career you love enhances your general well-being. These participants indicated that the choice of the career one pursues has an influence on the trajectory of one's life.

The responses of some of the students interviewed provided the researcher an insight into students' perceptions about career beliefs. Some participants indicated that in order to pursue a career that would be truly satisfying, career should be something you love to do and not something you are compelled to do.

A male respondent indicated that:

> *I feel like if you are doing something you like something you enjoy it can bring you happiness and bring career satisfaction.* [P10].

Another female said:

> *If you are doing what you love you would always feel mentally strong for the challenges that may come* [P1].

Participants believed that what would bring them true career satisfaction is by doing what they really would love to do as career.

4.3.4 Beliefs about family influence

Respondents believe that career choice is influenced by others and therefore the approval of significant others in their lives is very important. In this section the influence of family goes beyond advice and guidance of the supportive nature as the language is quite directive in nature.

For example, a male participant said,

> *I read science in school because my father wanted me to read medicine. Honestly, I don't want to be a doctor, but I read science to please my father. Just when I finished Senior High School preparing to enter Legon my father died. So now I am doing engineering* [P6].

A male participant reading Economics said:

> *"My parents give me freedom to decide on a career path. However, they want me to do something that will be prestigious and make good money too"* [P9].

A female participant said

> *"My family encouraged me to study marketing. They think I am good at selling. May be selling is my personality."* [P3].

A male participant said

> *~~"~~A family member works in the bank, and he has a nice car with a beautiful girlfriend, I also want to work in the banking sector*" [P9].

Occasionally the respondents contradict themselves by saying they have freedom but at the same time putting a restriction upon options for career choice. While some of the influences appear subtle, others appear very much as directives. This still hands over the power to make career decisions to significant others rather than relying on their own self-assessment. One could sense the participants are still passive and one could sense the subtle compliant in the process. Parents are very important for students when choosing their subjects or careers and they seem to be the single most important reason. This fits in with previous studies which show parents are an important influence in students' decision-making.

4.3.5 Financial considerations

Participants envisaged the complexities during the career decision-making process but would be rather influenced by financial considerations rather than their values when making a career choice.

For example, a student responded that:

> *Money is very important when choosing careers. I want to help people but my happiness would depend on how much money I earn. Right now, I want to further my ACCA course so that by the time I finish my degree I will be chartered Accountant so that I can earn big money.* [P6].

Another female respondent indicated that*:*

> *Well, looking at the economy now I will choose a career that will give me plenty money than my values. What if I stand by values and become poor? I will work genuinely but be focus on money too.* [P1].

4.3.6 Job flexibility

Participants were unwilling to relocate to other parts of the county for job offers and are unwilling to have any form of job experimentations. This means, in terms of job flexibilities, respondents are rigid in their expectations. This compelled the researcher to investigate during the in-depth interviews on job flexibility. Are they willing to move beyond their initial training? Are they willing to try new occupations? Would they move on? The in-depth interview revealed that participants were ready to relocate only if the job offers opportunities for travelling, scholarship for further training outside the country and regular lunch is also provided. These are the offers that are likely to get the participants to relocate.

One participant corroborated this finding by saying that:

> *I am an engineering student, and I may work in a factory. If I am going to work in a factory in a village somewhere, I don't know, then the company must provide me with lunch every day. This will give me a lot of peace of mind.*

> *The company should be able to offer me travelling money so that once a month, I can come to Accra and see my family* [P6].

Another female student said categorically that she was not willing to relocate beyond Accra. She said that:

> *I am a woman, going to a village or another town might make it difficult for me to move up in my career or even get a husband. By the time I come back to Accra, all my mates would be married [*P5].

4.3.7 Beliefs about being persistent

Participants were willing to initiate some behaviour to achieve success irrespective of uncertainties. They believe that hard work will bring success therefore they would work hard or seek a new job. This helped the study to explore what assumptions influence their beliefs to work hard. When participants were asked what would push them to go beyond the limit for their career, participants revealed that their desire to be successful. They believe that working hard would make you successful especially if you are able to solve the company's problem.

A participant answered by saying:

> *I am engineering students and I must solve problems. If I am able to invent low-cost solar panels, I will make the life of people easy. I will earn money from doing that and I will also feel happy I have solved a problem* [6].

What will motivate participants to work hard in their careers as indicated by their responses would be success and solving problems.

4.4 Research Question Two: Views of Undergraduate Students on Career Maturity and Career Decision-making Difficulties

This question sought to explore the opinions and belief systems of students on career maturity. During this stage it is a critical time for students to explore and confirm their career choices.

4.4.1 Career maturity and chronological age

On this question, participants held the opinion that career maturity has nothing to do with chronological age but rather experience. This is because most participants were of the view that, as children, people have fanciful ideas about careers but when they start growing and reality sets in, they change those aspirations and go for more realistic careers that are available on the market or within that society. Therefore, experience becomes a predictive factor in terms of career maturity. The more experienced you are the less mistakes you are inclined to make in terms of your career decisions. Participants believed that the level of education is irrelevant in this discussion. The reason being that there are students in Level 100 who are more career matured than some students in Level 400. Consequently, the actual life stage in relation to expected life stage provides one basis for judging vocational maturity. In other words, one's chronological age must as well match with behaviour or else maturation has not taken place. The opinions and views of students are reported below.

A male student said:

> *Age does not matter in career maturity. Some Level 100 students are more matured than those in Level 400. Some students come to Level 100 very young 17 or 18 years and they already know what they want to do, Yet, there are people in Level 400 and they have little idea about what they want to become in their career. I think level and age do not matter [*P 9].

Another participant shared his views by saying:

> *I don't understand career maturity properly, but I will attempt to answer the question. Age may not be link to career maturity. Once you are comfortable with a career choice and you face obstacles that come with your choice then I think you are career mature, and this is not about age or level it your decision [*P10].

About 75% of students agreed that career maturity may not necessarily match with chronological age. Consequently, career maturity is viewed as a developmental challenge that has very little to do with age. It is about career maturation process ~~–t~~hat results from a lack of information about self or the world of work" (Chartrand, Rose, Elliott, Marmarosh & Caldwell, 1993).

4.4.2 Career maturity and career decision-making difficulties

Most respondents believed that career maturity would lead to less career decision-making difficulties. Once you are career matured it means you have very little challenge with decision-making difficulties. A career matured person might have already decided or almost taken a decision regarding what they want to become. This is normally based on availability of information and resources.

A female respondent believed that career maturity will lead to less career decision-making difficulties. As evidenced in the following statement:

> *"Your maturity will make you know what you are about. I mean it will help you make everything easier if you are career matured because you know what you are going in for* [P3].

Another participant shared views to support the views earlier shared. she said:

> *Career maturity is when someone knows what they want to do with his lives, in terms of career. The person is focused on something, the person really knows what he or she wants so he/she works towards getting that thing. The knowing what to do at a particular point in terms of decision alone takes all the difficulties away* [P2].

Participants were of the view that age does not commensurate with career maturity but rather experience. Again, the more career matured a person is, the less difficulties one would have in terms of career decision-making difficulties.

4.5 Research Question 3: Perceptions of Students on Gender as Differentiators of Career Decision-making Difficulties?

For the moderating effect of gender and age, the researcher found out from participants whether demographic characteristics such as age and sex have effect on career decision-making difficulties. This question was asked to confirm or refute the results from the quantitative data and to give voice to the respondents to explain their position. Views solicited included gender and societal expectation of natural pathways in careers. Participants were asked to express their views on whether there are careers designed naturally for different sexes or not.

4.5.1 Gender specific careers in the Ghanaian context

Participants believed that society has carved out pathways for both genders in career development hence most of them believe that males are more decisive in career decision – making than females. Some participants are of the opinion that explaining the natural progression of females to marry at a certain age account for this. This mindset which comes in the form of pressure from families and friends does not affect males as much as females. For example, some of the female respondents believe that marriage can have negative significant effect on one‘s career. Naturally, women are expected to care for their children and their homes, therefore, most women would have to trade off their career aspirations if it is going to affect their homes. This makes it difficult for the woman to choose between her marriage, children, family and

her career. Most female respondents preferred job with a lot of flexibility in order to have time to take care of their families as well.

Participants believe that these challenges become a constraint on their efforts to build their career as they would have to consider so many options. A married man can pursue his career without much difficulties but the married woman will have challenges. The constraints on men are not as much as that of women. Therefore, men are more decisive when it comes to career decision than the woman.

This view was supported by a participant:

> *I know what to do when it comes to career, but it is not the same for my mates. I mean the females would want to put certain careers on hold when they get married before they get to do some other things, so the males have an advantage…*[R7]

A female student responded by saying:

> *In terms of marriage there could be a difficulty because normally when you get married you have to go and stay with your husband. So, if your husband is, let's say, a policeman and would always be transferred from one place to the other it would then make career decision very difficult* [R5].

More than half of the respondent both males and females were of the view that females are generally indecisive and as such have career decision-making difficulties. This is because women have more societal expectations than men.

Some respondents were also of the views that certain careers are meant for a specific gender and that society frowns on the opposite sex involved in that career. This makes it quite uncomfortable when you are in a career not supposedly designed for that gender. Some believed that this had made it difficult for them to achieve and pursue their dream careers. It is therefore, deduced from the interview results that, those who believed there are gender inappropriate careers seem to be at a loss when

deciding on their right careers. Some participants believed that some careers respect the males than the females as advanced by a female participant:

> *Like nursing profession male nurses are most of the time referred to as doctors even though they are nurses. Female doctors are sometimes referred to as nurses and people don't sometimes respect them like how they respect the male doctors* [R2].

A female participant argued that:

> *Let's say footballing for example if you want to be a footballer and if you are a girl right now in Ghana it will be very difficult. Even your parents would be disappointed in you and the entire community would discourage you.* [P8].

On the contrary, there were participants who did not agree with gender differences and support the changes in trends in gender – oriented careers. Their belief was that, society has evolved and intelligence is shared equally among genders. Supporting the saying that, what men can do women can also do and probably better. Therefore, the participants believed that there should not be any differentiation in terms of gender in choice of a career. This change in beliefs comes as a result of the influence of modernity and shift in ideologies such as the influence of capabilities and skills and not the sex of the prospective employee.

As evidenced by a participant:

> *In this modern Ghana, things have changed. Whether you are a male or a female, whatever you want to do you can do it. Let's take pilot for instance, I feel like majority of males go into that but I think ladies do that as well. I've heard of lady pilots as well but I feel like there are more males than females* [R10].

Another participant believed that:

> *Currently in our modern world I don't think some jobs are for only males, every job can be done by either a male or female. I think now those gaps have been broken, once you have the capabilities you can do anything. We have female engineers, doctors, pilots, research scientist, computer analyst, you just name them. There are Male nurses now, male Nannies, hairdressers, food venders and so on. What men can do women can also do and vice versa.* [R9].

Again, others shared their beliefs that the physical stature or physique of the genders makes it difficult for one to pursue certain careers. Categorically, the physical stature of women put them at a disadvantaged position should they want to pursue certain careers. The following are responses elicited from some participants:

> *In some institution yeah, I think the security agency. I think because I'm a woman, I admire the profession and I am passionate about it, the fact is that err as much as I want to join the security agency, I'm a little endowed like I have a lot of hmm bust may be that could also be an obstacle for me. Sometimes I nurse the fear that I could be disqualified because of my physical stature as a woman* [R1].

The career aspirations of participants are formed by job-related aspects and individual differences, such as gender role orientation. Gender role orientation will affect a number of related behaviours, including their career choice. As individuals are required to make choices related to their self-development, family or career, they may become more aware of the values and motives involved in the choices they make. It is indeed likely that gender role orientation may be more central to career choice than gender itself. In effect, stereotyping careers in terms of gender exerts a limiting influence on the career choices of young individuals, due to the characteristics of the individuals and their preferred career. Moreover, an individual's career self-concept acts as a stabilizing force. Hence, when an important life choice needs to be made, there are certain concerns, needs or values which guide the individual time spent in education.

4.7 Summary

The chapter presented data collected from undergraduate students on personality factors, career beliefs, career maturity and career decision-making difficulties. Data was presented in the form of tables and figures. Interpretation of the results were also done in this chapter. Hierarchical regression analysis showed that a relationship exists between personality factors, career beliefs and career decision-making difficulties. Again, bivariate analysis revealed that a negative relationship exists between career maturity (self-appraisal, occupational information, goal selection, planning and problem solving) and career decision-making difficulties. Age and sex did not emerge as significant differentiators when they were subjected to t test analysis. The qualitative studies analysed views of participants in thematic areas and was used to corroborate the findings from the statistical analysis. The next chapter presents the discussions.

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.0 Overview

This chapter presents the discussion of the results or findings that emerged from the analysis of the data. The discussion includes the interpretation of the data with reference to previous findings, theory and specific responses given by the respondents and participants in accordance with the objectives of the study. It is worth mentioning that the discussion of the findings is presented based on the objectives of the study.

5.1 Prediction of Personality Factors on Career Decision- Making Difficulties of Undergraduate Students of University of Ghana

The first objective of the study was to find out whether personality factors predict career decision-making difficulties. Personality factors and career decision-making difficulties were statistically analysed using the regression model for hypothesis 1 and was considered for discussion. The results indicated that, as a model, the coefficient of determination, the Adjusted R^2 of 0.214, was recorded for the regression model which was statistically significant (F (5, 465) = 41.44, $p < 0.01$). This means all the five factors of personality in combination contributed to 21.4% of variances in career decision-making difficulties.

The five beta values were negative with two non-significant factors. Extraversion (β = -0.047, t = -1.120, p = 0.263 or p> .05) and Agreeableness (β = -0.084, t = -1.847, p = .065 or p> .05). The individual contributions of the other three factors to the dependent variable were statistically significant: conscientiousness (β = -0.186, t = -4.082, p = .000 or p< .05); Neuroticism (β = -0.262, t = -6.164, p = .000 or p< .05) and Openness (β = -0.156, t = -3.325, p = .001 or p< .05). Therefore, in

order of magnitude, neuroticism, conscientiousness and openness were the major contributing factors to students' career decision-making difficulties among undergraduates of the University of Ghana.

Neuroticism, a personality trait, was strongly and inversely associated with personality-related career decision-making difficulties ($\beta = -.053$, $p<.00$). This finding is contrary to previous studies (Jackson & Lawty-Jones 1996; Lounsbury, et al., 2005; Lounsbury, et al., 1999; Meyer & Winer, 1993; Page et al., 2008), which suggested that Neuroticism as a personality trait, is associated with a more general tendency toward career decision-making deficits.

The findings from this Study however, support the findings of McKenzie, (1989) which showed that, among university students, academic success is strongly and positively correlated with neuroticism among those who are resilient enough to cope with its effects. Thus, the negative effect of Neuroticism can be channelled into striving to better one's position. However, neuroticism certainly interacts with other factors. Barrick, Mount, and Strauss (1993) posited that when intelligence is high, for example, the outcomes of neuroticism may be significantly different than when such factors are low. Although very high neuroticism has evident drawbacks, it may also serve as a motivator to achievement in competitive fields among those equipped to succeed (Nettle, 2005). Thus, the optimal value of neuroticism would plausibly depend on precise local conditions and other attributes of the person. This perfectly explains the results of this study. Thus, to be in the University, one ought to have had some level of intelligence. Therefore, even if a student has a trait of neuroticism, intelligence compensates for the negative effects of neuroticism.

Othman, Othman, Hallit, Obeid, and Hallitthere (2020) found a significant relationship at the .05 confidence level between employee's level of Neuroticism and career decision-making and concluded that, there was a positive correlation between Neuroticism and extrinsic career success. Likewise, the study of Barrick, Mount, and Strauss (1993) determined that Neuroticism was a valid predictor of career success and a meta-analysis research by Tokar, et al. (1998) showed positive correlation between Neuroticism and career success.

Byrne, Silasi-Mansat and Worthy (2015) asserted that Neuroticism negatively predicted performance under social pressure, but did not affect decision-making under low pressure. McKenzie (1989) asserted that neurotic personality types tend to be intelligent, humorous, have more realistic (if pessimistic) expectations, a greater self-awareness and drive, they take fewer risks, and have a strong need to provide for others. Naragon-Gainey and Watson, (2018) asserted that Neurotics also possess more emotional depth and neurotic individuals are more likely to be creative thinkers. This will buttress the position of the evolutionary standpoint, which explains why neurotic people tend to think ahead and are more likely to be prepared for possible negative outcomes (Nettle, 2005). Naragon-Gainey and Watson, (2018) argued that the reason why individuals pay attention to negative emotions is because they are likely to gather information about the environment or can perceive danger accurately.

This study reiterates that Neuroticism factor could have some career decision-making advantage and as such could reduce career decision- making difficulties. The neurotic is likely to be hyper aware of everything around him/her and are very deeper understanding of their environment (Naragon-Gainey, 2010).

These qualities combined with the anxiety of the neurotics make them forecast and plan very well and as such benefit from careful thinking when it comes to career decision-making which intends reduce the decision-making difficulties they may experience.

Conscientiousness personality factor (β = -0.186, t = -4.082, p = .000 or p< .05) had a significant beta value and was negatively associated with career decision-making difficulties. This means conscientiousness students tend to have less career decision- making difficulties. This result is compatible with those of previous studies that showed that the general tendency to be more orderly, self-disciplined, and dependable is associated with lower levels of career decision -making difficulties (Lounsbury, et al., 2014; Shafer, 2000), perhaps, because more conscientious individuals are more committed to career decision-making and they do invest resources into the process. They are also competent and purposeful, and while they tend to think carefully before acting, they typically have an internal career decision-making locus of control, and are generally not likely to exhibit indecisiveness (Lounsbury et al., 2012). Their level of diligence would suggest that they are likely to actively seek out information and take necessary advice to make career decisions, so they are also less likely than others to lack career-related knowledge (Costa & McCrae, 1992).

Judge, Thorsen, Bono and Patton (2001) posited that career success can be reliably predicted by personality traits, and that among the Big Five, conscientiousness is the best predictor of such success. This means that, the persistence nature of the conscientious personality would also ensure that they pursue avenues to resolve any conflicting advice or information that they may have received, and their determination would diminish their concern about any possible barriers that

may be restricting their choices. Such hindrances are likely to be enthusiastically embraced as challenges to be overcome, rather than as limitations. So, it can be seen that just as Conscientiousness is a predictor of career decidedness, it also provides a good indication of people's decidedness and confidence at the time of entry into the world of work (Costa & McCrae, 1992).

Conscientious individuals are also known for achieving better at school (e.g. Laidra, Pullmann, & Allik, 2007) and for being more likely to think about their future career and to implement behaviours leading to informed and well-thought-out career decisions. Conscientiousness individuals are likely to work hard, they are self-disciplined, they are organized, they strive for achievement, and are goal oriented. Besides, conscientious individuals have a high level of deliberation, making them capable of analysing the challenges and possibilities of a given situation. This means a conscientious decision-maker strives for achievements by searching for information and logically evaluating alternatives before making decisions, making them high achievement-oriented. Consequently, Bajwa, Batool, Asma, Ali and Ajmal (2016) concluded that conscientiousness personality trait is associated with rational decision-making style.

Conscientiousness reflects the tendency to be organized, set goals, and work towards them in an orderly way. When goals have been set, greater conscientiousness may facilitate staying on track with respect to the task and not being distracted by information irrelevant to the task. Conscientious individuals are more likely to pursue career decision-making in achievement-oriented fashion and this is likely to reduce the difficulties encountered during the process.

Openness to experience factor (β = -.034, p<.01) was also inversely and significantly related to career decision-making difficulties. The results of this study support the findings of Lounsbury et al. (2005) who found that openness is positively related to career decidedness, a tendency to avoid ambiguity and find answers to specific topics. Individuals who are high on this factor have the need for cognitive closure and are usually more decisive (Webster & Kruglanski, 1994).

Openness to experience (which often has been labelled as intellect) is related to active imagination, aesthetic sensitivity, attentiveness to inner feelings, preference for variety, intellectual curiosity, and independence of judgment (Costa & McCrae, 1992). Individuals with high scores on openness are curious about both inner and outer worlds, and they are willing to entertain novel ideas and unconventional values. They also experience both positive and negative emotions more keenly than do closed individuals (Costa & McCrae, 1992).

A probable explanation for the results on openness in this study could be that, the respondents in this study are University students who are likely to display intellectual curiosity, creativity, flexible thinking and culture. Therefore, they are inclined to explore and be more decisive when making career decisions. Divergent thinking is linked with openness and its spectrum and therefore may beneficially support career decision- making. Additionally, Storme, Celik, and Myszkowski, (2017) concluded that openness, in the past studies, has been clearly found to affect career decision-making. Students who are high on openness tend to use positive and rational decision-making styles. Feldt and Woelfel (2009) posited that Openness associated positively and significantly with rational, management, learning and entrepreneurship, but it negatively and significantly associated with avoidance. In

fact, it was found that students who scored higher in openness did not use avoidant style in making decision.

Openness assesses an individual's proactive seeking and appreciation of experience for its own sake and has tolerance for exploration of the unfamiliar. The higher scorers tend to be curious, creative, original, imaginative, and untraditional (Rossier, 2015). Individuals who exhibit openness are considered innovative, adventurous, and unusual in their ways. They show high levels of intellect and creativity and they should make good career decisions (Antoncic et al., 2015). An individual highly open to experience, should be constantly and intellectually challenged. If the challenge is sufficient, the performance of the person scoring highly on openness will improve (Hurtz & Donovan, 2000). Such an individual should be making better decisions since high openness promotes higher performance in decision-making (LePine, Colquitt & Erez, 2000).

Openness significantly predicts confidence and accuracy in decision-making and individuals with high openness scores possess elevated confidence. These individuals will also try to have an active role in decision-making (Gosling, Rentfrow, & Swann, 2003). On the other hand, people with low levels of openness are less adaptable to change, less confident, and highly likely to act recklessly (Chapman, Duberstein, Sorensen & Lyness (2007).

Results from this study attests to the significant predictive value of openness on career decision-making difficulties. This means students open to experience associated with less career decision-making difficulties whereas, for students having access to low level of openness are associated with higher level of career decision-making difficulties.

Even though result from agreeableness personality was not significant, (β = - 0.084, t = -1.847, p = .065 or p> .05), it was negatively associated with career decision-making difficulties. Agreeable individuals value getting along with others. They are therefore considerate, friendly, generous, helpful, and willing to compromise their interests with others. Previous research suggested that the Agreeableness personality factor was negatively associated with career indecision (Lounsbury, Foster, Carmody, Kim, Gibson & Drost, 2012). On the contrary results from other studies indicated that higher levels of Agreeableness were associated with higher levels of emotional and personality-related career decision-making difficulties (Gati, Gadassi, Saka, Hadadi, Ansenberg, Friedmann & Asulin-Peretz, 2011).

Even though trait agreeableness seems to be under some form of contention and results are inconclusive, Williamson (2018) asserted that Agreeableness is obviously advantageous for attaining and maintaining popularity, however, agreeableness is not useful in situations that require tough or absolute objective decisions.

Individuals with high agreeableness prefer working and perform better in workgroups or teams (John et al., 2008) since their characteristics facilitate interpersonal attraction, cooperation, smooth conflict resolution, open communication, information-seeking, and compliance with team goals. As a result, these people elevate the overall team performance (Peeters, Van Tuijl, Rutte & Reymen, 2006). For tasks that are mainly individualistic, it is assumed that individuals high on agreeableness may not do so well.

Another characteristic of agreeableness is tender mindedness (John et al., 2008). A decision-maker who is tender-minded tends to be influenced by others and can doubt his or her decisions. This tendency may lead to known decision biases and

rationality shown by supply chain decision-makers (Carter, Kaufmann, & Michel, 2007). All these biases can affect the rationality of the decision and may erode confidence in the decision. People who score highly in agreeableness will appreciate assistance from others (Dalal & Brooks, 2013) and, in turn, without communication with other team members will have lower confidence in the decision.

The first step to solving career problems is exploring one's values, interest and skills that will help in finding educational options that match up with one's goals. Knowing what is important will assist with the decision-making process and help to gain clarity on purpose. Therefore, relegating these responsibilities to significant others in one's life is likely to delay the decision-making process (Quinter & Edwards, 2011).

A probable explanation for the outcome of this study could be contextual. In the Ghanaian cultural setting, being respectful to some extent means being dependent on your parents, friends and significant others for decision-making. However, the sample in this study are university students who might have gained some form of assertiveness through their training in school. The confusion here is that, must they agree with everything from their parents or family when making career decisions or must they take a stand? The confusion experienced could account for agreeableness being insignificant in this study.

Graziano and Tobin (2009) asserted that among the personality dimension, agreeableness is less frequently studied empirically and even less well developed theoretically relative to the other four factors. This would mean that more studies need to be carried out on agreeableness factor in order to ascertain its full contribution to career decision-making difficulties.

Finally, Extraversion (β = -0.047, t = -1.120, p = 0.263 or p> .05) was also not significant, however, it related negatively with career decision-making difficulties. Individuals who are extraverted tend to be energetic and outgoing particularly in the presence of others. The result from this study is in contrast to the work of Page, Bruch, and Haase (2008) which supported a significant association between Extraversion and career decidedness.

A probable explanation for this result in this study could be attributed in part to the Ghanaian socio-cultural context. Being expressive might be considered disrespectful for young people. So young people are inclined to shelve their tendency to be expressive and outgoing. Consistent with collective society, they may tend to listen to what family members advise as opposed to their personal intentions when it comes to career decision-making. Consequently, traits extraversion is seen in its insignificant form among students in this current study.

Findings have been mixed regarding relationship between extraversion and career decision-making difficulties with quite a number of studies leaning towards being negatively correlated with career decision-making difficulties (Page, Bruch & Haase 2008). Part of the reason for the mixed results could be that, some high-status occupations (such as lawyers and politicians) may attract individuals who are unusually extraverted, while other high-status occupations (such as engineers and mathematicians) could appeal mainly to introverts. Consequently, this to some extent could reflect in the proportional differences of students who were sampled. Their personality could endear them to different career decision-making styles, Consequently, the insignificant relationship with career decision-making difficulties in this study could be associated with trait extraversion.

The results from the quantitative study corroborated the findings of the in-depth interviews. Even though participants were not exposed to the Big Five Personality Inventory, they could appreciate that choosing a career that is not compatible with one's personality may result in a stressful, unfulfilling, and unrewarding work environment. A female participant in his final year shared her view on this:

> *I admire lawyers and I wish I could become a Lawyer, but I am a very shy person, as a Lawyer I may have to go to court. This has become a problem for me I don't how to deal with it. If I can be helped with public speaking, then may be, I will be a lawyer* [P5].

Other results from the in-depth interview, indicated that participants could relate with the challenges of personality and career decision-making difficulties. Due to their personality traits some respondents were quite unsure if a particular decision would fit their personality. The challenges and difficulties experienced during the decision-making process is as a result of uncertainties students perceived in their personal dispositions or attributes. Career decision-making is a rational process, which involves emotions. Most importantly, emotional information is critical to shape the individuals' judgments, decisions, priorities and actions (Salovey, Mayer, Goldman, Turvey & Palfai, 1995). Therefore, the right appreciation of personality and its influence on career decision-making difficulties can be beneficial to the individual.

5.2 Predictive Factors of Career Beliefs on Career Decision-making Difficulties of Undergraduate Students of University of Ghana

The second objective was to predict career beliefs on career decision-making difficulties. The five predictors produced Adjusted $R^2 = 0.243$ and this implies that the model had explained 24.3% variance of dependent variable. Generally, the model was statistically significant: (F (5) = 31.391, $p < 0.01$).

My Current Career Situation MCS (β = -0.224, t = 5.417, p = .000 or p< .05), Factors that Influence my Decisions (FTID) (β = -0.218, t = -4.981, p = .000 or p< .05), Effort I am Willing to Initiate at Improving Self (EIWIIS) (β = -0.245, t = -4.957, p = .000 or p< .05) categories had an inverse and statistically significant relationship with career decision-making difficulties. However, What Seems Necessary for my Happiness (WSNH) (β = -0.027, t = -0.591, p = 0.555 or p> .05) and Changes I am Willing to make (CIWM) (β = - 0.039, t = -0.892, p = .373 or p> .05) categories were not statistically significant to career decision-making difficulties.

My Current Career Situation category MCS (β = -0.224, t = -5.417, p = .000 or p< .05) had an inverse and statistically significant relationship with career decision-making difficulties. These categories are designed to indicate an individual's present career status and how much personal effort an individual will put into the career process (Krumboltz, 1996).

Results from this study indicated that most students were unemployed and mostly being supported in school by their parents or family members. However, it appears that when students feel confident, they experience more positive feelings and then transfer it to other areas of their career decision-making and therefore experience fewer decision-making difficulties. Students who feel certain about their careers exhibit more active beliefs regarding the actual process of getting a job and have greater confidence in being independent from others when they find a job. Students with greater confidence and certainty about their career would most likely have come to that decision by using decision-making skills. Also, it is possible that their confidence in their career choice comes from their ability to complete tasks or their belief that they can complete new tasks related to career decision-making.

People differ widely on how they apply knowledge to solve problems. Those who are more knowledgeable in a certain domain become more confident (Hall, Ariss, & Todorov, 2007). The quality of a decision in this category is affected by prior career exploration. How much knowledge student might have had about their career and the labour market can affect the entire decision-making process. Students who go on internship often, are likely to be aware of the labour market demands and are prepared with some form of career decision-making skills. Technological and economic challenges are some of the uncertainties in the labour market environment and these challenges are much frequent now in the 21st century which have never been the case before in history. Therefore, students with the tenacity to survive the work environment with positive career beliefs are inclined to survive the labour market challenges.

Adaptive career beliefs can help improve career decision-making outcomes. Research has shown that less adaptive career beliefs can be transformed (Luzzo & Day, 1999) and correcting maladaptive career beliefs can lead to higher career success (Cheng, 2004). Thus, career beliefs are of pivotal nature for facilitating career decision-making process. Therefore, career counsellors should work at identifying maladaptive beliefs and help students form adaptive beliefs that can help facilitate the career decision-making process.

Factors That Influence My Decisions (FTID) category had an inverse and statistically significant relationship with career decision-making difficulties FTID (β = -0.218, t = -4.981, p = .000 or p< .05). This category helps to examine what students are considering as they make decisions. Whom are they trying to please? How much complexity do they perceive in occupational and educational environments? (Krumboltz, 1996), high scoring student in this category are

independent minded and low scoring students have significant others who influence their decision.

The results from this study means that students who believe that career choice is self-determined and are highly motivated to achieve personal goals, are likely to look at obstacles as challenges that need to be overcome instead of being an obstruction. They are likely to experience less career decision-making difficulties. Those students are likely to work hard irrespective of uncertainty to achieve their career aspirations. However, students with low scores on this category are individuals who are with the perception that, they are incapable of carrying out a thorough, proper career decision-making process. They are likely to have pessimistic views about the world of work and have overly negative perceptions regarding occupations, training courses, and jobs (e.g., that only few careers are really interesting).

The belief that one possesses the ability to solve complex and creative problems impact the decision-making process considerably. The subjective sense of mastery and confidence from experience of having repeatedly and successfully solved problems, enhance self-beliefs, which in turn enhance individual‘s persistence and motivation when confronted with problems. Students are often confronted with large numbers of individual pieces of information when exploring career options, and they need to be able and willing to change perspectives on the problem to arrive at new and original solutions.

Hechtlinger, Levin, and Gati (2017) argued that, individuals who believe they need the approval of others before they can make career decision or depend on others for career decision-making are less likely to be motivated to invest time and effort in making a decision and can be considered as maladaptive. However, this position may

not be culturally supported. Career beliefs held by individuals belonging to cultural groups vary (Bishop, Bauer, & Becker, 1998).

In the Ghanaian setting, listening to your parents against your personal wish is believed to be respect. Therefore, career decision-making can be a whole family affair. In this way, having such beliefs contribute to psychological feelings of satisfaction among collectivistic culture members (Tang, Fouad & Smith, 1999). Watts (1996) observed that Asians were likely to have stronger community and family orientation and they preferred combined career decision-making as compared to European-Americans who seemed to be more inclined towards individualism.

In this study it was evident from the beliefs expressed by participants during the in-depth interview that when choosing a career, it is important to have the approval of people closest to you, most importantly your parents. This was how a student expressed his views;

> *"My parents liked my career choice and the opportunities. Even though they are expecting that I will get a good job. My parents would support me with anything I do. I still feel pressure to do well in life because of my father especially"* [6].

Parents serve as a major influence in their children's career development and career decision- making. Parents want their children to find happiness and success in life and one factor which influences happiness and success is career choice. Research also indicates that when students feel supported and loved by their parents, they have more confidence in their own ability to research into careers and to choose a career that would be interesting and exciting (Keller 2004). This is important because studies show that students who feel competent regarding career decision-making, tend to make more satisfying career choices later in life (Tang, Fouad & Smith, 1999).

Parents influence the level of education or training that their children can achieve; the knowledge they have about work and different occupations, the beliefs and attitudes they have to working; and the motivation they have to succeed. According to Krumboltz (1996), most of these are learned unconsciously therefore, students absorb their parent‘s attitudes and expectations of them as they grow up.

This could be a probable explanation for the findings of this study. Perhaps students felt supported by their parents and even though they are subtly influenced, they are confident in the support of their parents and therefore translates into confidence in career decision-making. Students take on obstacles as challenges to be overcome and not as a disadvantage. Therefore, they experience fewer decision-making difficulties. Parental career support (e.g., expressions of interests and concerns, encouragement, instrumental assistance, and emotional backing) could provide students with positive career feedback (i.e., social persuasions) and thus may promote students‘ confidence to embrace career challenges and to make career decisions (Guan et al., 2015).

The Effort I am Willing to Initiate in Improving Self category also had an inverse and statistically significant relationship with career decision-making difficulties EIWIIS (β = -0.245, t = -4.957, p = .000 or p< .05). This category helps to explore whether students are willing to work hard? Maybe they are paralyzed by the thought of failure? Maybe some obstacle is blocking them? (Krumboltz, 1996).

The picture emerging from the statistical analysis from this study shows that, consistently high-scoring individuals in this category believe in hard work, explore alternatives and are self-reliant and therefore the score on career decision-making difficulties are low implying that they have fewer decision-making difficulties. Consistently low-scoring student in this category may be inclined to see little value in

hard work, want to proceed in one direction, depends on others and resists structure and therefore, are inclined to have more decision-making difficulties. Holland, Johnston, Asama and Polys (1993) found that those employees believing in hard work were more likely to be successful in their careers. Therefore, hard work in this instance means student are prepared to complete their degree and willing to see themselves progress in their careers. Therefore, they are prepared to have the requisite knowledge, skills and abilities, and the efficacy to work successfully to achieve their career objective.

It will follow logic that, the sample in this study would believe in the values of education. University education demands some form of hard work. It takes hard work to study for a degree, make career choice, courses to study and subsequent paths to follow. Students need to learn and consider all the options available. The need to get good grades and the fact that grades heavily influence what they can do and what they cannot do means that some students make hurried, expedient decisions.

Results from this category suggest that students might have developed an understanding and strategies to navigate the labour market. They are inclined to see challenges as difficulties that can be overcome and therefore might have developed self-driven skills to deal with challenges. In essence, students are putting themselves in the right mind-set to make relevant career decision and to offset the difficulties that come with career decision-making. Hard work means students are willing to work proactively and solve problems. However, the in-depth interview reveals that students have concerns about the recent banking sector challenges in the country and are entertaining some fears about the uncertainties in the labour market. This would mean that students do understand the labour market dynamics and perhaps are putting some mechanisms to reduce their chances of being unemployed after school.

What Seems Necessary for my Happiness (WSNH) (β = -0.027, t = -0.591, p = 0.555 or p> .05) was not significant with career decision-making difficulties. This grouping helps to examine the requirements clients may be placing on themselves. How important is high achievement or a desire to excel others. And values they put on education.

A probable explanation for this result was offered by the in-depth interview. Participants placed more importance on academic goals than on career achievement. Perhaps respondents could not associate with the variables of career achievement now because they are students. On education, all the students in this study were university students. This implies that they value education. During the in-depth interview, students explained that even though courses they were currently reading might not have direct bearing on their future career aspirations, they were prepared to work hard and go through school until they finish and are awarded with their degree.

Students may often look at their mates as comparative standards for how to behave, think, and feel. But in this current study peer equality was to measure whether students make decisions to outshine their colleagues. Even though students are pursuing the same course chances are that they may be pursuing different career paths and therefore may not deem it necessary to compare themselves with each other. The in-depth interview revealed that students are more concerned about their academic goals. Therefore, a detailed understanding of self -other-comparison was not evident in this study. This could account for the score not being significant in this study.

Changes I am Willing to make (CIWM) (β = - 0.039, t = -0.892, p = .373 or p> .05) categories did not predict career decision-making difficulties. This grouping helps to measure students' flexibility. Are they willing to relocate after their education? And would they move on?

Participants in the in-depth interview explained that they could only relocate to other parts of the country only when some benefits apart from their salary is part of the job offer. Again, students explained that relocating from Accra to other parts of the country would delay their progress. Perhaps students are yet to associate with the fact that relocating from Accra to other parts of the country could also help grow their career.

Workplace flexibility is a strategy of responding to changing circumstances and expectations. Therefore, approaching career decision with some flexible mind-set can be helpful with career decision-making. Flexible mind-set sets to help modify approach to tasks based on the unique demands of each situation.

Relocation may be an unplanned event for students and therefore they are quite rigid about it. Unplanned events are not only inevitable, they are desirable and Krumboltz (2009) referred to this phenomenon as ―planned happenstance" which can be incorporated into career counselling by teaching clients to generate, recognize, and incorporate chance events into the process of career decision-making to offset the difficulties encountered during the career decision-making process.

5.3 The Relationship that Exist Between Career Maturity and Career Decision-making Difficulties of Undergraduate Students of University of Ghana

The third objective sought to evaluate whether career maturity had a relationship with career decision-making difficulties. As shown by the five subscales of career maturity thus Self-Appraisal, Occupational Information, Goal Selection, Planning and Problem-Solving. All five subscales had inverse and statistically significant relationship with career decision-making difficulties.

The correlation coefficient between Accurate Self-Appraisal (AP) and Career Decision- making Difficulties (CDDQGS) was ($r = -0.30$, $n = 494$, $p < .01$, 2-tailed) and this indicated a moderate relationship. This means self-appraisal was dominant in students career decision-making. Self- appraisal in career decision-making refers to what extent an individual is sure and holds a notion in choosing their career based on self-abilities as a whole (Lent, Brown & Hackett, 1996). This result would suggest that students in this study incorporate their maximum efforts, including their individual beliefs while taking essential steps, thoughtfully and carefully in deciding the right careers to achieve. This also means students tend to have accurate perception of themselves–including their strengths, capabilities, character, feelings and motivations. Zunker (2006) argues that self-appraisal is the foundation on which development is built, both personally and professionally.

The findings from this study validated that there is a connection between self-appraisal and career decision-making difficulties. This is comparable with studies that pointed out that there is connection between self-appraisal which influences students' sphere of self-esteem and career decision-making (Guranda, 2013; Korkmaz, 2015). This means that when students truly understand their abilities, strength and weakness,

it facilitates the career maturity process and therefore they experience low decision-making difficulties.

Abdullah, Hussin, Shonubi, Ghazali and Abu Talib (2018) asserted that in the twenty-first century work place, there is the need for certain competencies such as confidence and affirmative attitude to be developed as it facilitates the career decision-making process. Therefore, Leong and Barak (2001) posited that, when individuals perceive less confidence in their abilities and perceive them as inadequate, it is likely to limit the range of career options and therefore struggle with the career decision-making process.

One of the most well-known theories that posit the importance of self-appraisal in career decision-making processes is that of Super (1957), who stated that most career choices attempt to actualize the skills, talents and interests of one's self-concept (Gianakos, 1999). Therefore, results from this study indicates that students have an appreciation of themselves; their talents, skills, interests, values and other personal attributes that might be of value in career decision-making. This self-knowledge therefore aids them in making career decisions.

Anakwe, Hall and Schor (1999) advocate that self-appraisal encompasses information about the individual and includes skills that focuses on individual's development. Therefore, acquisition of these skills contributes to learning about oneself, to realistic goal setting in managing career decision-making difficulties. Thus, effective career decision-making happens when individuals acquire an in-depth self-knowledge. It is therefore imperative that students have good self-appraisal to ensure that they make effective and adequate career decisions. Understanding one's self as well as its effect on different roles and relationships, has major influence on

career maturity (Creed & Paton, 2003). Therefore, self-knowledge is not only essential but necessary in the career decision-making process.

There was a weak negative correlation between Occupational Information (OI) subscale and career decision-making difficulties (CDDQGS) and the reading was ($r = -0.16$, $n = 494$, $p < 0.01$, 2-tailed). Even though the relationship is weak, it cannot be discounted. This means students have this skill but it could be developed to an appreciable level. Occupational information is one of the major components needed to make effective career decisions. Occupational information refers to the collection of details about occupational and educational opportunities. Gathering and using occupational information is essential if students are to select options that fit their interests, values, aptitudes, and skills. Occupational information can include details about the employment outlook, salary, related occupations, education and training and job duties.

A probable explanation for the findings of this study is, students who were decided about their career options have adequate information about how to make career decisions and therefore they may experience fewer decision-making difficulties compared to their colleagues who do not have adequate information.

Career maturity involves making age appropriate career decisions, exploring the world of work and seeking information about occupation and their requirements, having faith in one‘s ability to make realistic career decisions. Therefore, students in this study seems to involve themselves in these activities, therefore their level of career decision-making difficulties also decreases. The results from this study indicated that students should be provided with adequate career information. They should be encouraged to explore various careers and consult widely so as to improve on the amount of occupational information they have. Career counsellors, parents and

lecturers should encourage students to evaluate themselves and have a clear sense of their interest and clear career goals. They should also be encouraged to stop believing that their career outcomes are dependent on factors out of their control such as luck, chance and other powerful people.

There was also a weak significant negative relationship between Goal Selection (GS) and Career Decision-making Difficulties (CDDQGS) (r = -0.25, n = 494, $p < 0.01$, 2-tailed). The results of this subscale clearly produce the relationship between career maturity- goal setting and career decision-making difficulties. This means this skill must be developed to be more pronounced in students.

Goal selection is the ability to select one occupation from a list of occupations a student might be considering. It appeared from this study that, when students are able to make credible selection of goals with respect to choosing a career, it reduces the number of difficulties, they experience during the career decision-making process. Career Maturity is the process of identifying and selecting alternatives based on your unique preferences (Crites 1981). Therefore, successful career decision-making requires, an ability to set goals and then to know how to reach them.

Goal Selection is the basis for making major choice(s), internship and co-curricular involvements. Ideally, one would want to be able to make good decisions, which means the decisions should have a high probability of success. But decisions involve uncertainties. Decision-making should decrease the degree of uncertainties and increase the chances of achieving desired goal. Good goal selection enhances the decision-making process. Therefore, when students are committed to career goals and have the capability to attain goals, it leads to higher degree of career maturity and reduces career decision-making difficulties.

Planning (P), a subscale of career maturity, was significantly correlating moderately ($r = -0.30$, $n = 494$, $p < 0.01$, 2-tailed) with career decision-making difficulties (CDDQGS). Planning explains the ability to a plan of your goals for the next 5 years (Hackett & Betz, 1981). This result validates the fact that planning has some career benefits as it reduces the amount of difficulties experienced by students (Albion & Fogarty, 2002).

Results from this study suggests that career mature students are inclined to look ahead, taking a planful approach and therefore actively involve themselves in career planning activities. This means students engage in tasks related to obtaining career information and becoming aware of their vocational interests. The findings in this study suggest that respondents might have undertaken to engage in career planning.

Hoff, Briley, Einarsdóttir and Round (2020) asserted that those who go to school with a career plan start the race with an advantage. They added that one needs not to be the fastest but one needs to be strategic. A career plan allows you to confidently navigate critical choices such as what school, what major, sequence of electives, and internship options. The essential ingredients to creating a career plan include being aware that important decisions need to be made, understanding who you are, developing a mental map of the world of work, and identifying different ways you can contribute successfully will reduce the career decision-making difficulties experienced by students.

According to Hmileski and Baron (2008), students who invest the time and energy to think about what is important to them typically know the type of work they would like to do and set smart goals to graduate on time. They often carry less debt and spend less time switching from job to job trying to find direction. The net result is

establishing a career path sooner, a more predictable income, and job satisfaction within the first few years after graduation.

Career decision-making is an ongoing process throughout life that need to be reviewed and renewed regularly. There are so many choices and options available therefore, planning for career will mitigate against the career decision-making difficulties encountered by students. Choosing a career is one of the most important decisions students will ever make, one with far-reaching implications for happiness, health and financial status. It can be easier to do when students set career goals and put a plan in place to grow their career. Although there are no guarantees, taking a deliberate approach to the career planning process can expose more options and increase the probability that one will make the right career decisions.

There was a weak negative significant correlation between Problem solving and career decision-making difficulties (r = -0.18, n = 494, p < 0.01, 2-tailed). Problem solving in career maturity refers to the ability to use knowledge, facts, and data to effectively solve problems about career task (Meyer & Raich, 1983). Results from this study suggest that when students become more aware that making good decisions requires a well thought out process and a willingness to take a few risks, students exhibit less career decision-making difficulties.

Being a confident creative problem solver is really important to career success. (Lusk & Cook, 2009) and much of that confidence comes from having a good source of information to use when approaching a problem. Merely having knowledge or information is not enough, students must be able to solve problems to make effective decisions; they must be able to think critically. More importantly, the results from this study suggest that problem solving is related to career decision-making difficulties, which may have important implications for career interventions.

Larson and Heppner (1985) asserted that students who perceived themselves as positive problem solvers were more confident about their decision-making ability and occupational potential, more likely to relate their abilities to an occupational field and less likely to view the source of indecision as coming outside of themselves. The results from this study indicate that students possess the ability to make good career decisions. Lusk and Cook (2009) assert that good problem-solving skills prepare students for career decisions that would have to be made in the near future (Lusk & Cook, 2009). When students possess this skill, their decisions will more likely be wiser and more satisfying.

Problem-solving is another key component in the career development process. Heppner, Witty and Dixon (2004) pointed out that problem-solving is an important skill and the absence of this skill is related to limited opportunities for learning and poor socialization. Decision-making and problem-solving skills are crucial to the career decision-making.

Super (1957) proposed a set of skills an _ideal career decision maker' must have. The set of skills he proposed included knowledge of self-attributes thus a well-defined self-concept, broad knowledge of the world of work, detailed knowledge and reality testing of occupations under consideration, awareness of the need to plan ahead, decision-making skill, knowledge and use of appropriate resources for career decision-making. These set of skills are indicative of career maturity, which can be used again and again in the changeable 21st century work environment.

The two main scales of career maturity (CDSEGS) and career decision-making difficulties (CDDQGS) of the undergraduate students were correlated. It was found out that there was a moderate negative significant relationship between the two main variables (r = -0.31, n = 494, p < 0.01, 2-tailed).

This result would suggest that students in this study are career matured. This means these students tend to be more confident, and they express ability to successfully complete career decision-making tasks. In particular, students are more mature and therefore, tend to also be more career decided. The importance of this relationship is found in the findings of other researchers who have also found that confidence in one‘s ability to complete career decision-making tasks plays a role in an individual‘s confidence in his/her ability to complete the educational, training requirements and make efficient use of career information (Luzzo, 1995; Luzzo, Funk & Strang, 1996).

Parsons (1909) saw career maturity as encompassing a clear understanding about oneself, knowledge of the requirements of different occupations, and true reasoning on the relationships among these. A wealth of studies assert that career maturity is crucial to a successful school to work through transitions under any context (Brusoki, Gollin, Gallagher & Moore, 1993). Bloor and Brook (1993) found that undergraduate students who reported a higher level of career maturity also reported greater satisfaction with life and exhibited lower levels of career decision-making difficulties than participants with less career maturity scores.

Career education today should be concerned with preparing the students for the choices and transitions that life presents (Stead & Ngweni, 1999) however, the ability to make accurate, informed and realistic career and subject choices are a direct result of the students‘ career maturity levels. The higher the career maturity level, the more likely it is that an informed career decision-making process will take place (Van de Venter, 2006).

Participants in this study saw career maturity as a developmental task that has very little to do with age. They argued that lack of career maturity is about career maturation process that results from a lack of information about self or the world of work. This assertion was reiterated by a student in the following:

> *Madam, career maturity has nothing to do with age oo. Maybe age will give you a little experience but does not mean you are matured. I have seen some Level 100s who are more serious and organised, who acts better than some Level 400s* [P6].

Career maturity and the readiness to make career decisions are essential elements that can guide individuals to successfully make career decisions that are optimal. Career Maturity is central and critical to the career decision process. Therefore, the absence of career maturity may lead to poor decisions that would eventually end in unsuccessful and unsatisfactory careers.

5.4 Gender as a Differentiator of Career Decision-Making Difficulties

The fourth objective sought to explore possible sex differences in career decision-making difficulties. However, gender did not emerge as significant differentiator of students' career decision-making difficulties $t\,(494) = .23$, $p = .82$, $\eta^2 = 0.0015$. On the other sub-domains of career decision-making difficulties questionnaire, gender was not a significant factor on readiness ($t\,(494) = .27$, $p = .79$, $\eta^2 = 0.0035$); Lack of information ($t\,(494) = -0.41$, $p = .68$, $\eta^2 = 0.0023$) and Inconsistent Information ($t\,(492) = .1.07$, $p = 28$, $\eta^2 = 0.0001$).

Although there is a common pattern of difficulties experienced by individuals of different sexes, their experiences of career decision-making difficulties at this level was not significant. This result is compatible with that of Mdikana, Seabi and Rammutla (2009) which showed no statistically significant differences between male and female students in their career decision-making difficulties. Thus, gender plays

less influential role in career decision-making difficulties among undergraduate students of University of Ghana. Again, Hampton (2006) and Salami (2008) did not find any significant difference between sex and age.

A probable explanation for this is Fitzgerald and Crites (1980) who have suggested that many of the assumptions regarding sex differences in vocational behaviour are based on sex-role stereotypes and inadequate theory. It appears that there is no solid theoretical rationale to support the prediction of sex differences in coping with career decision-making difficulties. This means male and female students are exposed to the same number of difficulties and the expectations for both male and female students are the same.

Results from this study would suggest that both male and female students carefully process information, retrieve the relevant decision-related data from their memories, categorize the data if they are very diverse, think logically about the alternatives, predict results, evaluate the consequences, solve problems posed by the situation, and monitor all the decision stages. To some extent, the equivalence in these intellectual aspects in the sample under study shows that sex differences are closer to behavioural styles or to the demands of men and women‘s social roles than to the intellectual competences or to capacities.

Views expressed by participants in this study seem to affirm the assertion that, male and female possess the same intellectual capacity and should be able to pursue any career at all without restrictions. Female participants believed that women are now flying aircrafts, building cars and fixing bridges over rivers. These are few indicators to show that women have come of age and they have the capacity to pursue any career of their choice. Some participants also argue that there are males now in predominantly female careers.

Another probable explanation for the results from this study is Henley and Kramarae (1991) who asserted that over the past few decades, social, technological, medical, and legislative changes have brought about significant changes in women's participation in the workforce. Women are increasingly considering paid work as a lifelong career. A longitudinal study conducted by researchers at the University of Newcastle (Wicks, Mishra & Milne, 2002) suggests that young women aspire to having both full-time paid work and family relationships. This change in women's attitudes and aspirations would suggest that career decision-making is as important for girls as it is for boys.

The identification of the sources of differences is a necessary step towards a better understanding of both sexes only when these differences are duly localized will society, if it deems it appropriate, be able to search for adequate intervention approaches to change the factors that provoke them. Currently, there is a predominant notion that differences are a product of norms (Tannen, 1990), social status, and certain interested powers imposed on society (Henley & Kramarae, 1991).

Research has shown that gender stereotypes can already be observed in early childhood. Both boys and girls classify occupations by gender and aspire to pursue occupations that are stereotypically gender appropriate (Gottfredson, 1981; Hartung, Porfeli & Vondracek, 2005). Gender-biased perceptions of occupations are also often present in young adults (Gadassi & Gati, 2009). Indeed, individuals often limit the set of occupations or careers they consider to be potentially suitable on the basis of misconceptions and imagined barriers (Gati & Levin, 2014).

Addressing the importance of gender-related beliefs in career decision-making, this dimension refers to how strongly individuals believe that their gender narrows down the range of career options open to them. Such beliefs may hinder

career decision-making by limiting the range of alternatives considered by the individual (Gati & Asher, 2001), which in turn may lead to career decision-making difficulties.

The general belief among all participants during the in-depth interview, both male and female participants, was that, females would have more difficulties pursuing their careers because they have their families and marriages to take care of whereas the males can still pursue their career dreams and aspirations irrespective of family and marital responsibilities.

5.5 Age as Differentiator for Career Decision-making Difficulties

The study was also unable to demonstrate that Age has a direct effect on career decision-making difficulties. There was no significant difference $t\,(492) = .50$, $p = .62$, $\eta^2 = 0.0005$ between respondents. The most likely explanation for the failure to find any such relationship is Super (1957) who suggested that timeline for Career Exploration Stage is between the ages 14 to 24 years. It is this stage that is considered most significant in terms of career decision-making difficulties, particularly difficulties associated with perceived lack of career knowledge which is one of the significant predictors of career decision status across students within such age group (Albion & Fogarty, 2002). This presupposes that most students in this study are within the said age group and therefore, are likely to experience the same level of difficulties.

Another probable explanation as indicated by the results of this study could be the assertion of Albion and Forgarty (2002) that, career deciders of all ages are likely to experience career decision-making difficulties. This means irrespective of age; every career decider is likely to experience some amount of difficulties and this could

be the reason age could not have any significant difference on career decision-making difficulties of participants.

From a naturalistic perspective, specifically based on subjects‘ experience and competence, students are within the same cohort or developmental stage. This means participants are likely to behave in the same way when they make career decisions. The relevance they allocate to the task, and the environmental factors that determine the resolution process may be the same in some respects. It appears that Career Decision-making difficulties can be effectively ameliorated by providing access to relevant, up-to-date resources and information.

The findings of this study on demographic variables on career decision-making difficulties support the finding of those reported in previous works by Hampton (2006) and Salami (2008) which did not find any significant difference between sex and age. Patton and Creed (2002) outlined the complexity of the relationship between age and gender and highlighted the need for these and other demographic factors to be explored further.

5.6 Summary

The chapter presents the discussion of the results regarding the specific objectives of the study. The discussion shows that personality factors predict career decision-making difficulties. Again, career beliefs predict career decision-making difficulties. Career maturity has a relationship with career decision-making difficulties. Age and sex did not emerge as significant differentiators in terms of career decision-making difficulties.

CHAPTER SIX

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.0 Introduction

In this chapter, a summary of key findings as well as conclusions drawn have been presented. Implications of the findings for counselling, contributions of the study to knowledge and suggestions for further research have also been presented.

6.1 Summary of the Study

Students are challenged by career transitions in the 21st century and these include making career decisions. Typically, identifying career alternatives, collecting information about them, comparing these alternatives and choosing one, constitute some of the challenges, students are usually confronted with. Finding the areas where students are experiencing difficulties in this process is important for helping them and facilitating their career decision-making.

In summary, the purpose of the study was to investigate personality factors, career beliefs and career maturity influencing career decision-making difficulties. The study was conducted through the lenses of pragmatism and the researcher adopted the explanatory sequential mixed methods design. Classification system of career decision difficulties was tested by University students as sample in this study. Three colleges were selected from the four colleges in the University and a total of 494 students were selected through multiple sampling methods and 10 participants were selected for the qualitative study.

The study was conducted in two Phases. Phase One comprises the use of survey method and this consisted of the use of four standardized questionnaires, namely, the Big Five Personality Inventory, the Career Beliefs Inventory, the Career Decision Self- Efficacy Short Form. These instruments were used to gather

information from sampled respondents and data was statistically analysed. Descriptive and inferential statistics were used at this stage. Specifically, the means, standard deviation, Independent t- test, simple correlation, bivariate analysis and hierarchical multiple regression were used.

The next phase was the qualitative stage and 10 participants were purposively selected. The qualitative research method was chosen because it offered the researcher the opportunity to have a one-on-one their motivation and feelings and observed the physical responses and gestures of the participants. The responses were analysed using themes, categories and ground within participants' voices and face-to-face interactive session with the respondents. The researcher was able to probe the participants further and drill down into responses that were not very clear to understand within the collected data.

6.2 Summary of Key Findings of the Study

The following were the findings from this study:

a. All the personality variables in the study (Conscientiousness, Neuroticism, Openness, Extraversion and Agreeableness) explained 21.4% (adjusted R^2 = .214) of the variance in Career Decision-making Difficulties and the regression model which was statistically significant (F (5, 465) = 41.44, $p < 0.01$). This is clearly shown in Table 8. This would suggest that the present regression model is a good predictor of Career Decision-making Difficulties of University of Ghana undergraduate students.

b. More so, it appears from Table 9 that Personality factors indeed have a negative relationship with career decision-making difficulties and Conscientiousness, Neuroticism and Openness are the dominant predictors of Career Decision-making Difficulties. Agreeableness and Extraversion had

negative but non-significant relationship with Career Decision-making Difficulties.

c. From Table 11, the five categories from the Career Beliefs Inventory: My Current Career Situation (MCS), What Seems Necessary for my Happiness (WSNH), Factors that Influence My Decisions (FIMD), Changes I am Willing to Make (CIWM) and Efforts I am Willing to Initiate Improving Self (EIWIIS) explained 24% of the variance in career decision-making difficulties (Adjusted $R^2 = .243$) of the variance in Career Decision-making Difficulties. Generally, the model was statistically significant (F (5) = 31.391, $p < 0.01$).

d. It appeared from Table 13 that, My Current Career Situation (MCS), Factors that Influence my Decisions (FIMD), and Efforts I am Willing to Initiate Improving Self (EIWIIS) were the most significant predictors of career decision-making difficulties. When Scores on these categories increase, scores on career decision-making difficulties decrease. This means realistic career beliefs lead to positive assumptions, and dysfunctional career beliefs leads to distorted thoughts that impede the career decision-making process.

e. Career maturity affect career decision-making difficulties and this is largely influenced by accurate self-appraisal, occupational information, goal selection, planning and problem solving. This transfers to the availability of information and resources. The more career matured students are the easier it is for them to make career decisions.

f. However, career maturity does not necessarily correspond with chronological age.

g. Table 15 revealed that an Independent t-test on Gender differences in students' career decision-making difficulties revealed that there was no significant

relationship between the different sexes, male and female. Therefore, gender was inconsequential. Decisional compromise is made by a particular gender group because of societal assumptions. The qualitative study reveals that females would have more career decision-making difficulties than males. The reason being that when women marry, they shelve their career ambitions to grow their families. Whereas the men pursue their career ambitions whether they are married or not.

h. Age did not represent any decisional advantage. The Career Decision-making Difficulties faced by students of the University of Ghana is the same across age cohort among students.

6.3 Conclusion

The present research provides additional support for the fact that personality indeed has a relationship with career decision-making difficulties. Thus, the theoretical taxonomy of The Big Five Personality Inventory or the Five Factor Model of trait measures confirm that there is a significant relationship between personality factors and Career Decision-making Difficulties.

Secondly, the finding suggests that the more students have irrational career beliefs, the more they experience career decision-making difficulties. However, positive career beliefs facilitate the career decision-making process. This result was consistent with previous research findings emphasizing the importance of evaluating individuals‘ dysfunctional beliefs in career decision-making as career beliefs affect the career decision-making difficulties.

Thirdly, this study found out that career maturity is a measure of readiness towards making career decision competently. Consequently, age may not present any decisional advantage in terms of career maturity.

Fourthly, although the study provided a useful representation of some of the factors influencing career decision-making difficulties of students of University of Ghana, it does not fully support the hypotheses or meet all the aims of the study. In particular, the role of age and sex remains substantially unexplained. A probable interpretation could be both males and females are given equal access and equal opportunity when it comes to education and career choice and again the students in this study are all within the same age cohort and belong to the same developmental stage.

6.4 Implications for Counselling

This study provides empirical support for the assertion that career decision-making is a difficult task and as such the services of the counsellor is a much needed one. Today, students anticipate making multiple career changes throughout their lives and continually scale up their skills. The essence of establishing a quality career guidance programme is particularly imperative if the modern-day students are to successfully adapt and continue to adjust to future labour market challenges.

The findings confirm that personality factors indeed predict career decision-making difficulties. This means individual differences among students should be expected, accepted, understood and planned for. Counsellors would have to assess students and give appropriate personality counselling. This means counselling must be more focused on the individual. Again, Counsellors would have to help students to develop in the areas of their personality weakness and draw on the strengths of their personality to make personality-appropriate career decisions. This will help contribute to the total development of the students in respect of selection of courses and subsequently vocational development.

This study reveals that realistic career beliefs positively influence students' perception about career. However, dysfunctional beliefs might prevent students from thinking in a systematic and organized manner about the problem and making a rational decision, whereas the absence of dysfunctional or pessimistic thoughts promotes a better integration of knowledge about the self and potential occupations. Therefore, the help of the counsellor is a much needed one to provide career interventions that will help to mediate students career belief systems. This will have substantially stronger effects on correcting faulty assumptions and strengthening healthy beliefs.

The fact that students admitted that gender related careers are changing has important implications for school counsellors. This study shows the importance of developing an environment that promote systems of guidance and counselling that deal with the issue of gender imbalances. In the sense that female students are capable just as much as male students to attain success in any career.

6.5 Recommendations

The findings from the study established that career decision-making difficulties affect students regardless of individual differences in various personality factors. Again, findings from the study established that the complexities of career decision-making require that students are adequately prepared while still in school. However, intervention programs are not readily available for students. A concerted effort must be made to address this challenge. The following recommendations were made based on the findings from this study.

The management of University of Ghana must prepare an all-encompassing and coherent career guidance strategic plan that details career guidance framework with mandatory career guidance sessions for all students. This plan must include a

comprehensive binding policy on career guidance and counselling for all Colleges, Departments, and Institutes within the University of Ghana.

Secondly, tailor-made programs should target both students who pursue courses that have clear career paths and those who offer courses that have broader but very little specific career paths. Content should be developed for students from the first year up to the final year. In order to ensure that students attach the requisite importance to this exercise, these career courses must be made compulsory and examinable. For example, the content of these programs should commence with the introduction of first year students to a broad range of careers across different industries. It should also include teaching students basic decision-making skills and offering them training in basic practical career exercises such as preparation of career plans, among others.

The essence of these career development programmes is to ensure that as students' progress to the final year in school, they are obliged to consciously make well-informed and focused career decisions before they complete school. These interventions may help students to be aware of professional qualifications, continuing professional development, specific career requirements or opportunities, licenses needed, various routes for pursuing certain careers, and growth opportunities. This will minimize the career decision-making difficulties students encounter. When people find jobs, which utilise their potential and meet their own goals, they are likely to be more motivated and more productive in the efficient use of manpower.

Thirdly, Management of the University must ensure that guidance centres in the University have independent offices which are adequately resourced, with an assurance of pro-active one-on-one delivery of guidance and counselling sessions at key career decision-making points.

Finally, Counsellors at the Careers and Counselling Centre need to have a wide range of information and work-based materials including culturally friendly psychometric tools to assess for personality, interest, and aptitude. Finally, guidance initiatives also need to be carefully evaluated from time to time.

6.6 Limitations

Although the results of this study are encouraging, there are some limitations, of the study which are worth noting. This study relied heavily upon students' self-reported data. Both measurements and demographic data are methods which require students to self-report the data collected therefore, the validity of the information may be subjected to social desirability and erroneous reporting. Therefore, respondents were encouraged to give their most answers.

Again, the sample size was the students of University of Ghana and not all students in Ghana. Therefore, results should be interpreted with caution and not be extrapolated beyond the boundaries where the research took place. However, this study can be used as a referent point for another research.

6.7 Contributions to Knowledge

Despite the aforementioned limitations, the results of this study have theoretical and methodological contributions to research in general.

The findings of the present study have made many theoretical contributions. Firstly, the study has been able to add to theories via the findings which showed that, the theoretical framework of this study consisted of the five-factor model (FFM) personality traits. This theory states that five human behavioural personality traits that are common among all individuals. This theory was important for this study because

it provided a foundation for the most common personality traits used in understanding the relationship with career decision-making difficulties.

Additionally, contribution of the study refers to the confirmation of previous findings that indeed there is a relationship between personality factors and career decision marking difficulties (e.g., Cohen et al., 1995; Taylor & Betz, 1983; Tokar, Withrow, Hall & Moradi, 2003). Again, the study found that, the most dominant personality factors that predicted career decision-making difficulties were Conscientiousness, Openness and Neuroticism. This study is amongst the few studies that have found trait neuroticism to have an inverse relationship with career decision-making difficulties (e.g McKenzie, 1989; McKenzie, Taghavi-Knosary & Tindell, 2000; Nettle, 2005).

Furthermore, the findings of this study enable us to understand that many of the assumptions regarding sex differences in vocational behaviour may be based on sex-role stereotypes and therefore there may be inadequate theory to support it.

It also worth mentioning that this study shows that methodologically, most studies dealing with career decision-making difficulties used bivariate analysis. (e.g., Cohen et al., 1995; Guerra & Braungart–Rieker, 1999; Kelly & Lee, 2005; Leong & Chervinko, 1996; Slaney, 1988). However, this study used multivariate tools in analysing personality factors, career beliefs, career maturity and career decision-making difficulties and has found that, indeed personality factors, career beliefs and career maturity have a relationship with career decision-making difficulties.

Another contribution offered by this present study is that it has also exhibited strength in the chosen methodology and design. The study utilized a quantitative and qualitative methodology. Quantitative methodology allowed the researcher to measure collected data numerically. This type of data collection and analysis provided a strong

foundation for accurate measurements and results. By employing quantitative methods, this study may be easily replicated by future researchers in trait psychology. The data collected may also be compared to similar research, by using quantitative methods. In addition to that, the qualitative approach also provided an in–depth understanding of career decision–making difficulties among students within the Ghanaian context.

Finally, the study tested four existing measures using Ghanaian students as samples.

6. 8 Suggestions for Future Research

The following are suggestions from the current study for further research:

Future studies should compare the career decision-making difficulties of students who enrol in career development training course with those who do not have the benefit of career development training. This will also help the academic body to know whether career development training could have any benefit for students‘ career decision-making.

A future replication of this research with much larger and more diverse samples of Ghanaian Universities controlling for gender, socio-economic status, family and culture will enhance the generalizability of such a research.

Identifying and assessing individuals‘ thoughts and difficulties when making a career decision is just the first step. The next step is developing interventions to increase the individual‘s readiness and specific suggestions for dealing with his or her particular difficulties. Further research, then, should consider designing career counselling interventions for career decision-making difficulties.

REFERENCES

Abdullah, N., Hussin, N., Shonubi, O. A., Ghazali, S. R., & Talib, & M. A. (2018). Career decision-making competence, self-knowledge, and occupational exploration: A model for university students. *Journal of Technical Education and Training*, *10*(1). Retrieved from https://publisher.uthm.edu.my/ojs/index.php/JTET/article/view/1832

Academic Affairs Directorate (2018). *2018/2019 academic year students' records.* University of Ghana, Legon.

Ahuja, M., Ogan, C., Herring, S. C., & Robinson, J. C. (2006). Gender and career choice determinants in information systems professionals: A comparison with computer science. In F. Niederman & T. Farrat (Eds.), *IT workers: Human capital issues in a knowledge-based environment* (pp. 279-304). Greenwich, CT: Information Age.

Ajzen, I. (1975). *Belief, attitude, intention and behaviour: An introduction to theory and research*. Addison-Wesley.

Al Zaabi, H. H. J., & Ajmal, M. M. (2017). Role of organizational commitment, culture and leadership in managing innovation: A study. *International Journal of Value Chain Management, 8*(3), 270.

Albion, M., & Fogarty, G. (2002). Factors influencing career decision-making in adolescents and adults. *Journal of Career Assessment, 10,* 91-126.

Allport, G. W., & Odbert, H. S. (1936). Trait-names: A psycho-lexical study. *Psychological Monographs, 47*(1), 100-171.

American Psychological Association [APA] (2017). Understanding personality disorders. *https://www.apa.org/topics/personality/*

Amir, T., Gati, I., & Kleiman, T. (2008). Understanding and interpreting career decision-making difficulties. *Journal of Career Assessment, 16*(3), 281-309.

Amundson, N. (1997). Myths, metaphors, and moxie: The 3ms of career counselling. *Journal of Employment Counselling, 34*, 89-115.

Anakwe, U. P., Hall, J.C & Schor, S.M (1999). Knowledge-related skills and effective career management. *International Journal of Manpower, 21*(7), 110-125.

Anderson, S., & Brown, C. (1997). Self-efficacy as a determinant of career maturity in urban and rural high school seniors. *Journal of Career Assessment, 5*, 305-315.

Annan, P. K. (2006). Factors affecting career choice among senior secondary school Students in Shama Ahanta East Metropolis. Winneba: University of Education. (Unpublished B.Ed. Long Essay).

Ansong, D., Eisensmith, S., Okumu, M., & Chowa, G. (2019). The importance of self-efficacy and educational aspirations for academic achievement in resource-limited countries: Evidence from Ghana. *Journal of Adolescence, 70*, 13-23.

Antoncic, B., Auer Antoncic, J., Gantar, M., Li, Z. & Kakkonen, M.-L. (2015). Chancenon-control and entrepreneurship. *Journal of Developmental Entrepreneurship*, *20*(3), 1–13.

Arulmani, G., Van Laar, D., & Easton, S. (2003). The influence of career beliefs and socio-economic status on the career decision-making of high school students in India. *International Journal for Educational and Vocational Guidance, 3*(3), 193-204.

Asiamah, N., Mensah, H. K., & Oteng-Abayie, E. F. (2017). General, target and accessible population: Demystifying the concepts for effective sampling. *The Qualitative Report, 22*(6), 1187-1202.

Atli, A. (2016). The effects of trait-factor theory-based career counselling sessions on the levels of career maturity and indecision of high school students. *Universal Journal of Educational Research, 4*, 1837-1847.

Australian Bureau of Statistics (2020). *Sampling and sampling techniques*. Profile on the web Library Extension Program, Retrieved on 20th March, 2020.

Bacarli, F. (2006). Personality characteristics as predictors of personality indecisiveness. *Journal of Career Development, 32,* 320-332.

Badu-Nyarko, S. K. (2013). *Basic research methods in social* science (Rev ed.). Woeli Publications.

Bajwa, R. S., Batool, I., Asma, M., Ali, H., & Ajmal, A. (2016). Personality traits and decision-making styles among university students (Pakistan). *Pakistan J Life Soc Sci., 14*(1), 38–41.

Bandura, A. (1977). *Social learning theory*. Prentice-Hall.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs.

Bandura, A. (1994). Social cognitive theory of mass communication. In J. Bryant, & D. Zillman (Eds.), *Media effects: Advances in theory and research* (2nd ed., pp. 61-90). Lawrence Erlbaum.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. Freeman.

Barrick, M. R., Mount, M. K., & Strauss, J. P. (1993). Conscientiousness and performance of sales representatives: Test of the mediating effects of goal setting. *Journal of Applied Psychology, 78*(5), 715–722.

Beck, A. T. (1976). *Cognitive therapy and the emotional disorders*. International Universities Press.

Bergeron, L. M., & Romano, J. L. (1994). The relationships among career decision-making self-efficacy, educational indecision, vocational indecision, and gender. *Journal of College Student Development, 35,* 19-35.

Betz, N. E., & Hackett, G. (1981). The relationship of career-related self-efficacy expectations to perceived career options in college women and men. *Journal of Counselling Psychology, 28*(5), 399-410.

Betz, N. E., Klein, K. L., & Taylor, K. M. (1996). Evaluation of a short form of the career decision-making self-efficacy scale. *Journal of Career Assessment, 4*(1), 47-57.

Biney, I. K. (2015). Exploring graduate unemployment problem in Ghana: Challenges and strategies. *Journal of Education*, *3*(2), 40-60.

Bishop, J. B., Bauer, K. W., & Becker, E.T. (1998). A survey of counselling needs of male and female college students. *Journal of College Student Development, 39,* 205- 210.

Blaikie, N. (2007). *Approaches to social enquiry: Advancing knowledge* (2nd ed.). Polity Press.

Blanchard, C. A. & Lichtenberg, J. W. (2003). Compromise in career decision-making: a test of Gottfredson‘s theory. *Journal of Vocational Behavior, 62(*2), 250–271.

Bloor, D., & Brook, J. (1993). Career development of students pursuing higher education. New *Zealand Journal of Educational Studies, 28*(1), 57-68.

Blustein, D. L. (1989). The role of goal instability and career self-efficacy in the career exploration process. *Journal of Vocational Behaviour, 35*,194.203

Blustein, D. L., Ellis, M. V., & Devenis, L. E. (1989). The development and validation of a two-dimensional model of the commitment to career choices process. *Journal of Vocational Behaviour, 35*(3), 342-378.

Blustein, D. L., Kenna, A. C., Gill, N., & DeVoy, J. E. (2008). The psychology of working: A new framework for counseling practice and public policy. *The Career Development Quarterly, 56*(4), 294-308.

Bochner, S. (1994). Cross-cultural differences in the self-concept: A test of Hofstede‘s individualism/ collectivism distinction. *Journal of Cross-Cultural Psychology, 25*, 273-83.

Bochner, S. (1994). Cross-cultural differences in the self-concept: A test of Hofstede's individualism/collectivism distinction. *Journal of Cross-Cultural Psychology, 25*(2), 273–283.

Borchert, M. (2002). Career choice factors of high school students. A research paper submitted in partial fulfilment of the requirements for the Degree Master of Science Degree, University of Wisconsin-Stout, 2002.

Bouchard Jr, T. (2004). Genetic influence on human psychological traits: A survey. Current directions in psychological science. C*urrent Directions in Psychological Science, 13*(4), 148-151.

Bouchard, T. J., & Loehlin, J. C. (2001). Genes, evolution, and personality. *Behaviour Genetics, 31,* 243-273.

Bouchard, T. J., Lykken, D. T., McGue, M., Segal, N. L., & Tellegen, A. (1990). Sources of human psychological differences: The Minnesota study of twins reared apart. *Science, 250*(4978), 223-228. doi: 10.1126/science.2218526

Boudreau, J. W., Boswell, W. R., & Judge, T. A. (2001). Effects of personality on executive career success in the United States and Europe. *Journal of Vocational Behaviour, 58*(1), 53-81. doi: 10.1006/jvbe.2000.1755

Bowerman, B. L., & O‘Connell, R. T. (1990). *Linear statistical models: An applied approach* (2nd ed.). Duxbury Press.

Boyce, C., & Neale, P. (2006). *Conducting in-depth interview: A guide for designing and conducting in-depth interviews for evaluation input*. Pathfinder International Tool Series, Monitoring and Evaluation-2.

Braunstein-Bercovitz, H., & Lipshits-Braziler, Y. (2015). Career-planning beliefs as predictors of intentions to seek career counselling. *Journal of Career Assessment, 25*(2), 352-368. Doi: 10.1177/1069072715616129

Bright, J. E., & Pryor, R. G. (2005). The chaos theory of careers: A user's guide. *The Career Development Quarterly, 53*(4), 291-305.

Brooks, L. (1990). Recent developments in theory building. In D. Brown and L. Brooks (Eds.), *Career choice and development: Applying contemporary theories to practice* (2nd ed.). Jossey-Bass.

Brusoki, G. C., Gollin, A. K., Gallagher, R. P., & Moore, M. (1993). Career group effects on career indecision, career maturity, and locus of control of undergraduate clients. *Journal of Career Assessment, 1*, 309-320.

Bryman, A. (2012). *Social research methods* (4th ed.). Oxford University Press.

Bubić, A., & Ivanišević, K. (2016). The role of emotional stability and competence in young adolescents‘ career judgments. *Journal of Career Development, 43*(6), 498–511.

Buddeberg-Fischer, B., Klaghofer, R., Abel, T., & Buddeberg, C. (2006). Swiss residents' speciality choices – impact of gender, personality traits, career motivation and life goals. *BMC Health Services Research*, *6*, 112-152.

Bullock-Yowell, E., Andrews, L., Buzzetta, M. E. (2012). Unemployed adults‘ Career thoughts, career self-efficacy, and interest: Any similarity to college students? *Journal of Employment Counselling, 49*(1), 18-30.

Bussey, K., & Bandura, A. (1999). Social cognitive theory of gender development and differentiation. *Psychological Review, 106*(4), 676-713.

Byrne, K. A., Silasi-Mansat, C. D., & Worthy, D. A. (2015). Who chokes under pressure? The big five personality traits and decision-making under Pressure. *Personality and Individual Differences, 74*, 22-28.

Cantor, N., & Zirkel, S. (1990). Personality, cognition, and purposive behavior. In L. A. Pervin (Ed.), *Handbook of personality: Theory and research* (p. 135–164). The Guilford Press.

Careers and Counselling Centre (2018). Annual data. Careers and counselling Centre, University of Ghana, Legon.

Carter, C. R., Kaufmann, L. & Michel, A. (2007). Behavioural supply management: A taxonomy of judgment and decision-making biases. *International Journal of Physical Distribution and Logistics Management, 37*(8), 631-669.

Carter, S. M., & Little, M. (2007). Justifying knowledge, justifying method, taking action: Epistemologies, methodologies, and methods in qualitative research. *Qualitative Health Research, 17*(10), 1316–1328.

Caspi, A., Roberts, B., & Shiner, R. (2005). Personality development: Stability and change. *Annual Review of Psychology, 56*, 453-84.

Cattell, R. B. (1943). The description of personality: Basic traits resolved into clusters. *Journal of Abnormal and Social Psychology, 38*, 476-506

Cattell, R. B. (1965). *The scientific analysis of personality*. Penguin Books.

Cattell, R. B. (1990). Advances in Cattellian personality theory. In L. A. Pervin (Ed.), *Handbook of personality: Theory and research* (p. 101–110). The Guilford Press.

Chamberlain, T. C., Catano, V. M., & Cunningham, D. P. (2005). Personality as a predictor of professional behaviour in dental school: Comparisons with dental practitioners. *Journal of Dental Education, 69*(11), 1222- 1237.

Chaney, D., Hammond, M., Betz, N., & Multon, K. (2007). The reliability and factor structure of the career decision self-efficacy scale- SF with African Americans. *Journal of Career Assessment, 15*, 194-205.

Chao, C. T. (2012). *Encyclopaedia of research design proportional sampling.* SAGE Publications Inc.

Chapman, B. P., Duberstein, P. R., Sorensen, S., & Lyness, J. M. (2007). Gender differences in Five Factor Model personality traits in an elderly cohort. *Personality and Individual Differences, 43,* 1594–1603.

Chartrand, J. M., Rose, M. L., Elliott, T. R., Marmarosh, C., & Caldwell, S. (1993). Peeling back the onion: personality, problem solving, and career decision-making style correlates of career indecision. *Journal of Career Assessment, 1*(1), 66–82.

Chen, Y., & Liew, J. (2015). Parenting and emotion regulation in the adaptive and academic competencies of Chinese American youth. *International Society for the Study of Behavioral Development (ISSBD) Bulletin, 65*, 10-12.

Chen, Y., & Sun, Y. (2003). Age differences in financial decision-making: Using simple heuristics. *Educational Gerontology, 29,* 627-635.

Cheng, C. (2004). Empirical study between students‘ career belief and creative thinking instruction of career planning in technological and professional college. *International Journal of Technology and Engineering Education, 1*(1), 439-443.

Cheung, F. M. & Leung, K. (1998). Indigenous personality measures: Chinese examples. *Journal of Cross-Cultural Psychology, 29*, 233–248.

Chi, H. Y. (1994). A study of the types of career decision-making and career decision beliefs among college students (original in Chinese). Unpublished thesis, National Taiwan Normal University, Taipei, Taiwan.

Childers, S. M. (2012). Against simplicity, against ethics. *Qualitative Inquiry, 18*(9), 752-761.

Chung, H., & Van der Horst, M. (2018a). Flexible working and unpaid overtime in the UK: The role of gender, parental and occupational status. *Social Indicators Research*. https://doi.org/10.1007/s11205-018-2028-7.

Cobb, R. J. (2001). Attachment security and marital satisfaction: The role of positive perceptions and social support. *Personality and Social Psychology Bulletin, 27*(9), 1131-1143.

Cohen, C. R., Chartrand, J. M., & Jowdy, D. P. (1995). Relationships between career indecision subtypes and ego identity development. *Journal of Counseling Psychology, 42*(4), 440–447. https://doi.org/10.1037/0022-0167.42.4.440.

Cohen, L., Manion, L., & Morrison, K. R. B. (2004). *A guide to teaching practice* (5th ed.). Routledge.

Cohen, L., Manion, L., Morrison, K. (2000). *Research methods in education*. Routledge. https://doi.org/10.4324/9780203224342.

Connolly, J. J., & Viswesvaran, C. (2000). The role of affectivity in job satisfaction: A meta-analysis. *Personality and Individual Differences, 29*, 265-281.

Connolly, P. (2003). *Ethical principles for research vulnerable groups*. Ulster University Press.

Converse, J. M., & Presser, S. (1986). *Survey questions: Handcrafting the standardized questionnaire*. Sage Publications.

Corrigal, E. A., & Konrad, A. M. (2007). Gender role attitudes and careers: A longitudinal study. *Sex Roles, 56*(11), 847-855.

Cosgrove, P. B. (2020). Implications of mixing methods. *Applied Social Science Approaches to Mixed Methods Research, 10*, 1-24.

Costa, P. T., & McCrae, R. R. (1989). *The NEO PI/FFI manual supplement*. Psychological Assessment Resources.

Costa, P. T., & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO PI-R) and NEO Five-Factor Inventory (NEO-FFI).* Psychological Assessment Resources.

Costa, P. T., Jr., & McCrae, R. R. (1985). Concurrent validation after 20 years: Implications of personality stability for its assessment. In J. N. Butcher & C. D. Spielberger (Eds.), *Advances in personality assessment* (Vol. 4, pp. 31-54). Erlbaum.

Costa, P. T., Jr., & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual*. Psychological Assessment Resources.

Craik, T. A., & Salthouse, T. A. (1992). *Reasoning and spatial abilities*. Lawrence Erlbaum Associates, Inc.

Creed, P. A., & Patton, W. A. (2003). Predicting two components of career maturity in school-based adolescents. *Journal of Career Development, 29*(4), 112-154.

Creed, P. A., & Yin, W. O. (2006). Reliability and validity of a Chinese version of the career decision-making difficulties questionnaire. *International Journal for Educational and Vocational Guidance, 6,* 47-63.

Creed, P. A., Patton, W., & Prideaux, L. A. (2007). Predicting change over time in career planning and career exploration for high school students. *Journal of Adolescence, 30*(3), 377–392.

Creed, P., Patton, W., & Prideaux, L. A. (2006). Causal relationship between career indecision and career decision-making self-efficacy. *Journal of Career Development, 33*, 1, 47-65.

Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd ed.). Sage Publications, Inc.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Sage Publications, Inc.

Creswell, J. W. (2013). *Qualitative inquiry & research design: Choosing among five approaches* (3rd ed.). Sage Publications, Inc.

Crites, J. O. (1971). *The maturity of vocational attitudes in adolescence*. American Personnel and Guidance Association.

Crites, J. O. (1981). *Career counselling: Models, methods, and materials.* McGraw-Hill.

Crites, J.O. (1974). *The career maturity inventory*. McGraw-Hill Book Company.

Crossman, A. (2013). *Ideographic and nomothetic.* Retrieved on September, 25, 2019 from: http://sociology.about.com/od/I_Index/g/Ideographic-Nomothetic.

Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. SAGE Publications Inc.

Dalal, R. S., & Brooks, M. E. (2014). Individual differences in decision-making skill and style. In S. Highhouse, R. S. Dalal, & E. Salas (Eds.), *SIOP organizational frontiers series: Judgment and decision-making at work* (p. 80–101). Routledge/Taylor & Francis Group.

de Acedo Lizárraga, M. L. S., de Acedo Baquedano, M. T. S., & Cardelle-Elawar, M. (2007). Factors that affect decision-making: Gender and age differences. *International Journal of Psychology & Psychological Therapy, 7*(3), 381–391.

De Raad, B. (2000). *The big five personality factors: The psycholexical approach to personality.* Hogrefe & Huber Publishers.

De Raaf, S., Dowie, M., & Vincent, C. (2009). *Improving career decision-making of young workers: Design of a randomized experiment.* Social Research and Demonstration Corporation, February: 1-20.

Denscombe, M. (2008). Communities of practice: A research paradigm for the mixed methods approach. *Journal of Mixed Methods Research, 2*(3), 270-283.

Denzin, N. K., & Lincoln, Y. S. (1994). *Handbook of qualitative research*. Sage Publications, Inc.

Di Fabio, A., & Palazzeschi, L. (2009). Emotional intelligence, personality traits and career decision difficulties. *International Journal for Educational and Vocational Guidance, 9*(2), 135-146.

Di Fabio, A., Palazzeschi, L., Asulin-Peretz, L., & Gati, I. (2013). Career indecision versus indecisiveness: Associations with personality traits and emotional intelligence. *Journal of Career Assessment, 21,* 42–56.

Di Fabio, A., Palazzeschi, L., Levin, N., & Gati, I. (2014). The role of personality in the career decision-making difficulties of Italian young adults. *Journal of Career Assessment, 23*(2), 281-293.

Dickson, V. V., Lee, C., & Riegel, B. (2011). A mixed methods study of symptom perception in patients with chronic heart failure. *Heart Lung, 47*(2), 107–114

Dror, I. E., Katona, M., & Mungur, K. (1998). Age differences in decision-making: To take a risk or not? *Gerontology, 44*(2), 67–71.

Du Toit, R., & De Bruin, G. (2002). The structural validity of Holland's R-I-A-S-E-C model of vocational personality types for young black South African men and women. *Journal of Assessment, 10*(1), 62-77.

Ehigbor, B., & Akinlosotu, T. N. (2016). Parents' occupation as correlate of students' career aspiration in public secondary schools in Ekpoma Metropolis. *International Journal of Arts and Humanities*, *5*(3), 197-212.

Ellis, A. (1962). *Reason and emotion in psychotherapy.* Lyle Stuart.

Enright, M. S. (1996). The relationship between disability status, career beliefs, and career indecision. *Rehabilitation Counselling Bulletin, 40*(2), 134-153

Evans, J. G., & Dirks, S. J. (2001). Dental aptitude test as predictors of performance over four years of dental school: Analysis and interpretation. *Journal of Dental Education, 65*(8), 74-82.

Everitt, B., & Hothorn, T. (2011). *An introduction to applied multivariate analysis with R.* Springer.

Eyo, M. B., & Edet, P. B. (2011). Gender and occupational preferences among senior high school students in Cross River State, Nigeria. *An International Multi-Disciplinary Journal, 5*(1), 327-341.

Eysenck, H. J. (1953). *The structure of human personality*. New York. John Wiley

Fabea, I. B. (2012). *Factors that influence the career choices of university of Cape Coast students*. Department of Educational Foundation.

Fabunmi, J., & Adedayo, J. (2017). Adolescents' gender and age as correlates of career choice among secondary school students in Southwest Nigeria. *Advances in Social Sciences Research Journal, 4(4*), *157-162*

Favara, M. (2012). *The cost of acting "Girly": Gender stereotypes and educational choices.* Working paper series n.36 – May, Uni-Credit & Universities

Feilzer, M. Y. (2010). Doing mixed methods research pragmatically: Implications for the rediscovery of pragmatism as a research paradigm. *Journal of Mixed Methods Research*, *4*(1), 6–16.

Feldt, R. C., & Woelfel, C. (2009). Five-factor personality domains, self-efficacy, career outcome expectations, and career indecision. *College Student Journal, 43*(2), 429-438.

Field, A. (2005). Reliability analysis. In Field, A. (ed.), *Discovering statistics using SPSS* (2nd ed.). Sage Publications, Inc.

Field, A. (2009). *Discovering statistics using SPSS*. SAGE Publications Ltd.

Fitzgerald, L. F., & Crites, J. O. (1980). Toward a career psychology of women: What do we know? What do we need to know? *Journal of Counselling Psychology, 27*(1), 44–62.

Fong, W. (2012). The role of personality in the career choice commitment of university undergraduate students in Hong Kong. Published Doctoral thesis 2012 University of Newcastle Australia.

Foss, C. J., & Slaney, R. B. (1986). Increasing non-traditional career choices in women: Relation of attitudes toward women and response to a career intervention. *Journal of Vocational Behaviour, 28,* 191-202.

Fouad, N., Cotter, E. W., & Kantamneni, N. (2009). The effectiveness of a career decision-making course. *Journal of Career Assessment*, *17,* 338-347.

Fraenkel, J. R., & Wallen, N. E. (2009). *How to design and evaluate research in education* (7th ed.). McGraw-Hill.

Freshwater, D. (2007). Reading mixed methods research: Contexts for criticism. *Journal of Mixed Methods Research, 1*(2), 134–146.

Fukuyama, F. (1995). *Trust: Social virtues and the creation of prosperity*. Free Press.

Fuqua, D. R., Seaworth, T. B., & Newman, J. L. (1987). The relationship of career indecision and anxiety: A multivariate examination. *Journal of Vocational Behavior, 30,* 175-186.

Gadassi, *R., & Gati, I. (2009*). The effect of gender stereotypes on explicit and implicit career preferences. *The Counseling Psychologist, 37*(6), *902*–922.

Gardner, W., Scherer, D., & Tester, M. (1989). Asserting scientific authority: Cognitive development and adolescent legal rights. *American Psychologist, 44*(6), 895-902. https://doi.org/10.1037/0003-066X.44.6.895

Gati, I., & Asher, I. (2001). The career development quarterly. Pre-screening, in-depth exploration, and choice. *From Decision Theory to Career Counseling Practice, 50*(2), 98-192

Gati, I., & Asulin-Peretz, L. (2011). Internet-based self-help career assessments and interventions: Challenges and implications for evidence-based career counseling. *Journal of Career Assessment, 19*(3), 259-273.

Gati, I., & Levin, N. (2014). Counselling for career decision-making difficulties: Measures and methods. *The Career Development Quarterly, 62*(2), 98-113.

Gati, I., & Saka, N. (2001). High school students' career-related decision-making difficulties. *Journal of Counseling & Development, 79*(3), 331–340.

Gati, I., Gadassi, R., Saka, N., Hadadi, Y., Ansenberg, N., Friedmann, R., & Asulin-Peretz, L. (2011). Emotional and personality-related aspects of career decision-making difficulties: Facets of career indecisiveness. *Journal of Career Assessment, 19*(1), 3–20.

Gati, I., Krausz, M., & Osipow, S. H. (1996). A taxonomy of difficulties in career decision-making. *Journal of Counselling Psychology, 43*, 510–526.

Gati, I., Osipow, S. H., Krausz, M., & Saka, N. (2000). Validity of the career decision-making difficulty questionnaire: Counselee versus career counsellor perceptions. *Journal of Vocational Behaviour, 56*, 99–113.

Ghana Statistical Service (2014). *Demographic and health survey*. GSS.

Gianakos, I. (1999). Patterns of career choice and career decision-making self-efficacy. *Journal of Vocational Behaviour, 54*(2), 244–258. https://doi.org/10.1006/jvbe.1998.1668

Gianokos, L. J. (1999). School based experiences as contributors to career decision-making: Findings from a cross-sectional survey of high-school students. *Aust. Educ. Res. 42*, 179-199.

Gill, S., Stockard, J., Johnson, M., & Williams, S. (1987). Measuring gender differences: The expressive dimension and critique of androgyny scales. *Sex Roles: A Journal of Research, 17*(7-8), 375–400.

Ginter, E. J., & Brown, S. (1996). Lifestyle assessment and planning utilizing Supers C-DAC model and a life-skills model. Paper presented at the 3rd International Congress on Integrative and Eclectic Psychotherapy, Huatulco, Mexico

Golafshani, N. (2003). Understanding reliability and validity in qualitative research. *The Qualitative Report*, *8*(4), 597-607.

Goldberg, L. R. (1981). Language and individual differences: The search for universals in personality lexicons. In L. Wheeler (Ed.), *Review of personality and social psychology* (pp.141-165). Sage Publications, Inc.

Goldberg, L. R. (1990). An alternative description of personality: The Big-Five factor structure. *Journal of Personality and Social Psychology, 59*, 1216-1229.

Goldberg, L. R. (1993). The structure of phenotypic personality traits. *American Psychologist, 48*(1), 26-34.

Gosling, S. D., Rentfrow, P. J., & Swann, W. B., Jr. (2003). A very brief measure of the Big-Five personality domains. *Journal of Research in Personality, 37*(6), 504–528.

Gottfredson, L. S. (1981). Circumscription and compromise: A developmental theory of occupational aspirations [Monograph]. *Journal of Counseling Psychology, 28, 54-79.*

Gottfredson, L. S. (2002). Gottfredson‘s theory of circumscription, compromise, and self-creation. In D. Brown (Ed.), *Career choice and development* (4th ed., pp. 85–148). Jossey-Bass.

Gray, D. E. (2009). *Doing research in the real world* (2nd ed.). Sage Publications, Inc.

Graziano, G., & Tobin, R. M. (2009). *Agreeableness*. The Guilford Press.

Griff, N. (1987). Meeting the career development needs of returning students. *Journal of College Student Personnel, 28*, 469.470.

Guan, Y., Wang, F., Liu, H., Ji, Y., Jia, X., & Fang, Z. (2015). Career-specific parental behaviors, career exploration and career adaptability: A three-wave investigation among Chinese undergraduates. *J. Vocat. Behav., 86*, 95–103.

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 105–117). Sage Publications, Inc.

Guerra, A. L., & Braungart-Rieker, J. M. (1999). Predicting career indecision in college students: The roles of identity formation and parental relationship factors. *Career Development Quarterly, 47,* 255-266.

Guest, G., MacQueen, K. M., & Namey, E. E. (2012). *Applied thematic analysis*. Sage Publications, Inc.

Gunkel, M., Schlaegel, C., Langella, I. M., & Peluchette, J. V. (2010). Personality and career decisiveness: An international empirical comparison of business students' career planning. *Personnel Review, 39*(4), 503-524.

Guranda, M. (2013). The importance of adult`s personality traits and professional interests in career decision-making. *Procedia-Social and Behavioural Sciences, 136*, 522 – 526.

Guthrie, W. R., & Herman, A. (1982). Vocational maturity and its relationship to vocational choice. *Journal of Vocational Behaviour, 21*, 196-205.

Hackett, G., & Betz, N. E. (1981). A self-efficacy approach to the career development of women. *Journal of Vocational Behaviour, 18*, 326-389.

Hackett, G., & Byars, A. M. (1996). Social cognitive theory and the career development of African American women. *The Career Development Quarterly, 44*(4), 322–340.

Hall, C. C., Ariss, L., & Todorov, A. (2007). The illusion of knowledge: When more information reduces accuracy and increases confidence. *Organizational Behavior and Human Decision Processes, 103*(2), 277–290.

Hamer, R. J., & Bruch, M. A. (1997). Personality factors and inhibited career development: testing the unique contribution of shyness. *Journal of Vocational Behavior, 50*(3), 382-400.

Hampton, N. Z. (2006). A psychometric evaluation of the career self-efficacy scale-short form in Chinese school students. *Journal of Career Development, 33*(2), 142-155.

Hansen, L. S. (1976). Career development education: Humanizing focus for educators. *Journal of Career Education*, *3*(1), 42–48.

Harmon, L. W., & Meara, N. M. (1994). Contemporary development in women's career counselling. themes of the past puzzles for the future. In W. B. Walsh & S. H. Osipow (Eds.), *Counselling for women: Contemporary topics in vocational psychology* (pp355-367). Hillsdale, NJ: Erlbaum.

Hartung, P. J., Porfeli, E. J., & Vondracek, F. W. (2005). Child vocational development: A review and reconsideration. *Journal of Vocational Behavior, 66*(3), 385–419. https://doi.org/10.1016/j.jvb.2004.05.006.

Hatala, R., & Case, S. M. (2000). Examining the influence of gender on medical students' decision-making. *Journal of Women's Health, Gender Based Medicine, 9*(6), 617-623.

Hawkins, R., & Power, B. O. (1999). Perceptions on the role of guidance and counselling programme on Kenyan Secondary School students' career decision-making. *Journal of Education and Social Sciences, 4*(6), 301.

Healy, C. C. (1991). Exploring a path linking anxiety, career maturity, grade point average, and life satisfaction in a community college population. *Journal of College Student Development, 32*, 207-211.

Healy, C. C., & Mourton, D. L. (1987). The relationship of career exploration, college jobs, and grade point average. *Journal of College Student Personnel, 28*, 28-34.

Healy, C. C., & Reilly, K. C. (1989). Career needs of community college students: Implications for services and theory. *Journal of College Student Development, 30,* 541-545.

Healy, C. C., O.Shea, D., & Crook, R. H. (1985). Relation of career attitudes to age and career progress during college. *Journal of Counselling Psychology, 32*, 239-244.

Hechtlinger, S., Levin, N., & Gati, I. (2017). Dysfunctional career decision-making beliefs: A multidimensional model and measure. *Journal of Career Assessment, 27*(2), 209-229.

Henley, N. M., & Kramarae, C. (1991). Gender, power, and miscommunication. In N. Coupland, H. Giles, & J. M. Wiemann (Eds.), *Miscommunication and problematic talk* (pp. 18–43). Sage Publications, Inc.

Heppner, M. J., Fuller, B. E., & Multon, K. D. (1998). Adults in involuntary career transition: An analysis of the relationship between the psychological and career domains. *Journal of Career Assessment, 6*(3), 329–346.

Heppner, P. P., Witty, T. E., & Dixon, W. A. (2004). Problem-solving appraisal and human adjustment: A review of 20 years of research using the problem solving inventory. *The Counseling Psychologist, 32*(3), 344–428.

Herr, E. L. (2013). Trends in the history of vocational guidance. *The Career Development Quarterly, 61*(3), 228-264.

Herr, E. L., & Cramer, S. H. (1979). *Career guidance through the life span. Systematic approaches.* Little & Brown Company.

Herr, E. L., Rayman, J. R., & Garis J. W. (1993). *Handbook for the college and university career center*. Greenwood Press.

Hesketh, B., Elmslie, S., & Kaldor, W. (1990) Career compromise: An alternative account to Gottfredson's theory. *Journal of Counseling Psychology, 37*(1), 49–56.

Hidayat, M., & Alsa, A. (2018). The effect of "PLANS" Training towards career maturity of senior high school students. *Journal of Educational, Health and Community Psychology, 7*(2), 160-175.

Hirschi, A., Niles, S. G., & Akos, P. (2011). Engagement in adolescent career preparation: Social support, personality and the development of choice decidedness and congruence. *Journal of Adolescence*, *34*(1), 173-182.

Hmileski, K. M., & Baron, R. A. (2008). Entrepreneurs' optimism and new venture performance: A social cognitive perspective. *Academy of Management Journal, 52*(3), 473–488.

Hoff, K. A., Song, Q. C., Einarsdóttir, S., Briley, D. A., & Rounds, J. (2020). Developmental structure of personality and interests: A four-wave, 8-year longitudinal study. *Journal of Personality and Social Psychology, 118*(5), 1044–1064.

Hoffmann J. P., & Shafer K. (2015). *Linear regression analysis: Applications and assumptions* (2nd ed.). NASW Press.

Hogan, J., & Ones, B. (1992). Using theory to evaluate personality and job-performance relations. *Journal of Applied Psychology, 88*(1), 100-12

Holland, J. L. (1959). A theory of vocational choice. *Journal of Counseling Psychology, 6*(1), 35–45. https://doi.org/10.1037/h0040767

Holland, J. L., Johnston, J. A., Asama, N. F., & Polys, S. M. (1993). Validating and using the career beliefs inventory. *Journal of Career Development, 19*(4), 233-244.

Howard, K. A. S., & Walsh, M. E. (2011). Children's conceptions of career choice and attainment: Model development. *Journal of Career Development*, *38*(3), 256–271.

Howard, P. J., & Howard, J. M. (1995). *The Big Five Quick Start: An introduction to the five-factor model of personality for human resource professionals.* Center for Applied Cognitive Studies.

Hurtz, G. M., & Donovan, J. J. (2000). Personality and job performance: The Big Five revisited. *Journal of Applied Psychology, 85*(6), 869–879

Institute of Statistical, Social and Economic Research (ISSER) (2010). ISSER annual report. Retrieved from: http://isser.edu.gh/images/Publication_files/ISSER_Annual_Report.pdf

International Labour Organisation (2018). *World employment social outlook: Trends 2018*. www.ilo.org.

International Labour Organisation [ILO] (2009). *Key Indicators of the Labour Market (KILM).* International Labour Organisation, www.ilo.org

International Labour Organisation [ILO] (2010). *Global Employment Trends (GET).* International Labour Organisation, www.ilo.org

International Labour Organisation [ILO] (2014). *Global Employment Trends (GET*). International Labour Organisation, www.ilo.org

ISSER (2010). *Global economic performance and Ghana's economic performance*. Institute of Statistical, Social and Economic Research. Retrieved from www.isser.ug.edu.gh.

Jackson, C., & Lawty-Jones, M. (1996). Explaining the overlap between personality and learning style. *Personality and Individual Differences, 20*(3), 293–300

Jackson, E. (2013). Choosing a methodology: Philosophical under pinning. *Practitioner Research in Higher Education, 7*(1), 49-62.

Jackson, M. A., & Fordham, D. (2006). *Career development interventions for social justice: addressing needs across the lifespan in educational, community, and employment contexts.* Rowman & Littlefield Publisher.

Jaenscha, H., Hirsch, O. P., & Freund, U. (2015). Increasing vocational information seeking behaviors of high school students. (Doctoral dissertation, University of Maryland, 1972). *Dissertation Abstracts International, 34*, 2311A-2312A.

Jamabo, T., Enebeli, I., & Ester, N. (2012). Gender differences in the vocational aspirations of secondary school students in Post Harcourt. *African Journal of Education and technology, 2*(1), 90-95.

Jin, L., Watkins, D., & Yuen, M. (2009). Personality, career decision self-efficacy and commitment to the career choices process among Chinese graduate students. *Journal of Vocational Behavior, 74*(1), 47–52.

John, O. P. (1990). The "Big Five" factor taxonomy: Dimensions of personality in the natural language and in questionnaires. In L. A. Pervin (Ed.), *Handbook of personality: Theory and research* (p. 66–100). The Guilford Press.

John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative big five trait taxonomy. *Handbook of personality: Theory and Research, 3*, 114-158.

Johnson, R. B., Onwuegbuzie, A. J., & Turner, L. A. (2007). Toward a definition of mixed methods research. *Journal of Mixed Methods Research*, *1*(2), 112–133

Jones, A. C., Courts, F. J., Sandow, P. L., & Watson, R. E. (1997). Myers-Briggs type indicator and dental school performance. *Journal of Dental Education*, *61*, 928-933.

Judge, T. A., Higgins, C. A., Thoresen, C. J., & Barrick, M. R. (1999). The big five personality traits, general mental ability, and career success across the life span. *Personnel Psychology, 52*(3), 621- 652.

Judge, T. A., Thoresen, C. J., Bono, J. E., & Patton, G. K. (2001). The job satisfaction–job performance relationship: A qualitative and quantitative review. *Psychological Bulletin, 127*(3), 376–407.

Kanfer, R., Wanberg, C. R., & Kantrowitz, T. M. (2001). Job search and employment: A personality–motivational analysis and meta-analytic review. *Journal of Applied Psychology, 86*(5), 837-855.

Kaplan, D. M., & Brown, D. (1987). The role of anxiety in career indecisiveness. *Career Development Quarterly, 36*, 148-162.

Katic, I., Ivanisevic, A., Grubic-Nesic, L., Penezić, N. (2017). Effects of socio-demographic characteristics and personality traits on career development. The International *Journal of Aging and Human Development, 87*(4), 009141501774300 +DOI: 10.1177/0091415017743008

Kazuyuki, M., & Kuo-lin, W. (2006). Illusion of career development theories for the departure of developing a demonstrative career development theory. *The Economic Journal of Takasaki City University of Economics, 49*(2), 17-30.

Keller, B. K. (2004). *Parental behaviors that influence adolescents' career development*. National Career Development Association.

Keller, B. K., & Whiston, S. C. (2008). The role of parental influences on young adolescents' career development. *Journal of Career Assessment, 16*(2), 198-217.

Kelly, K. R., & Lee, W.-C. (2005). Relation of psychological type to career indecision among university students. *Journal of Psychological Type, 64*(2), 11-20

Kemper, E. A., Stringfield, S., & Teddlie, C. (2003). Mixed methods sampling strategies in social science research. In A. Tashakkori & C. Teddlie (eds.), *Handbook of mixed methods in social and behavioral research* (pp. 273-296). Sage Publications, Inc.

Kenny, M. E., Blustein, D. L., Chaves, A., Grossman, J., & Gallagher, L. A. (2003). The role of perceived barriers and relational support in the educational and vocational lives or urban high school students. *Journal of Counseling Psychology, 50*, 142-155.

Kenny, M. E., Waldo, M., Warter, E., & Barton, K. (2002). School-linked prevention: Theory, science and practice for enhancing the lives of children and youth. *The Counselling Psychologist, 30,* 726-748.

Kiani, S. (2010). Personality and vocational interests in high school students (Unpublished Doctoral Thesis). National Institute of Psychology, Islamabad Pakistan.

King, L. A., Walker, L. M., & Broyles, S. J. (1996). Creativity and the five-factor model. *Journal of Research in Personality, 30*(2), 189-203.

King, S. T. (1990). The relationship between career maturity and work commitment in a sample of Australian high school students. *Journal of Career Development, 29*(2), 69-85.

Kisely, S., & Kendall, E. (2011). Critically appraising qualitative research: a guide for clinicians more familiar with quantitative techniques. *Australasian Psychiatry, 19*(4), 364-367.

Klapwijk, R., & Rommes, E. (2009). Career orientation of secondary school students in the Netherlands. *International Journal of Technology Des Education, 19*, 403-418.

Kleiman, T., Gati, I., Peterson, G., Sampson, J., Reardon, R., & Lenz, J. (2004). Dysfunctional thinking and difficulties in career decision-making. *Journal of Career Assessment*, *12*, 312-331. doi:10.1177/1069072704266673

Kline, R. B. (1998). *Principles and practice of structural equation modelling*. The Guilford Press.

Koen, J., Ute-Christine Klehe U-C., Annelies, E. M., Van Vianen, A. E. M., Zikic, J., & Nauta, A. (2010). Job-search strategies and reemployment quality the impact of career adaptability. *Journal of Vocational Behavior, 77*(2010), 126–139

Korkmaz, K. (2015). Factors influencing students‘ career chooses in science and technology: Implications for high school science curricula. *Procedia - Social and Behavioral Sciences, 197*, 966-972

Koro-Ljungberg, M. (2010). Validity, responsibility, and aporia. *Qualitative Inquiry, 16*(8), 603-610.

Korstjens, I., & Moser, A. (2017). Series: Practical guidance to qualitative research. Part 2: Context, research questions and designs. *European Journal of General Practice, 23*(1), 274-279, DOI: 10.1080/13814788.2017.1375090

Kothari, C. R. (2004). *Research methodology, research, and techniques*. New Age International Publishers.

Kracke, B. (2002). The role of personality, parents and peers in adolescents career exploration. *Journal of Adolescence, 25*(1), 19-30.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, *12*, 12-33.

Krisher, H., & Shechtman, Z. (2015). Factors in the adjustment and academic achievement of college students with learning disabilities in Israel. *Semantic Scholar DOI*:10.5430/IRHE.V1N1P125 Corpus ID: 55478556

Krumboltz J. D., Folley P. F., Cotter E. W. (2013). Applying the happenstance learning theory to involuntary career transitions. *The Career Development Quarterly, 61*(1), 15-44.

Krumboltz, J. D. (1979). A social learning theory of career decision-making. Revised and reprinted in A. M. Mitchell, G. B. Jones, and J. D. Krumboltz (Eds.), *Social learning and career decision-making* (pp. 19-49). Cranston, RI: Carroll Press.

Krumboltz, J. D. (1983). *Private rules in career decision-making.* Columbus, OH: National Centre for Research in Vocational Education, Ohio State University.

Krumboltz, J. D. (1988). *Career beliefs inventory.* Palo Alto, CA: Consulting Psychologists Press.

Krumboltz, J. D. (1991). *Manual for the career beliefs inventory*. Palo Alto, CA: Consulting Psychologist Press.

Krumboltz, J. D. (1994a). Improving career development theory from a social learning theory perspective. In M. L. Savikas & R. W. Lent (Eds.), *Convergence in career development theories: Implications for science and practice* (pp. 9–31). CPP Books.

Krumboltz, J. D. (1996). Krumboltz's learning theory of career choice and counseling. In D. Brown & L. Brooks (Eds.), *Career choice and development* (3rd ed.). Jossey Bass.

Krumboltz, J. D. (1999). *Career beliefs inventory: Applications and technical guide.* California: Consulting Psychologists Press, Inc.

Krumboltz, J. D. (2009). The happenstance learning theory. *Journal of Career Assessment, 17*(2), 135-154.

Kuhn, T. S. (1962). *The structure of scientific revolutions*. University of Chicago Press.

Kunnen, E. S. (2013). The effects of career choice guidance on identity development. *Educational Research International, 90*, 17-18. doi: 10.1155/2013/901718

Laidra, K., Pullmann, H., & Allik, J. (2007). Personality and intelligence as predictors of academic achievement: A cross-sectional study from elementary to secondary school. *Personality and Individual Differences, 42*(2007), 441-451.

Lancaster, B. P., Rudolph, C. E., Perkins, T. S., & Patten, T. G. (1999). The reliability and validity of the career decision difficulties questionnaire. *Journal of Career Assessment, 7*(4), 393–413. https://doi.org/10.1177/106907279900700405

Langowitz, N., Allen, I., & Godwyn, M. (2013). Early-career outcomes and gender: Can educational interventions make a difference? *Gender in Management: An International Journal, 28,* 110-120.

Larson, L. M., & Heppner, P. P. (1985). The relationship of problem-solving appraisal to career decision and indecision. *Journal of Vocational Behavior, 26*(1), 55–65.

Larson, L. M., Rottinghaus, P. J., & Borgen, F. H. (2002). Meta-analyses of Big Six interests and Big Five personality variables. *Journal of Vocational Behavior, 61*, 217–239.

Larson, L. M., Suzuki, L. A., Gillespie, K. N., Potenza, M. T., Bechtel, M. A., & Toulouse, A. L. (1992). Development and validation of the counselling self-estimate inventory. *Journal of Counselling Psychology, 39*, 105–120.

Laura Parks-Leduc, L., Feldman, G., & Bardi, A. (2014). Personality traits and Personal values: A meta-analysis. *Personality and Social Psychology Review, 19*(1) 3–29.

Lawer, P. (2007). A multilevel study of students‘ motivations of studying accounting. *Career Development International, 54*(1), 50-64.

Leal-Muniz, V., & Constantine, M. (2005). Predictors of the career commitment process in Mexican American College Students. *Journal of Career Assessment, 13*, 204-215.

Lee, B. (2001). Career development during childhood and adolescence. *Literature Review in New Directions for Youth Development, 134*, 11-22,

Lee, K., & Ashton, M. C. (2004). Honesty-humility, the big five, and the five-factor model. *Journal of Personality, 73*(5), 1321-55.

Lee, M. D., Lirio, P., Karakas, F., MacDermid, S. M., Buck, M. L., & Kossek, E. E. (2006). Exploring career and personal outcomes and the meaning of career success among part-time professionals in organizations. In R. J. Burke (ed.), *Research companion to work hours and work addiction* (pp. 284–309). Edward Elgar.

Lent, R. W., & Brown, S. D. (2013). Social cognitive model of career self-management: Toward a unifying view of adaptive career behaviour across the life span. *Journal of Counselling Psychology, 60*(4), 557-568.

Lent, R. W., Brown, S. D., & Hackett, G. (1996). Career development from a social cognitive perspective. In D. Brown & L. Brooks (Eds.), *Career choice and development* (pp. 373-421). Jossey-Bass Inc.

Leong & A. Barak (Eds.), (2001). *Contemporary models in vocational psychology: A Vol. in honor of Samuel H. Osipow* (p. 207–230). Lawrence Erlbaum Associates Publishers.

Leong, F. T. L., & Chervinko, S. (1996). Construct validity of career indecision: Negative personality traits as predictors of career indecision. *Journal of Career Assessment, 4,* 315-329.

LePine, J. A., Colquitt, J. A., & Erez, A. (2000). Adaptability to changing task contexts: Effects of general cognitive ability, conscientiousness, and openness to experience. *Personnel Psychology, 53*, 563–593.

Lero Vie, M. (2013). How universal is the big five? Testing the five-factor model of personality vibration among forager-farmers in the Bolivian Amazon. *Journal of Personality and Social Psychology*. [Online only] Doi:10.1037/a0030841 .

Leu, J. J. (2000). A study of investigation between career belief and career barriers in college of physical education students (original in Chinese) (Unpublished thesis). National Taiwan Physical Education College, Taipei, Taiwan.

Leung, S. A. (2008). The big five career theories. In J. A. Athanasou & R.V. Esbroeck (Eds.), *International handbook of career guidance* (pp.115-132). Springer.

Levinson, E. M., Ohler, D. L., Caswell. S., & Kiewra, K. (2011). Six approaches to the assessment of career maturity. *Journal of Counselling and Development, 76*(4), 475-48.

Lewis, R. A., & Gilhousen, M. R. (1981). Myths of career development: A cognitive approach to vocational counseling. *Personnel & Guidance Journal, 59*(5), 296–299. https://doi.org/10.1002/j.2164-4918.1981.tb00553.x

Li, Y. I., Hazler, R. J., & Trusty, J. (2017). Relational self-construal as a moderator of social support in career decision-making. *Wiley Online Liabry, 65*(1), 44-56.

Lincoln, Y., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage Publications, Inc.

Lipshits-Braziler, Y., Gati, I., & Tatar, M. (2015). Strategies for coping with career indecision: Concurrent and predictive validity. *Journal of Vocational Behavior, 91,* 170-179.

Lipshits-Braziler, Y., Gati, I., & Tatar, M. (2016). Strategies for coping with career indecision. *Journal of Career Assessment, 24*(1), 42-66.

Liu, Y. C. (2003). Relationship between career resilience and career beliefs of employees in Taiwan (Unpublished Doctoral Dissertation). Texas A&M University. Retrieved from http://repository.tamu.edu/bitstream/handle/1969.1/474/etd-tamu-2003C-2003091022-Liu-1.pdf?sequence=1.

Liu, Y. H. (1997). An investigation on the relationships among career beliefs, career self-efficacy, and career development of elementary school teachers (original in Chinese) (Unpublished thesis), National Taipei Normal College, Taipei, Taiwan.

Locke, E. A., & Latham, G. P. (2006). New directions in goal-setting theory. *Current Directions in Psychological Science, 15*(5), 265–268.

Lorch, R. F., & Myers, J. L. (1990). Regression analyses of repeated measures data in cognitive research. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 16*(1), 149–157. https://doi.org/10.1037/0278-7393.16.1.149

Lounsburry, J. W., Sundstrom. E., Loveland, J. M. & Gibson, L. W (2003). Intelligence, ‗Big Five'' personality traits, and work drive as predictors of course grade. *Personality and Individual Differences, 35*, 1231-1239.

Lounsbury, J. W, Sundstrom, E, Levy, J. J & Gibson, J, W (2014). Distinctive Personality Traits of Information Technology Professionals. *Computer and Information Science, 7*(3), 38-48.

Lounsbury, J. W., Foster, N., Carmody, P. C., Kim, J. Y., Gibson, L. W., & Drost, A. W. (2012). Key personality traits and career satisfaction of customer service workers. *Managing Service Quality, 22*(5), 517-536.

Lounsbury, J. W., Gibson, L. W., Hamrick, F. L. (2004). The development of a personological measure of work drive. *Journal of Business and Psychology, 18*, 347-371.

Lounsbury, J. W., Hutchens, T., & Loveland, J. M. (2005). An investigation of big five personality traits and career decidedness among early and middle adolescents. *Journal of Career Assessment, 13*(1), 25–39.

Lounsbury, J. W., Tatum, H. E., Chambers, W., Owens, K., & Gibson, L. W. (1999). An investigation of career decidedness in relation to ―Big Five" personality constructs and life satisfaction. *College Student Journal, 33*(4), 646-652

Low, M. B., & MacMillan, I. C. (1988). Entrepreneurship: Past research and future challenges. *Journal of Management*, *14*(2), 139–161.

Ludwikowski, G. J. J., Vogel, K. A. O., & Armstrong, M. (2009). Factors affecting the decision of freshmen students in pursuing hospitality and tourism programs in Lyceum of the Philippines University-Laguna: Basis for enhancement. *LPU–Laguna Journal of International Tourism and Hospitality Management, 3*(1), 23-48.

Lunneborg, C. E. & Lunneborg, P. W. (1975). Factor structure of the Vocational interest models of Roe and Holland. *Journal of Vocational Behavior, 7*(3), 313-326. DOI: 10.1016/0001-8791(75)90073-1

Lunney, C. A. M. (1993). Assessing career expectations and belief systems of liberal arts graduates. *Dissertation Abstracts International, 54*(5), 16-81.

Lusk, S. & Cook, D. (2009). Enhancing career exploration, decision-making, and problem solving of adolescent girls with disabilities. *Journal of Vocational Rehabilitation, 31*(3), 145-153.

Luzzo, D. A. (1993a). Career decision-making differences between traditional and non-traditional college students. *Journal of Career Development, 20*, 113.120.

Luzzo, D. A. (1993b). Predicting the career maturity of undergraduates: A comparison of personal, educational, and psychological factors. *Journal of College Student Development, 34,* 271-275.

Luzzo, D. A. (1995). Gender differences in college students' career maturity and perceived barriers in career development. *Journal of Counselling & Development, 73*, 319–322.

Luzzo, D. A. (1997). *The assessment of attributions for career decision-making: Theory*. Authors Choice Publications.

Luzzo, D. A., & Day, S. G. (1999). A psychometric evaluation of the career decision-making self-efficacy scale. *Journal of Counseling and Development, 74*, 276-279.

Luzzo, D. A., & McWhirter, E. H. (2001). Sex and ethnic differences in the perception of educational and career-related barriers and levels of coping efficacy. *Journal of Counselling & Development, 79*(1), 61–67.

Luzzo, D. A., Funk, D. P., & Strang, J. (1996). Attributional retraining increases career Decision-making self-efficacy. *Career Development Quarterly, 44*, 378-38

Luzzo, D. A., James, T., & Luna, M. (1996). Effects of attributional retraining on the career beliefs and career exploration behaviour of college students. *Journal of Counselling Psychology, 43,* 415-422.

Madill, A., & Gough, B. (2008). Qualitative research and its place in psychological science. *Psychological Methods, 13*(3), 254–271

Martin, C. L., Wood, C. H., & Little, J. K. (1990). The development of gender stereotype components. *Journal of Child Development*, *61*(6), 40-79.

Martincin, K. M., & Stead, G. B. (2015). Five-factor model and difficulties in career decision-making: A meta-analysis. *Journal of Career Assessment, 23*(1), 3-19.

Matthews, G., Deary, I. J., & Whiteman, M. C. (2005). *Psihologia personalității: trăsături, cauze, consecințe.* Translated by Ilin, D. L., Enăchescu, C. Iași: Editura Polirom.

Mau, W.-C. J. (2001). Assessing career decision-making difficulties: A cross-cultural study. *Journal of Career Assessment, 9*, 353–364.

Mau, W-C. & Bikos, L. (2000). Educational and vocational aspirations of minority and female students: A longitudinal study. *Journal of Counselling and Development, 78*(2). DOI:10.1002/j.1556-6676.2000.tb02577

Mbetse, D. J. (2002). The development of an intervention strategy for career education in Bu shbuckridge. M.Ed dissertation. Pretoria: University of Pretoria

McAdams, D. P., & Pals, J. L. (2006). A new big five: Fundamental principles for an integrative science of personality. *American Psychologists, 3*, 204-217.

McCrae, R. R., & Costa, P. T. (1992). Four ways five factors are basic. *Journal of Personality and Individual Differences*, *13*(6), 653-665.

McCrae, R. R., & Costa, P. T. (2010). *NEO Inventories professional manual: NEO PI-3, NEO FFI-3, NEO PI-R.* Lutz, FL: PAR.

McCrae, R. R., & Costa, P. T., Jr. (1999*). A five-factor theory of personality.* In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (p. 139–153). Guilford Press.

McCrae, R. R., & John, O. P. (1992). An introduction to the five-factor model and its applications. *Journal of Personality, 60*, 175-215.

McCrae, R. R~ & Costa, E T., Jr. (1990). Reinterpreting the Myers Briggs Type Indicator from the perspective of the five-factor model of personality. *Journal of Personality, 57,* 17-40.

McCrae, R., Costa, P., Ostendorf, F., Angleitner, A., Hrebícková, M., Avia, M., Sanz, J., Sánchez-Bernardos, M. L., Ersin, M., Woodfield, R., Saunders, P., Smith, P. (2000). Nature over Nurture: Temperament, Personality, and Life Span Development. *Journal of Personality and Social Psychology, 78*, 173-86.

McKenzie, J. (1989). Neuroticism and academic achievement: The Furneaux factor. *Personality and Individual Differences, 10*, 509 –515.

McKenzie, J., Taghavi-Knosary, M., & Tindell, G. (2000). Neuroticism and academic achievement: The Furneaux factor as a measure of academic rigour. *Personality and Individual Differences, 29*, 3–11.

Mdikana, A. A., Seabi, J., & Rammutla, L. (2009). Gender identity development and career decision-making process among high school learners. *Journal of Psychology in Africa, 19*(4), 569–572.

Meade, A. W., Johnson, E, C., & Braddy, P. W. (2008). Power and sensitivity of alternative fit indices in tests of measurement invariance. *Journal of Applied Psychology, 93,* 568- 592. doi:10.1037/00219010.93.3.568

Meldahl, J. M., & Muchinsky, P. M. (1997). The neurotic dimension of vocational indecision: Gender comparability? *Journal of Career Assessment, 5*, 317–331.

Menard, S. (2011). Standards for standardized logistic regression coefficients. *Social Forces*, *89*, 1409 –1428.

Menard, S. (2011). Standards for standardized logistic regression coefficients. *Social Forces*, *89*, 1409 –1428.

Mertens, D. M. (2012). Transformative mixed methods: addressing inequities. *American Behavioral Scientist*, *56*(6), 802–813.

Metz, A. J., Fouad, N., & Ihle-Helledy, K. (2009). Career aspirations and expectations of college students: Demographic and labor market comparisons. *Journal of Career Assessment, 17*(2), 155–171.

Meyer, B. W., & Winer, J. L. (1993). The career decision scale and neuroticism. *Journal of Career Assessment, 1*(2), 171-180.

Meyer, R. D., Dalal, R. S., Jose, I. J., Hermida, R., Chen, T. R., Vega, R. P., & Khare, V. P. (2014). Measuring job-related situational strength and assessing its interactive effects with personality on voluntary work behavior. *Journal of Management, 40*(4), 1010-1041.

Meyer., H. & . Raich., M. S. (1983). An objective evaluation of a behaviour modeling training program. *Personnel Psychology*, *36*(4), 755-761.

Migunde, Q., Othuon, L., & Mbagaya, C. (2015). Career decision-making status of adolescents in Kisumu Municipality, Kenya Quinter. *Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS) 6*(1), 36-39.

Miles, J. (2008). The impact of a career development programme on career maturity and academic motivation. MA dissertation, Fort Hare University, East London.

Millar, R., & Shevlin, M. (2007). The development and factor structure of a Career Locus of Control Scale for use with school pupils. *Journal of Career Development, 33*, 224-249.

Mitchell, L. K., & Krumboltz, J. D. (1996). Krumboltz's learning theory of career choice and counselling. In D. Brown, L. Brooks and Associates (Eds.), *Career choice and development* (3rd ed.). Jossey Bass.

Mitchell, M. (1993). Situational interest: Its multifaceted structure in the secondary school mathematics classroom. *Journal of Educational Psychology, 85*(3), 424-436.

Mittal, N., Chaudhary, M., & Alavi, S. (2017). Development and validation of teachers mobile learning acceptance scale for higher education teachers. *International Journal of Cyber Behavior, Psychology and Learning*, *7*(1), 76-98.

Moleke, P. (2005). *Finding work: Employment experiences of South African Graduates*. *HSRC Monograph*. HSRC Press.

Morris, J. A., & Feldman, D. C. (1996). The dimensions, antecedents, and consequences of emotional labor. *Academy of Management Review, 21*, 986-1010.

Moshman, D. (1993). Adolescent reasoning and adolescent right. *Human Development, 36,* 27-40.

Moumoula, I. A. (2013). *Les adolescents Africains et leurs projets d'avenir d'avenir* [African teenagers and their future projects]. Paris: L'Harmattan.

Mount, M. K., Murray, R. B., & Steve, M. S. (2005). Higher-order dimensions of the big five personality traits and the big six vocational interest types. *Pers. Psycho., 58,* 447–478.

Mounty, L. H. (1991). Involving nontraditional commuting students in the career planning process at an urban institution. *Journal of Higher Education Management, 6,* 43-48.

Mubiana, P. B. (2010). Career maturity, career knowledge, and self-knowledge among psychology honours students: an exploratory study. Unpublished Masters Dissertation, University of Pretoria, Pretoria.

Multon, K. D., Heppner, M. J., Gysbers, N. C., Zook, C., & Ellis-Kalton, C. A. (2001). Client psychological distress: an important factor in career counselling. *The Career Development Quarterly*, *49*(4), 324-335.

Murry, B. W. (1989). The relationship of irrational/maladaptive beliefs to subtypes of career indecision. *Dissertation Abstracts International, 51*(4), 11-20.

Mutekwe, E., & Modiba, M. (2012). An evaluation of the gender sensitive nature of selected textbooks in the Zimbabwean secondary school curriculum. *Anthropologist*, *14*(4), 365-37.

Mwamwenda, T. S. (2013). Adolescence's gender stereotypes, differences and other aspects of behaviour in the Eastern Cape Province, South Africa. *Journal of Teaching and Learning, 8*, 1-19.

Myers, R. H. (1990). *Classical and modern regression with applications*. PWS-Kent Publishing.

Naragon-Gainey, K. (2010). Meta-analysis of the relations of anxiety sensitivity to the depressive and anxiety disorders. *Psychological Bulletin, 136*(1), 128–150. https://doi.org/10.1037/a0018055

Naragon-Gainey, K., & Watson, D. (2018). What Lies beyond neuroticism? An examination of the unique contributions of social-cognitive vulnerabilities to internalizing disorders. *Assessment, 25*(2), 143–158.

Nathan, R., & Hill, L. (2006). *Career counseling*. London: Sage.

Nauta, M. M. (2010). The development, evolution, and status of Holland's theory of vocational personalities: Reflections and future directions for counselling psychology. *Journal of Counselling Psychology, 57*(1), 11-22.

Neault, R. A. (2002). Thriving in the new millennium: career management in the challenging world of work. *Canadian Journal of Career Development, 1*(1), 11-21.

Neice, D. E., & Bradley, R. W. (1979). Relationship of age, sex and educational group to career decisiveness. *Journal of Vocational Behaviour, 14*, 271–8.

Nettle, D. (2005). An evolutionary approach to the extraversion continuum. *Evolution and Human Behaviour, 26,* 363–373.

Neuman, W. L. (2006). *Social research methods qualitative and quantitative approach* (6th ed.). Pearson Education, Inc.

Nevo, O. (1987). Irrational expectations in career counseling and their confronting arguments. *The Career Development Quarterly, 35*, 239-250.

Newman, B. M., & Newman, P. R. (2017). *Development through life: A psychosocial approach.* Wadsworth.

Newman, J. C., Gray, E. A., & Fuogua, D. R. (1999). The relation of career indecision to personality dimension of the California psychological inventory. *Journal of Vocational Behaviour, 54,* 174-187.

Niles, S. G., & Harris-Bowlsbey, J. (2009). *Career development interventions in the 21st century* (3rd, ed.). Pearson Education, Inc.

Niles, S. G., & Harris-Bowlsbey, J. A. (2013). *Career development interventions in the 21st century.* Pearson Education, Inc.

Niles, S. G., & Sowa, C. J. (1992). Mapping the nomological network of career self-efficacy. *The Career Development Quarterly, 41*, 12-21.

Norida, A., Tajuddin, N. M., & Sahari, N. M. (2011). *The relationship between self-esteem, job-search intensity and career decision-making among final year students: An application of structural equation modelling.* International Association of Technology, Education and development (IATED).

Norman, W. T. (1963). Toward an adequate taxonomy of personality attributes: Replicated factor structure in peer nomination personality ratings. *Journal of Abnormal and Social Psychology, 66,* 574- 583.

Nota, L., & Soresi, S. (2003). An assertiveness training program for indecisive students attending an Italian University. *The Career Development Quarterly*, *5,* 322-343.

Nunnally, J. C., & Bernstein, I. H. (1994). The assessment of reliability. *Psychometric Theory, 3,* 248-292.

Nutini, S. G. (2002). *Career development interventions in 21st century*. Pearson Education, Inc.

O'Shea, D., & Kirrane, M. (2008). The transmission of work-related attitudes: A social learning analysis. *Journal of Managerial Psychology, 23*, 524-557.

Ochs, L. A., & Roessler, R. T. (2004). Predictors of career exploration intentions: a Social cognitive career theory perspective. *Rehabilitation Counseling Bulletin, 47*(4), 224-233.

Ohler, D. L., Levinson, E. M., & Sanders, P. (1995). Career maturity in young adults with learning disabilities: What employment counselors should know. *Journal of Employment Counseling, 32*(2), 64–78.

Oishi, S., & Diener, E. (2001). Goals, culture, and subjective well-being. *Personality and Social Psychology Bulletin*, *27*(12), 1674–1682.

Omotosho, J. A., & Nyarko-Sampson, E. (2012). Religion and parental occupation as determinants of Ghanaian senior secondary school students' aspirations for entrepreneurial careers. *Nigerian Journal of Guidance and Counselling*, *17*(1), 30-39.

Onoyase, D., & Onoyase, A. (2009). The relationship between personality types and career choice of secondary school students in federal government colleges in Nigeria. *The Anthropologist Journal, 11*(2), 109-115.

Organization for Economic Cooperation and Development [OECD] (2010). Working it out: Career guidance and employer engagement. Retrieved on September, 25, 2019 from: http://www.oecd.org/officialdocuments/publicdisplaydocumentpdf/?cote=EDU/WKP(2018)11&docLanguage=En.

Osborne, J. W. & Waters, E. (2002). Four assumptions of multiple regression that researchers should always test. *Practical Assessment, Research, and Evaluation, 8*(2). DOI: https://doi.org/10.7275/r222-hv23 Available at: https://scholarworks.umass.edu/pare/vol8/iss1/2

Osipow, S. H. (1983). *Theories of career development.* Englewood Cliffs, New Jersey: Prenrice-Hall Inc.

Osipow, S. H. (1990). Convergence in theories of career choice and development: Review and prospect. *Journal of Vocational Behavior, 36*(2), 122–131. https://doi.org/10.1016/0001-8791(90)90020-3

Osipow, S. H. (1999). Assessing career indecision. *Journal of Vocational Behaviour, 55*(1), 147-154.

Osipow, S. H., & Gold, J. A. (1968). Personal adjustment and career development. *Journal of Counseling Psychology, 15*, 439–443.

Ostendorf, F., & Angleitner, A. (1992). On the generality and comprehensiveness of the five factor model of personality: Evidence for five robust factors in questionnaire data. Gian-Vittorio, C. (Ed.), *Modern personality psychology*, (pp. 73-109). Harvester Wheatsheaf.

Othman, R. E., Othman, R. E., Hallit, R., Obeid, S. & Hallit, S. (2020). Personality traits, emotional intelligence and decision-making styles in Lebanese universities medical students. *BMC Psychol, 8*, 46. https://doi.org/10.1186/s40359-020-00406-4

Otuei, C.O. (2017). Career decision-making difficulties of senior high school students in Koforidua municipality. (Published master thesis) University of Cape Coast.

Owusu, G. M. Y., Anderson, A., Kwakye, T. O. & Bekoe, R. (2018). Factors influencing career choice of tertiary students in Ghana: A comparison of science and business majors. *Education and Training, 60*(6), 361.

Page, J., Bruch, M. A., & Haase, R. F. (2008). Role of perfectionism and five-factor model traits in career indecision. *Personality and Individual Differences, 45*, 811-815.

Pallant, J. (2001). *SPSS survival manual: A step by step guide to data analysis using SPSS for Windows version 10*. Open University Press.

Pallant, J. (2005). *SPSS survival manual: A step by step guide to data analysis using SPSS*. (2nd ed.). Ligare.

Parsons, F. (1909). *Choosing a vocation*. Houghton, Mifflin and Company.

Patton, W., & Creed P. A. (2002). The relationship between career maturity and work commitment in a sample of Australian high school students. *Journal of Career Development, 29*(2), 69-85.

Patton, W., & Creed, P. A. (2001). Developmental issues in career maturity and career decision status. *The Career Development Quarterly, 49*, 336-351.

Patton, W., & Lokan, P. A. (2001). Developmental issues in career maturity and career decision status. *The career Development Quarterly, 49*(4), 336-351. https://doi.org/10.1002/j.2161-0045.2001.tb00961.

Patton, W., & McMahon, M. (2006). The systems theory framework of career development and counselling: Connecting theory and practice. *International Journal for the Advancement of Counselling, 28*(2), 153-166.

Patton, W., Watson, M., & Creed, P. A. (2004). Career maturity of Australian and south African high school students: Developmental and contextual explanations. *Australian Journal of Career Development, 13*(1), 33-41.

Paulsen, A. M., & Betz, N. (2004). Basic confidence predictors of career decision self-efficacy. *Career Development Quarterly, 52*, 353-361.

Paunonen S. V., & Jackson, D. N. (2000). What is beyond the Big Five? Plenty! *Journal of Personality, 68*, 821-835.

Paunonen, S. V. (1998). Hierarchical organization of personality and prediction of behaviour. *Journal of Personality and Social Psychology, 74*(2), 538-556.

Pečjak, S., & Košir, K. (2007). Personality, motivational factors and difficulties in career decision-making in secondary school students. *Psihologijske Teme, 16*(1), 141–158.

Pedhazur, E. J. (1997). *Multiple regression in behavioral research* (3rd ed.). Orlando, FL.

Peeters, M. A. G., Van Tuijl, H. F. M., Rutte, C. G., & Reymen, I. M. (2006). Personality and team performance: A meta-analysis. *European Journal of Personality, 20*(5), 377–396.

Peng, H. (2001). Comparing the effectiveness of two different career education courses on career decidedness for college freshmen: An exploratory study. *Journal of Career Development, 28*(1), 29–41.

Penn, L. T., & Lent, R. W. (2019). The joint roles of career decision self-efficacy and personality traits in the prediction of career decidedness and Decisional Difficulty. *Journal of Career Assessment, 27*(3), 457–470.

Peterson, G. W., Sampson, J. P., Jr., Reardon, R. C., & Lenz, J. G. (1996). Becoming career problem solvers and decision makers: A cognitive information processing approach. In D. Brown & L. Brooks (Eds.), *Career choice and development* (3rd ed., pp. 423-475). Jossey-Bass.

Peterson, M. R., & Einarson, J. (2001). A mammalian homologue of SLY1, a yeast gene required for transport from endoplasmic reticulum to Golgi. G*ene., 169*(2), 293-4.

Peterson, S. L. (1993). Career decision-making self-efficacy and institutional integration of underprepared college students. *Research in Higher Education, 34,* 659-685.

Pitan, O. S. & Adedeji, S. O. (2014). Students' choice of courses: Determining factors, sources of information, and relationship with the labor market demands in Nigeria. Found in https://doi.org/10.1080/18146627.2014.934997

Pitan, O. S. (2010). Assessment of skills mismatch among employed university graduates in Nigeria labour market. PhD dissertation. Ibadan, Nigeria: University of Ibadan.

Ponterotto, J. G. (2005). Qualitative research in counseling psychology: A primer on research paradigms and philosophy of science. *Journal of Counseling Psychology, 52*(2), 126–136.

Porfeli, E. & Lee, B. (2012). Career development during childhood and adolescence. *Journal of New Directions for Youth Development, 7*(134), 11-22

Post-Kammer, P. (1987). Intrinsic and extrinsic work values and career maturity of 9th- and 11th-grade boys and girls. *Journal of Counselling & Development, 65(*8), 420-423.

Powell, D. F., & Luzzo, D. A. (1998). Evaluating factors associated with the career maturity of high school students. *The Career Development Quarterly, 47*, 145-149.

Pryor, R. G. L. (1985). Towards a composite theory of career development and choice. *British Journal of Guidance & Counselling, 13*(3), 225-237.

Pytlik Zillig, L. M., Hemenover, S. H., & Dienstbier, R. A. (2002). What do we assess when we assess a Big 5 trait? A content analysis of the affective, behavioural, and cognitive processes represented in Big 5 personality inventories. *Personality and Social Psychology Bulletin, 28*, 847-858.

Quinter, M., & Edwards, K. (2011). Factors influencing students career choices among secondary school students in Kisumu Municipality, Kenya. Journal of Emerging Trends in Educational Research and Policy Studies, 2(2), 81-87.

Raskin P. M. (2011). Career maturity: The construct's validity, vitality, and viability. *The Career Development Quarterly, 47*(1), 32-35.

Raskin, P. M. (1998). Career maturity: The construct's validity, vitality, and viability. *The Career Development Quarterly, 47*(1), 32–35.

Reed, M. B., Bruch M. A., & Haase R. F. (2004). Five-factor model of personality and career exploration. *Journal of Career Assessment, 12,* 223-238.

Regmi, K. D. (2015). Lifelong learning: Foundational models, underlying assumptions and critiques. *International Review of Education, 61*(2), 133-151.

Robbins, S. B. (1985). Validity estimates for the career decision-making self-efficacy scale. *Measurement and Evaluation in Counselling and Development, 18*, 64-71.

Robbins, S. B., & Patton, M. J. (1985). Self-psychology and career development: Construction of the Superiority and Goal Instability scales. *Journal of Counseling Psychology, 32*(2), 221– 231.

Robson, C. (1993). *Real world research. A resource for social scientists and practitioner researchers*. Blackwell Publishers Inc.

Rochlen, K. D., Mohr, J., & Hargrove, N. (1999). Career decision-making skills of high school students in the Bahamas. *Journal of Career Development, 31*, 1-13.

Rogers, W. B., & Westbrook, B. W. (1983). Measuring career indecision among college students: Towards a valid approach for counselling practitioners and researchers. *Measurement and Guidance in Evaluation, 16*, 78-85

Rojewski, J. W., & Schell, B. (1994). Career indecision types for rural adolescents from disadvantaged and no disadvantaged backgrounds. *Journal of Counseling Psychology, 41*, 356-363.

Roll, T. (2002). The Career beliefs of post-secondary students seeking career counselling. Master's thesis, University of Calgary.

Ross, S. R., Stewart, J., Mugge, M., & Fultz, B. (2001). The imposter phenomenon, achievement dispositions, and the five-factor model. *Personality and Individual Differences, 31*, 1347-1355.

Rossier, J. (2015). *Career adaptability and life designing*. In L. Nota & J. Rossier (Eds.), *Handbook of life design: From practice to theory and from theory to practice* (p. 153–167). Hogrefe Publishing Group.

Roulston, K. (2014). Interactional problems in research interviews. *Qualitative Research Journal, 14*(3), 277-293.

Ryan, A. M., & Ployhart, R. E. (2014). A century of selection. *Annual Review of Psychology, 65,* 1-177. DOI: 10.1146/annurev-psych-010213.115134

Ryan-Jones, K. N. (1990). A comparative study of the career decision-making with two computer-assisted career guidance systems. (Doctoral dissertation, University of Tulsa, 1987). Dissertation Abstracts International, 48, 02A.

Ryckman, R. M. (2013). *Theories of personality* (10th ed.). Belmont, CA: Wadsworth, Cengage Learning.

Sadeghi, A., Baghban, I., Bahrami, F., Ahmadi, A., & Creed, R. (2010). Validation of the short form of the career development inventory with an Iranian high school sample. *International Journal for Educational and Vocational Guidance, 11*, 29-38.

Saka, N., Gati, I., & Kelly, K. R. (2008). Emotional and personality-related aspects of career decision-making difficulties. *Journal of Career Assessment, 16,* 403–424.

Salami, S. O. (2008). Psychopathology and academic performance among Nigerian high school adolescents: The moderator effects of study behaviour, self-efficacy and motivation. *Journal of Social Sciences, 16*(2), 155-162.

Salmela-Aro, K. (2001). Personal goals during a transition to adulthood. In J-E. Nurmi (Ed.), *Navigation through adolescence* (pp. 59-84). Routledge Falmer.

Salovey, P., Mayer, J. D., Goldman, S. L., Turvey, C., & Palfai, T. P. (1995). Emotional attention, clarity, and repair: Exploring emotional intelligence using the Trait Meta-Mood Scale. In J. W. Pennebaker (ed.), *Emotion, disclosure, and health* (pp. 125-154). American Psychological Association.

Sampson, J. P., Lenz, J. G., Reardan, R. C., & Peterson, G. W. (1999). A cognitive information processing approach to employment problem solving and decision-making. *The Career Development Quarterly*, *48*, 3-18.

Santos, P. J. (2001). Predictors of generalized indecision among Portuguese secondary school students. *Journal of Career Assessment, 9*, 381-396.

Santrock, J. W. (1994). *Psychology* (4th ed.). Brown & Benchmark.

Santrock, J. W. (2004). *Life-span development* (9th ed.). McGraw-Hill.

Sanz de Acedo Lizárraga, L., Sanz de Acedo Baquedano, M. T., & Cardelle-Elawar, M. E. (2007). Factors that affect decision-making: gender and age differences. *International Journal of Psychology and Psychological Therapy, 7*(3), 381-391.

Sarantakos, S. (2013). *Social research* (4th ed.). Palgrave Macmillan.

Saunders, D. E., Peterson, G. W., Reardon, R. C., & Sampson, J. P. Jr. (2000). Relation of depression and dysfunctional career thinking to career indecision. *Journal of Vocational Behaviour, 56*, 288–298.

Savickas, M. (1997). Career adaptability: An integrative construct for life-span, life-space theory. *Career Development Quarterly, 45*, 247-259.

Savickas, M. L. (2001). Toward a comprehensive theory of career development: Dispositions, concerns, and narratives. In F. Leong (Ed.), *Contemporary models in vocational psychology* (pp. 295–320). Erlbaum.

Schmitt, D. P., Allik, J., McCrae, R. R., Benet-Martínez, V., Alcalay, L., & Ault, L. (2007). The geographic distribution of Big Five personality traits: Patterns and profiles of human self-description across 56 nations. *Journal of Cross-Cultural Psychology, 38*, 173–212. doi:10.1177/ 0022022106297299.

Schmitt, D. P., Realo, A., Voracek, M., & Allik, J. (2008). Why can't a man be more like a woman? Sex differences in Big Five personality traits across 55 cultures. *Journal of Personality and Social Psychology, 94*(1), 168–182.

Schmitt-Rodermund, O. M., Silbereisen, E., Rainer, K., Gosling, S., & Potter, D. J. (2013). The regional distribution and correlates of an entrepreneurship-prone personality profile in the United States, Germany, and the United Kingdom: a socio-ecological perspective. *Journal of Personality and Social Psychology*, *105*(1), Jul 2013, 104-122.

Schuette, C. T., Ponton, M., & Charlton, M. L. (2010). Middle school children's career aspirations: Relationship to adult occupations and gender. *American Counseling Association, 60*(1), 34-46.

Scotland, J. (2012). Exploring the philosophical underpinnings of research: Relating ontology and epistemology to the methodology and methods of the Scientific, Interpretive, and Critical Research Paradigms. *Current, 5*(9), 9-16.

Scott, A. B., & Ciani, K. D. (2008). Effect of an undergraduate career class on men‘s and women‘s career decision-making self-efficacy and vocational identity. *Journal of Career Development, 34*(3), 263-285.

Segal, D. (1988). Nationalism, comparatively speaking. *Journal of Historical Sociology, 3*(1), 301-321.

Seibert, S. E., & Kramer, M. L. (2001). The five-factor model of personality and career success. *Journal of Vocational Behaviour, 58*(1), 1-21.

Seligman, L. (1994). *Developmental career counseling & assessment* (2nd ed.). SAGE Publications.

Shafer, A. B. (2000). Mediation of the big five‘s effect on career decision-making by life task dimensions and on money attitudes by materialism. *Journal of Personality and Individual Differences*, *4*, 93-109.

Shah, A., Pell, K., & Brooke, P. (2004). *Graduate employability survey: Active learning in higher education*. SAGE Publications.

Shelagh, F., Brace-Govan, J., Hoek, J., & Mulconroy, M. (2020). Managing smoke free momentum: Young RYO smokers‘ responses to tobacco endgame strategies. *Journal of Macro-Marketing*, *40*(2), (250-265),

Shelagh, F., Brace-Govan, J., Hoek, J., & Mulconroy, M. (2020). Managing smoke free momentum: Young RYO Smokers‘ responses to tobacco endgame strategies. *Journal of Macro-Marketing, 40*(2), 250-265.

Shin, Y. J., & Kelly, K. R. (2013). Cross-cultural comparison of the effects of optimism, intrinsic motivation, and family relations on vocational identity. *The Career Development Quarterly, 61*(2), 141-160.

Sidiropoulou-Dimakakou, D., Mylonas, K., & Argyropoulou, K. (2015). Self-efficacy in career planning: A new approach to career exploration. *International Journal of Learning, Teaching and Educational Research, 11*(2), 40-54.

Sikes, P. (2004). Methodology, procedures and ethical concerns. In C. Opie (Ed.), *Doing education research* (pp. 15-33). Thousand Oaks, CA: SAGE Publications, Inc.

Simiyu, N. R. (2015). Influence of gender on career choices by students in youth polytechnics in Bungoma County, Kenya. *International Journal of Innovation and Scientific Research*, *14*(1), 83-88.

Simon-Kumar, R. (2005). Book review: The right to development: a primer. *Progress in Development Studies*, *5*(4), 343–344.

Singh, D. (2019). Understanding philosophical underpinnings of research with respect to various paradigms: Perspective of a research scholar (Conference Paper) Conference: ANVESH-19 At: Nirma University, Ahmedabad.

Skorikov, V. (2007). Adolescent career development and adjustment. *Career Development in Childhood and Adolescence, 6*, 237-254.

Slaney, R. B. (1988). The assessment of career decision-making. In W. B. Walsh & S. H. Osipow (Eds.), *Contemporary topics in vocational psychology. Career decision-making* (pp. 33-76). Lawrence Erlbaum Associates, Inc.

Slaney, R. B., Hall, M. E., & Bieschke, K. J. (1993). Stability of self-descriptive Holland types and career indecision. *Journal of Career Assessment, 1*(1), 83–92.

Smith, D. A (2002). Validity and values: Monetary and otherwise. *American Psychologist, 57,* 136-137.

Smith, H. (2001). Efficacy and esteem pathways to depression in college students. Unpublished Ph.D. dissertation, Department of Psychology, Ohio State University.

Smith, R. M. (2011). *Personality traits and career decidedness: An empirical study of university students*. Dissertation University of Tennessee, Knoxville

Smithers, S., Catano, V. M., & Cunningham, D. P. (2004). What predicts performance in Canadian dental schools? *Journal of Dental Education, 68*(5), 98-613.

Snape, D., & Spencer, L. (2003). The foundations of qualitative research In J. Richie & J. Lewis (Eds.), Qualitative Research Practice (pp. 1-23). Sage Publications, Inc.

Snape, D., & Spencer, L. (2003). The foundations of qualitative research. In J. Ritchie and J. Lewis (eds.), *Qualitative research practice: A guide for social science researchers and students* (pp. 1–23). SAGE Publications Ltd.

Solberg, V. S., Howard, K., Blustein, D. L., & Close, W. (2002). Career development in the schools: Connecting school-to-work-to-life. *The Counseling Psychologist, 30,* 705-725.

Soraya, H., Elaheh, H., & Masoud, G. L. (2011). The relationships between personality traits and students‘ academic achievement. *Procedia - Social and Behavioral Sciences, 29,* 836 – 845.

Soto, C., & John, O. (2017). The Next Big Five Inventory (BFI-2): Developing and assessing a hierarchical model with 15 Facets to Enhance Bandwidth, Fidelity, and Predictive Power. *Journal of Personality and Social Psychology, 113*, 117-143.

Sovet, L., & Metz, A. J. (2014). Parenting styles and career decision-making among French and Korean adolescents. *Journal of Vocational Behavior*, *84*, 345-355. doi:10.1016/j.jvb.2014.02.002

Sovet, L., Tak, J., & Jung, S. (2015). Validation of the career decision-making difficulties questionnaire among Korean college students. *Journal of Career Assessment, 23*, 661- 676.

Stead, G. B., & Ngweni, Z. C. (1999). Introduction to career education and information technology. In GB Stead & MB Watson (eds.), *Career Psychology in the South African context*. Van Schaik.

Stern, M., Norman, S. L., & Zevon, M. A. (1991). Career development of adolescent cancer patients: A comparative analysis. *Journal of Counselling Psychology*, *38*(4), 431–439. https://doi.org/10.1037/00220167.38.4.431

Stevens, J. P. (2002). *Applied multivariate statistics for the social sciences*. Erlbaum.

Stone, E. (1996). Career beliefs and self-efficacy levels of working women. *Dissertation Abstracts International, 58*(01), 319.

Storme, M., Celik, P., & Myszkowski, N. (2017). Career decision ambiguity tolerance and career decision-making difficulties in a French sample: The mediating role of career decision self-efficacy. *Journal of Career Assessment*, *27*(2), 273–288.

Storme, M., Celik, P., & Myszkowski, N. (2017). Career decision ambiguity tolerance and career decision-making difficulties in a French sample: The mediating role of career decision self-efficacy. *Journal of Career Assessment, 27*(2), 273-288.

Sucier, G., & Goldberg, L. R. (1998). What is beyond the Big Five? *Journal of Personality, 66,* 495-524.

Sullivan, B. A., & Hansen, J-I. C. (2004). Mapping associations between interests and personality: toward a conceptual understanding of individual differences in vocational behaviour. *Journal of Counselling Psychology*, *51*, 287-298.

Super, D. E. (1954). Career patterns as basis for vocational counseling. *Journal of Counseling Psychology, 1*, 12-20.

Super, D. E. (1957). *The psychology of careers.* Harper and Row.

Super, D. E. (1971). *Occupational psychology*. Tavistock.

Super, D. E. (1980). A life-span, life space approach to career development. *Journal of Vocational Behavior, 16,* 282-298.

Super, D. E. (1984). Career and life development. In D. Brown, L. Brooks, & Associates (eds.), *Career choice and development* (pp. 192-234). Jossey-Bass.

Super, D. E. (1990). A life-span, life-space approach to career development. In D. Brown and L. Brooks (eds.), *Career choice 2nd and development: Applying contemporary theory to practice* (pp. 197-262). San Francisco, CA: Jossey-Bass.

Super, D. E. (1994). A life span, life space perspective on convergence. In M. L. Saviskas and R. W. Lend (Eds), *Convergence in career development theories.* Consulting Psychologists Press.

Super, D. E., Crites, J. O., Hummel, R. C., Moser, H. P., Overstreet, P. L., & Warnath, C. F. (1957). *Vocational development: A framework for research.* London: Bureau of Publications, Teachers Co.

Super, D. E., Thompson, A. S., Lindeman, R. H., Jordaan, J. P., & Myers, R. A. (1981). *Career development inventory: College form*. Consulting Psychologists Press.

Super, D., Savickas, M., & Super, C. (1996). The life span, life-space approach to careers. In D Brown & L Brooks & Associates (Eds.), *3rd Career choice and development* (pp.121-178). Jossey-Bass.

Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics* (4th ed.). Allyn and Bacon.

Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.). Pearson Education Inc.

Tabachnick, B. G. & Fidell, L. S. (2001). *Using multivariate statistics* (4th ed.). Allyn and Bacon.

Talib, M. A., & Kit-Aun, T. (2009). Predictors of career indecision among Malaysian undergraduate students. *European Journal of Social Sciences*, *8*(2), 55-79.

Tang, M., Fouad, N. A., & Smith, P. L. (1999). Asian Americans' career choice: A path model to examine factors influencing their career choices. *Journal of Vocational Behavior, 54*, 142–157.

Tannen, D. (1990). Gender differences in conversational coherence: Physical alignment and topical cohesion. In B. Dorval (ed.), *Advances in discourse processes: Conversational organization and its development* (p. 167–206). Ablex Publishing.

Tashakkori, A., & Teddlie, C. (2010). Putting the human back in human research methodology: The researcher in mixed methods research. *Journal of Mixed Methods Research, 4*(4), 271–277.

Taylor, I. A., & Buku, K. D. (2006). *Basics in guidance and counselling* (2nd ed.). University of Education Winneba Press.

Taylor, K. M., & Betz, N. E. (1983). Applications of self-efficacy theory to the understanding and treatment of career indecision. *Journal of Vocational Behavior, 22,* 63-81.

Taylor, K. M., & Popma, J. (1990). Construct validity of the career decision-making self-efficacy scale and the relationship of CDMSE to vocational indecision. *Journal of Vocational Behaviour, 37*, 17-31.

Tekke, M., M., & Ghani, F. A. (2013). Examining the level of career maturity among Asian foreign students in a public university: Gender and academic achievement. *Journal of Research House of Parkistani Educationist, 1*(1), 17-39.

Terracciano, A., McCrae, R., Costa Jr, R., & Paul, T. (2010). Intra-individual change in personality stability and age. *Journal of Research in Personality*, *44*(1), 31-37.

Teuscher, U. (2002). *Evaluation of a decision training program for vocational guidance.* Department of Psychology, University of Fribourg, Switzerland.

The British Psychological Society. (2010). *Code of human research ethics: Simply psychology.* Retrieved from:

www.bps.org.uk/sites/default/files/documents/code_of_human_research_ethics.pdf

Thompson, A. P. (1976). Client misconceptions in vocational counselling. *Personnel and Guidance Journal, 55,* 30–33.

Tien, H. L. S. (2005). The validation of the career decision-making difficulties scale in a Chinese culture. *Journal of Career Assessment, 13*, 114-127.

Todd, A. R., Bodenhausen, G. V., Richeson, J. A., & Galinsky, A. D. (2011). Perspective taking combats automatic expressions of racial bias. *Journal of Personality and Social Psychology, 100*(6), 1027–1042.

Tokar, D. M., Fischer, A. R., & Subich, L. M. (1998). Personality and vocational behaviour: A selective review of the literature. *Journal of Vocational Behaviour, 53,* 115–153.

Tokar, D. M., Withrow, J. R., Hall, R. J., & Moradi, B. (2003). Psychological separation, attachment security, vocational self-concept crystallization, and career indecision: A structural equation analysis. *Journal of Counseling Psychology, 50*(1), 3–19. https://doi.org/10.1037/0022-0167.50.1.3

Trauth, E., M., Quesenberry, J. L., & Huang, H. (2008). A multicultural analysis of factors influencing career choice for women in the information technology workforce. *Journal of Global Information Management (JGIM), 16*(4), 23-30.

Tremblay, K., Lalancette, D., & Roseveare, D. (2012). *Assessment of higher education learning outcomes: Feasibility study report, Vol 1. Design and implementation*. Paris: OECD. Available at www.oecd.org/edu/skills-beyoschool/AHELOFSReportVolume1.pdf

Tuli, F. (2010). The basis of distinction between qualitative and quantitative research in social science: Reflection on ontological, epistemological and methodological perspectives. *Ethiopian Journal of Education and Sciences,* 6(1), 97-108.

Turiano, N. A. (2012). Examining concurrent and longitudinal relationship between personality traits and social well-being in adulthood. *Social Psychological and Personality Science, 3*, 698-705.

Turner, S. L., & Conkel, J. L. (2011). The career beliefs of inner-city adolescents. *Professional School Counselling, 15*, 1-14.

UGCCC (2018). *Careers and counselling centre annual Data*. University of Ghana, Legon.

UNESCO (2002). *Education for sustainability: from Rio to Johannesburg, lessons learnt from a decade of commitment*. United Nations Educational, Scientific and Cultural Organization. www.UNESCO.org.

UNESCO (2012). *Shaping the education of tomorrow: 2012 full length report on the UN Decade of Education for Sustainable Development*. United Nations Educational, Scientific and Cultural Organization. www.UNESCO.org.

University of Ghana Amendment Act (2018). University of Ghana, Legon.

Vahedi, S., Farrokhi, F., Mahdavi, A., & Moradi, S. (2012). Exploratory and confirmatory factor analysis of the career decision-making difficulties questionnaire. *Iranian Journal of Psychiatry, 7*(2), 74-81.

Van de Venter, A. M. (2006). Grade nine learners' experiences of career counselling at school. (MEd dissertation). University of South Africa, Pretoria.

Venkatesh, S. J., & Morris, R. (2000). The effects of role models on the attitudes and career choices of female students enrolled in high school science. Dissertation submitted to Portland State University, Portland, OR.

Venkatesh, V., Morris, M. G., & Ackerman, P. L. (2000). A longitudinal field investigation of gender differences in individual technology adoption decision-making processes. *Org. Behav. Human Decision Process*, *83*, 33–60.

Vertsberger, D., & Gati, I. (2016). The effectiveness of sources of support in career decision-making: A two-year follow-up. *Journal of Vocational Behavior*, *89*, 151-161.

Vignoli, E. (2009). Inter-relationships among attachment to mother and father, self-esteem, and career indecision. *Journal of Vocational Behaviour, 75*, 91-99.

Vondracek, F. W., & Reitzle, M. (1998). The viability of career maturity theory: A developmental–contextual perspective. *The Career Development Quarterly, 47*(1), 6–15. https://doi.org/10.1002/j.2161-0045.1998.tb00724.x

Vuori, J., Koivisto, P., Mutanen, P., Jokisaari, M., & Salmela-Aro, K. (2008). Towards working life: Effects of an intervention on mental health and transition to post-basic education. *Journal of Vocational Behaviour, 72*(1), 67-80

Wahyuni, D. (2012). The research design maze: understanding paradigms, cases, methods and methodologies. *Journal of Applied Management Accounting Research 10(1*), 80-85.

Wallace-Broscious, A., Serafica, F. C., & Osipow, S. H. (1994). Adolescent career development: Relationships to self-concept and identity status. *Journal of Research on Adolescence, 4*(1), 127-149.

Wang, M., & Degol, J. (2013). Motivational pathways to STEM career choices: Using expectancy–value perspective to understand individual and gender differences in STEM fields. *Developmental Review, 33*(4), 1-37.

Wang, N., Jome, L. M., Haase, R. F., & Bruch, M. A. (2006). The role of personality and career decision-making self-efficacy in the career choice commitment of college students. *Journal of Career Assessment, 14*(3), 312–332.

Waqar, S. (2015). Career beliefs, personality and career success: An investigation of direct and indirect effects (Published PhD dissertation) Quaid-i-Azam University Islamabad-Pakistan.

Watts, A. G. (1996). Socio-political ideologies in guidance. In A. G. Watts, B. Law, J. Killeen, J. M. Kidd, & R. Hawthorn (Eds.), *Rethinking careers education and guidance: Theory, policy and practice* (pp. 351–365). London: Routledge

Webster, D. M., & Kruglanski, K. W. (1994). Individual differences in need for cognitive closure. *Journal of personality and Social Psychology, 67*, 1049-1062.

Weiler, N. (1977). *Reality and career planning.* Addison-Wesley Publishing Company, Inc.

Weinrach, S. G., & Srebalus, D. J. (1990). Holland's theory of careers. In D. Brown, L. Brooks, & Associates (eds.) (pp. 37-67, 2nd ed.), *Career choice and development.* San Francisco: Jossey-Bass.

Welbourne, T. M., Johnson, D. E., & Erez, A. (1998). The role-based performance scale: validity analysis of a theory-based measure. *Academy of Management Journal, 41*(5). https://doi.org/10.5465/256941.

West, C., & Zimmerman, D. H. (1991). Doing gender. In J. Lorber & S. A. Farrell (Eds.), *The social construction of gender* (p. 13–37). Sage Publications, Inc.

Wicks, D., Mishra, G., & Milne, L. (2002). Young women, work and inequality: Is it what they want or what they get? An Australian contribution to research on women and workforce participation. *Sociological Research Online*, *7*(3), 3–18.

Williamson, T. (2018). Hyman on Knowledge and Ability. *Philosophy and Phenomenological Research, 101*(1), 66-70.

Woasey, F. A. (2015). Factors influencing the career choice of undergraduate students in the humanities of the University of Ghana (Doctoral dissertation, University of Ghana).

Yilmaz, K. (2013). Comparison of quantitative and qualitative research traditions: epistemological, theoretical, and methodological differences. *European Journal of Education, 3*, 88-105.

Yin, R. K. (2014). *Case study research design and methods* (5th ed.). Thousand Oaks, CA: Sage.

Zhou, D., & Santos, A. (2007). Career decision-making difficulties of British and Chinese international university students. *British Journal of Guidance and Counseling,* 35(2). https://doi.org/10.1080/03069880701256684

Zimmerman, D., & West, C. (1975). Sex roles, interruptions and silences in conversations. In B.Thorne & N. Henley (eds.), *Language and sex: Difference and dominance* (pp.105-29). Newbury House.

Zirkel, S., & Cantor, N. (1990). Personal construal of life tasks: Those who struggle for independence. *Journal of Personality and Social Psychology, 58*(1), 172–185. https://doi.org/10.1037/0022-3514.58.1.172

Zunker, V. G. (2006). *Career counselling: A holistic approach* (7th ed.). Thomson Brooks/Cole.

APPENDICES

APPENDIX A

Questionnaire

These questions are being asked for the purpose of a research on Personality factors and career development and to plan an intervention for tertiary students. The answers you give will not be used against you. Any information you give will be highly confidential. Your name will not be mentioned in the study. Therefore, I will please employ you to give your honest response because there are no right or wrong answers. However, you are free to withdraw at any point from the study.

1. Sex: Male…… Female…….
2. Level ……
3. Age: 18 - 24…… 24 - 29…… 30 - 35…….. 36+
4. Academic program? BA…… BSC……BFA…. Others

APPENDIX B

Big Five Personality Indicator

Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, your responses will be kept in absolute confidence. In the table below, for each statement 1-50 mark how much you agree with on the scale 1-5, where

Disagree	1
Slightly disagree	2
Neutral	3
Slightly agree	4
Agree	5

Test

Number	I…..	Rating
1	Am the life of the party	
2	Feel little concern for others	
3	Am always prepared	
4	Get stressed out easily	
5	Have a rich vocabulary	
6	Don't talk a lot	
7	Am interested in people	
8	Leave my belongings around	
9	Am relaxed most of the time	
10	Have difficulty understanding abstract ideas	
11	Feel comfortable around people	
12	Starts quarrels with others / Insults people	
13	Pay attention to details	
14	Worry about things	
15	Have a vivid imagination	
16	Keep in the background	
17	Sympathize with others‘ feelings	
18	Make a mess of things	
19	Rarely do I feel sad	
20	Am not interested in abstract ideas	
21	Start conversations	
22	Am not interested in abstract ideas	
23	Get chores done right away	
24	Am easily disturbed	
25	Have excellent ideas	
26	Have little to say	

Describe yourself as you generally are now, not as you wish to be in the future.
Describe yourself as you honestly see yourself, your responses will be kept in absolute confidence. In the table below, for each statement 1-50 mark how much you agree with on the scale 1-5, where

Disagree **1**
Slightly disagree **2**
Neutral **3**
Slightly agree **4**
Agree **5**

27	Have a soft heart	
28	Often forget to put things back in their proper place	
29	Get upset easily	
30	Do not have a good imagination	
31	Talk to a lot of different people at parties	
32	Am not really interested in others	
33	Like order	
34	Change my mood a lot	
35	Am quick to understand things	
36	Don‘t like to draw attention to my self	
37	Take time out for others	
38	Shirk my duties	
39	Have frequent mood swings	
40	Use difficult words	
41	Don‘t mind being the center of attention	
42	Feel others‘ emotions	
43	Follow a schedule	
44	Get irritated easily	
45	Spend time reflecting on things	
46	Am quiet around strangers	
47	Make people feel at ease	
48	Am demanding in my work	
49	Often feel sad	
50	Am full of ideas	

APPENDIX C

Career Beliefs Inventory

Directions: This Inventory is designed to assess beliefs related to your career goals. Please read each statement below and decide to what extent you agree or disagree with it. There are **no** right or wrong responses. This inventory will be most helpful to you if you answer honestly.

After you have selected a response for an item, mark your choice using the response scale shown below.

1	2	3	4	5
Strongly Disagree	Disagree	Uncertain	Agree	Strongly agree

Rating		**Rating**	
	1. Once I make a career decision, I will stick to it.		11. If I were to train for one kind of work and later found that I didn‘t like it, I would still feel good about what I‘d learned.
	2. Only I can say what work is best for me.		12. If I told people the real reasons for my career plans, they would make fun of me.
	3. Everything depends on my making the right career choice now.		13. I know what kind of work I want to do.
	4. I aim for the top in everything I do even if I sometimes fail.		14. No one can stop me from doing the kind of work I want to do.
	5. I want to become like a particular person I know.		15. If I really tried hard to succeed but still failed, I would feel bad that I had wasted my energy.
	6. If I spent a great deal of time and energy doing one kind of work, I would not change to another later		16. There are some parts of the country where I would never move even if I‘d received a terrific job offer there.
	7. I can succeed in whatever occupation I like.		17. I don‘t compare my personal qualities with those of people who are employed in different occupations.
	8. If I were to attend school for job training, I‘d pick the school that made it easiest to get in.		18. If I am unable to work in the occupation of my choice, I‘m sure that I could find something else just as good.
	9. I want to do better work than other people in my group.		19. I can‘t get into the work I‘d like because there are too few opportunities.

	10. I would like to take some tests that would tell me what kind of work I should do.		20. Getting a college education is necessary to get a good job.
	21. It‘s perfectly reasonable that, at this time in my life, I might not know what kind of work I want to do.		38. I‘d like to work in a certain occupation, but I couldn‘t stand the raining required for it.
	22. When my career goal is unclear, I don‘t try very hard at what I‘m doing.		39. I am content to maintain my personal level of skill.
	23. I am not now employed.		40. A given college could be right for one person but wrong for Someone else.
	24. When I have a career problem, I like to take action to solve it.		41. I can be perfectly open with others about the reasons for my career choices.
	25. I can‘t do the kind of work I want because I lack a required skill.		42. I would accept a good job offer even if I had to uproot and start a new life elsewhere.
	26. I continually strive to improve my performance.		43. I need to know how to perform a job before I accept it.
	27. My work activities must be interesting to me.		44. I would refuse a good job offer if it required me to move away from my relatives.
	28. I can start working at one kind of job and then change to some other work.		45. When my career goal is unclear, I still continue working to the best of my ability anyway.
	29. I don‘t compare my competence with that of any ideal person.		46. It doesn‘t matter if I make a poor career choice now because I can always make a change later.
	30. It‘s important that I do the kind of work for which I was trained.		47. Other people can prevent me from entering the kind of work I like.
	31. Everyone in the occupation I like has to perform the same duties.		48. If I really tried hard to succeed but still failed, I would feel good that I had tried my best.
	32. If I don‘t find the best career for me, I‘ll be terribly upset.		49. To avoid the risk of failure, I set low goals for myself.
	33. I need to work in an occupation that I‘m good at even if I don‘t like it very much.		50. I am satisfied with my current level of performance.
	34. I don‘t think any job would be right for me.		51. I don‘t mind telling people the real reasons for my career plans.
	35. Within any given occupation there is a wide range of talents and personalities.		52. At this time in my life I should know what kind of work I want to do

	36. If the people who are important to me disapprove of the work I‘ve chosen; it would not matter to me.		53. No matter what past experience I‘ve had, I would be willing to change to some other kind of work.
	37. There are no jobs that can satisfy me.		54. If I didn‘t like my job, I‘d try to change the conditions that were making me unhappy.
	58. If I fail, I feel better knowing that I had not tried very hard.		75. People have successful careers because of their hard work, persistence and good judgement.
	59. I don‘t have what it takes to be successful in the kind of work I like.		76. Other people could persuade me to change my career direction.
	60. An employment agency or placement service would be able to find a good job for me.		77. I‘m sure I can find good job opportunities when I need them.
	61. Tests can‘t tell me what kind of work I should do.		78. I know I can find or create a job I like.
	62. I could be happy working at any one of a number of different jobs.		79. I‘d feel terrible if I spent years preparing for one kind of work and then later found that I didn‘t like it.
	63. The kind of job I start with will determine what I am able to next.		80. I don‘t know anyone who is the ideal person I want to be.
	64. I hate to have someone supervise my work.		81. People in a given occupation are all pretty much alike.
	65. I have more desirable qualities than at least one person who‘s employed in an occupation I like.		82. I would search out all the facts – both good and bad about an occupation before I decided to enter it.
	66. So many people are competing for so free jobs that it‘s no use for me even to try to get one.		83. I know why I‘m making my career choices but prefer I not to disclose them to anyone.
	67. On any job that I take I‘ll have to do the work in the way the boss tells me to do.		84. If I were offered a good job that I didn‘t know how to perform, I‘d accept it anyway and learn on the job.
	69. One can get a good job without a college education.		85. I want the people who are important to me to approve of the kind of work I do.
	70. I can learn whatever skills are required to get the kind of work I want.		86. College students should major in the subjects they find most interesting even if they don‘t get their best grades there.

	71. I want someone to tell me what work is best for me.		87. I am undecided about the kind of work I want to do.
	88. The training required for an occupation is part of what I'd enjoy.		93. If I were to attend school for job training, I'd pick the school that offered the best training.
	89. I need to be able to choose my own work hours if I'm going to do my best work.		94. I could accept a new job offer even if I had been trained for a completely different kind of work.
	90. One college is basically the same as any other.		95. I'll never get into the work I'd like because of the type of person I am.
	91. When I have a career problem, I like to wait and hope it will solve itself.		96. I need to enjoy my work even if I'm not very good at it.
	92. If I needed a good job, I'd be willing to travel anywhere in the country to get it.		

You have now finished the Career Beliefs Inventory. Please look back over the pages to make sure that you responded to every statement. Now, please provide important information about you and your current status.

APPENDIX D

Career Decision Self Efficacy Scale

INSTRUCTIONS: For each statement below, please read carefully and indicate how much confidence you have that you could accomplish each of these tasks by marking your answer according to the following 5-point continuum. Mark your answer by filling in the correct corresponding number under the **"RATING"** column on the answer sheet. How much confidence do you have that you could:

No Confidence at All = 1 Very Little confidence = 2 Moderate confidence = 3
Much confidence = 4 Complete Confidence = 5

Rating		Rating	
	1. Use the internet to find information about occupations that interest you.		14. Decide what you value most in an occupation.
	2. Select one major from a list of potential majors you are considering		15. Find out about the average yearly earnings of people in an occupation
	3. Make a plan of your goals for the next five years.		16. Make a career decision and then not worry whether it was right or wrong
	4. Determine the steps to take if you are having academic trouble with an aspect of your chosen major.		17. Change occupations if you are not satisfied with the one you enter.
	5. Accurately assess your abilities.		18. Figure out what you are and are not ready to sacrifice to achieve your career goals.
	6. Select one occupation from a list of potential occupations you are considering.		19. Talk with a person already employed in a field you are interested in
	7. Determine the steps you need to take to successfully complete your chosen major.		20. Choose a major or career that will fit your interests.
	8. Persistently work at your major or career goal even when you get frustrated.		21. Identify employers, firms, and institutions relevant to your career possibilities.
	9. Determine what your ideal job would be.		22. Define the type of lifestyle you would like to live.
	10. Find out the employment trends for an occupation in the next decade.		23. Find information about graduate or professional schools.
	11. Choose a career that will fit your preferred lifestyle		24. Successfully manage the job interview process.
	12. Prepare a good resume		25. Identify some reasonable major or career alternatives if you are unable to get your first choice.
	13. Change majors if you did not like your first choice.		

APPENDIX E

Career Decision-Making Difficulties Questionnaire Revised

This questionnaire‘s aim is to locate possible difficulties and problems related to making career decisions.

Please begin by filling in the following information:

Age: _____

Number of years of education: _____

Sex: Female / Male

Have you considered what field you would like to major in or what occupation you would like to choose?

Yes / No

If so, to what extent are you confident of your choice?

Not confident at all 1 2 3 4 5 6 7 8 9 Very confident

Next, you will be presented with a list of statements concerning the career decision-making process. Please rate the degree to which each statement applies to you on the following scale:

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

Circle 1 if the statement does not describe you and 9 if it describes you well. Of course, you may also circle any of the intermediate levels.

Please do not skip any question.

For each statement, please circle the number which best describes you.

1. I know that I have to choose a career, but I don't have the motivation to make the decision now

   ("I don't feel like it").

   Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

2. Work is not the most important thing in one‘s life and therefore the issue of choosing a career doesn't worry me much.

   Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

3. I believe that I do not have to choose a career now because time will lead me to the "right" career choice.

   Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

4. It is usually difficult for me to make decisions.

   Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

5. I usually feel that I need confirmation and support for my decisions from a professional person or somebody else I trust.

   Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

6. I am usually afraid of failure.

   Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

7. I like to do things my own way.

   Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

8. I expect that entering the career I choose will also solve my personal problems.

   Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

9. I believe there is only one career that suits me.

   Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

10. I expect that through the career I choose I will fulfill all my aspirations.

    Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

11. I believe that a career choice is a one-time choice and a life-long commitment.

    Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

12. I always do what I am told to do, even if it goes against my own will.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

13. I find it difficult to make a career decision because I do not know what steps I have to take.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

14. I find it difficult to make a career decision because I do not know what factors to take into consideration.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

15. I find it difficult to make a career decision because I don't know how to combine the information I have about myself with the information I have about the different careers.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

16. I find it difficult to make a career decision because I still do not know which occupations interest me.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

17. I find it difficult to make a career decision because I am not sure about my career preferences yet (for example, what kind of a relationship I want with people, which working environment I prefer).

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

18. I find it difficult to make a career decision because I do not have enough information about my competencies (for example, numerical ability, verbal skills) and/or about my personality traits (for example, persistence, initiative, patience).

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

19. I find it difficult to make a career decision because I do not know what my abilities and/or personality traits will be like in the future.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

20. I find it difficult to make a career decision because I do not have enough information about the variety of occupations or training programs that exist.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

21. I find it difficult to make a career decision because I do not have enough information about the characteristics of the occupations and/or training programs that interest me (for example, the market demand, typical income, possibilities of advancement, or a training program‘s perquisites).

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

22. I find it difficult to make a career decision because I don't know what careers will look like in the future.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

23. I find it difficult to make a career decision because I do not know how to obtain additional information about myself (for example, about my abilities or my personality traits).

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

24. I find it difficult to make a career decision because I do not know how to obtain accurate and updated information about the existing occupations and training programs, or about their characteristics.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

25. I find it difficult to make a career decision because I constantly change my career preferences (for example, sometimes I want to be self-employed and sometimes I want to be an employee).

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

26. I find it difficult to make a career decision because I have contradictory data about my abilities and/or personality traits (for example, I believe I am patient with other people but others say I am impatient).

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

27. I find it difficult to make a career decision because I have contradictory data about the existence or the characteristics of a particular occupation or training program.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

28. I find it difficult to make a career decision because I‘m equally attracted by a number of careers and it is difficult for me to choose among them.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

29. I find it difficult to make a career decision because I do not like any of the occupation or training programs to which I can be admitted.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

30. I find it difficult to make a career decision because the occupation I am interested in involves a certain characteristic that bothers me (for example, I am interested in medicine, but I do not want to study for so many years).

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

31. I find it difficult to make a career decision because my preferences cannot be combined in one career, and I do not want to give any of them up (e.g., I'd like to work as a free-lancer, but I also wish to have a steady income).

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

32. I find it difficult to make a career decision because my skills and abilities do not match those required by the occupation I am interested in.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

33. I find it difficult to make a career decision because people who are important to me (such as parents or friends) do not agree with the career options I am considering and/or the career characteristics I desire.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

34. I find it difficult to make a career decision because there are contradictions between the recommendations made by different people who are important to me about the career that suits me or about what career characteristics should guide my decisions.

Does not describe me 1 2 3 4 5 6 7 8 9 Describes me well

Finally, how would you rate the degree of your difficulty in making a career decision?

Low 1 2 3 4 5 6 7 8 9 High

APPENDIX F

Interview Guide

i. Sex: Male…… Female…….

ii. Level ……

iii. Age: 18 - 24…… 24 - 29…… 30 - 35…….. 36+

iv. Academic program? BA…… BSC……BFA…. Others

v. Please specify the course……..

vi. Are you are employed? Yes_____ No _____

vii. Who Funds your Education? Self_____ Parents____ Siblings_____ Family Member____ Others___

1. How would describe the course you reading?
2. How important is a University degree?
3. Briefly explain to me your understanding of personality.
4. Tell me how did you come to know about personality preferences?
5. Describe how personality influences career decision-making difficulties?
6. How does your career contribute to your life satisfaction?
7. Would you say a particular gender has an advantage in career decision making over other? If yes Why if No why?
8. In choosing a career which people do you consider necessary?
9. What are the environmental supports you will need in making a decision towards a particular career or in your career development?
10. Which obstacles do you envision in a particular career of your choice?
11. Do you entertain any fears about your career?
12. How do you understand career maturity?

13. Would you say career maturity correspond with age in some ways?
14. Do you see age as an advantage when it comes to career decision making?
15. In what way does career maturity influence career decision-making difficulties?
16. What will motivate your performance in the pursuit of a career or in career development?
17. What resources do you think or know are available for you to attain a certain career?
18. Do you have anything to add or ask?

Thank you very much

APPENDIX G

Factor Analysis

CBI Factor and Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
`Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.096	8.433	8.433	8.096	8.433	8.433
2	6.156	6.412	14.845	6.156	6.412	14.845
3	4.182	4.356	19.201	4.182	4.356	19.201
4	3.320	3.458	22.660	3.320	3.458	22.660
5	2.435	2.536	25.196	2.435	2.536	25.196
6	2.392	2.491	27.687	2.392	2.491	27.687
7	2.184	2.275	29.963	2.184	2.275	29.963
8	2.104	2.192	32.154	2.104	2.192	32.154
9	1.961	2.042	34.196	1.961	2.042	34.196
10	1.931	2.011	36.208	1.931	2.011	36.208
11	1.825	1.901	38.108	1.825	1.901	38.108
12	1.765	1.838	39.946	1.765	1.838	39.946
13	1.672	1.741	41.688	1.672	1.741	41.688
14	1.658	1.727	43.415	1.658	1.727	43.415
15	1.636	1.705	45.119	1.636	1.705	45.119
16	1.536	1.600	46.720	1.536	1.600	46.720
17	1.509	1.572	48.291	1.509	1.572	48.291
18	1.479	1.541	49.832	1.479	1.541	49.832
19	1.385	1.443	51.275	1.385	1.443	51.275
20	1.331	1.387	52.662	1.331	1.387	52.662
21	1.312	1.367	54.029	1.312	1.367	54.029
22	1.265	1.317	55.347	1.265	1.317	55.347
23	1.253	1.305	56.652	1.253	1.305	56.652
24	1.211	1.261	57.913	1.211	1.261	57.913
25	1.190	1.240	59.153	1.190	1.240	59.153
26	1.162	1.211	60.364	1.162	1.211	60.364
27	1.150	1.198	61.561	1.150	1.198	61.561
28	1.115	1.161	62.722	1.115	1.161	62.722
29	1.089	1.135	63.857	1.089	1.135	63.857
30	1.055	1.099	64.956	1.055	1.099	64.956
31	1.049	1.093	66.049	1.049	1.093	**66.049**
32	.999	1.041	67.089			
33	.952	.991	68.081			
34	.943	.982	69.063			
35	.929	.967	70.030			
36	.902	.939	70.969			
37	.895	.932	71.901			
38	.865	.901	72.802			
39	.858	.893	73.696			
40	.837	.872	74.567			
41	.817	.851	75.418			
42	.796	.829	76.247			
43	.778	.810	77.057			
44	.755	.786	77.844			
45	.738	.768	78.612			
46	.724	.755	79.367			
47	.701	.730	80.097			
48	.698	.727	80.824			
49	.675	.703	81.527			
50	.634	.660	82.187			
51	.629	.655	82.842			

52	.619	.645	83.487
53	.604	.629	84.116
54	.593	.618	84.733
55	.576	.600	85.333
56	.564	.588	85.921
57	.559	.582	86.503
58	.549	.572	87.076
59	.540	.563	87.638
60	.523	.545	88.183
61	.501	.522	88.706
62	.487	.508	89.213
63	.473	.493	89.706
64	.471	.490	90.197
65	.458	.477	90.674
66	.444	.462	91.136
67	.432	.450	91.586
68	.428	.446	92.032
69	.414	.431	92.463
70	.407	.424	92.886
71	.394	.410	93.297
72	.384	.400	93.696
73	.367	.382	94.078
74	.348	.363	94.441
75	.345	.359	94.800
76	.341	.355	95.156
77	.328	.341	95.497
78	.323	.336	95.833
79	.312	.325	96.159
80	.302	.315	96.474
81	.298	.310	96.784
82	.280	.292	97.076
83	.273	.284	97.360
84	.269	.281	97.641
85	.250	.260	97.901
86	.233	.242	98.144
87	.218	.227	98.371
88	.214	.223	98.594
89	.205	.213	98.807
90	.198	.207	99.014
91	.187	.195	99.209
92	.174	.182	99.390
93	.169	.176	99.566
94	.160	.167	99.733
95	.133	.138	99.871
96	.124	.129	100.000

Extraction Method: Principal Component Analysis.

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	12.265	36.073	36.073	12.265	36.073	36.073	7.581	22.297	22.297
2	2.259	6.644	42.718	2.259	6.644	42.718	4.494	13.218	35.515
3	1.703	5.008	47.726	1.703	5.008	47.726	2.206	6.488	42.003
4	1.335	3.927	51.653	1.335	3.927	51.653	1.949	5.732	47.735
5	1.191	3.502	55.155	1.191	3.502	55.155	1.856	5.458	53.193
6	1.130	3.324	58.479	1.130	3.324	58.479	1.631	4.797	57.990
7	1.013	2.979	61.459	1.013	2.979	61.459	1.179	3.469	**61.459**
8	.963	2.833	64.292						
9	.873	2.568	66.860						
10	.798	2.348	69.209						
11	.756	2.224	71.433						
12	.691	2.031	73.465						
13	.683	2.009	75.474						
14	.665	1.956	77.430						
15	.626	1.842	79.272						
16	.588	1.729	81.000						
17	.554	1.630	82.631						
18	.521	1.532	84.163						
19	.508	1.494	85.657						
20	.500	1.472	87.128						
21	.475	1.396	88.524						
22	.438	1.288	89.813						
23	.417	1.227	91.040						
24	.387	1.139	92.179						
25	.364	1.070	93.249						
26	.334	.982	94.231						
27	.315	.927	95.158						
28	.306	.899	96.057						
29	.272	.801	96.858						
30	.260	.765	97.623						
31	.238	.701	98.324						
32	.213	.626	98.950						
33	.187	.550	99.500						
34	.170	.500	100.000						

Extraction Method: Principal Component Analysis.

APPENDIX H

CDDQ Variance Explained

Appendix: CDDQ Factors extracted using Rotated Component Matrixa

Items	Component						
	1	2	3	4	5	6	7
CDDQ21	.791						
CDDQ20	.739						
CDDQ22	.723						
CDDQ17	.720						
CDDQ14	.717						
CDDQ15	.716						
CDDQ24	.686						
CDDQ23	.682						
CDDQ19	.673						
CDDQ18	.670						
CDDQ16	.648						
CDDQ25	.537	.468					
CDDQ30		.688					
CDDQ31		.674					
CDDQ27		.609					
CDDQ33		.598		.			
CDDQ29		.589					
CDDQ32		.559					
CDDQ26	.	.552					
CDDQ34		.551					
CDDQ28	.	.549					
CDDQ3			.620				
CDDQ13			.606				
CDDQ1			.589				
CDDQ9				.665			
CDDQ12				.662			
CDDQ2				.416			
CDDQ5					.740		
CDDQ6					.687		
CDDQ4					-.505		
CDDQ8						.746	
CDDQ10						-.700	
CDDQ11						.594	
CDDQ7							.815

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 10 iterations.

APPENDIX I

BFI Factor Variance Explained

	`Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.352	10.704	10.704	5.352	10.704	10.704
2	3.613	7.225	17.929	3.613	7.225	17.929
3	2.758	5.515	23.445	2.758	5.515	23.445
4	2.134	4.269	27.714	2.134	4.269	27.714
5	1.988	3.977	31.690	1.988	3.977	31.690
6	1.787	3.574	35.264	1.787	3.574	35.264
7	1.448	2.896	38.160	1.448	2.896	38.160
8	1.370	2.740	40.901	1.370	2.740	40.901
9	1.272	2.544	43.445	1.272	2.544	43.445
10	1.162	2.324	45.770	1.162	2.324	45.770
11	1.141	2.282	48.052	1.141	2.282	48.052
12	1.125	2.249	50.301	1.125	2.249	50.301
13	1.096	2.193	52.494	1.096	2.193	52.494
14	1.074	2.149	54.642	1.074	2.149	54.642
15	1.027	2.053	56.696	1.027	2.053	56.696
16	1.004	2.008	58.703	1.004	2.008	**58.703**
17	.976	1.951	60.655			
18	.924	1.849	62.503			
19	.904	1.808	64.311			
20	.877	1.753	66.065			
21	.826	1.651	67.716			
22	.819	1.638	69.354			
23	.805	1.609	70.964			
24	.784	1.568	72.532			
25	.767	1.533	74.065			
26	.763	1.525	75.590			
27	.729	1.457	77.047			
28	.713	1.425	78.473			
29	.693	1.386	79.858			
30	.662	1.324	81.182			
31	.639	1.278	82.460			
32	.613	1.227	83.687			
33	.595	1.189	84.876			
34	.592	1.183	86.059			
35	.571	1.143	87.202			
36	.563	1.126	88.328			
37	.534	1.068	89.395			
38	.518	1.036	90.431			
39	.504	1.007	91.438			
40	.469	.937	92.376			
41	.457	.913	93.289			
42	.443	.886	94.174			
43	.433	.866	95.040			
44	.410	.819	95.859			
45	.397	.794	96.653			
46	.379	.758	97.411			
47	.348	.695	98.106			
48	.343	.686	98.792			
49	.311	.621	99.413			
50	.293	.587	100.000			

Extraction Method: Principal Component Analysis.

APPENDIX J

CDSE Factor and Variances Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	TOTAL	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.402	25.607	25.607	6.402	25.607	25.607	3.312	13.247	13.247
2	1.791	7.163	32.771	1.791	7.163	32.771	2.742	10.968	24.215
3	1.441	5.765	38.536	1.441	5.765	38.536	2.096	8.382	32.597
4	1.258	5.033	43.569	1.258	5.033	43.569	1.916	7.665	40.262
5	1.056	4.224	47.793	1.056	4.224	47.793	1.883	7.531	**47.793**
6	.992	3.970	51.762						
7	.941	3.765	55.527						
8	.932	3.729	59.256						
9	.904	3.617	62.873						
10	.872	3.488	66.361						
11	.816	3.264	69.625						
12	.802	3.210	72.835						
13	.799	3.197	76.032						
14	.727	2.908	78.940						
15	.658	2.630	81.571						
16	.645	2.580	84.151						
17	.593	2.371	86.522						
18	.553	2.211	88.733						
19	.522	2.088	90.821						
20	.470	1.878	92.699						
21	.452	1.807	94.507						
22	.432	1.727	96.234						
23	.402	1.607	97.841						
24	.375	1.500	99.340						
25	.165	.660	100.000						

Extraction Method: Principal Component Analysis.

APPENDIX K

Factor Components Extracted for the CDSE

(Rotated Component Matrix[a])

	Component				
	1	2	3	4	5
CDSE4	.730				
CDSE5	.704				
CDSE8	.611				
CDSE3	.590				
CDSE9	.558				
CDSE7	.486				
CDSE22		.555			
CDSE19		.550			
CDSE16		-.546			
CDSE14		.503			
CDSE25		.488			
CDSE11		.478			
CDSE23		.425			
CDSE21					
CDSE20					
CDSE2			.711		
CDSE1			.666		
CDSE6			.559		
CDSE18			-.478		
CDSE17				.661	
CDSE24				.549	
CDSE10				.440	
CDSE12				.409	
CDSE13					.934
CDSE15					.922

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

APPENDIX L

Summary of the Sampled Population

	Name of College	Student Population	Proport. Sample size	Name of school	Student population	Proportionate sample size	Name of department	Levels	Student population	Proportionate sample size
1	COLLEGE OF EDUCATION	9,256	114	School of Information Studies and Communication	3,046	72	Information Studies	100	378	29
								200	203	15
								300	236	18
								400	137	10
				School of Education and Leadership	1,755	42	Teacher Education	100	510	17
								200	319	11
								300	294	10
								400	112	4
2	COLLEGE OF BASIC AND APPLIED SCIENCES	8,692	107	School of Agriculture	1,829	55	Crop Science	100	378	22
								200	203	12
								300	236	13
								400	137	8
				School Engineering	1,737	52	Biomedical Engineering	100	339	14
								200	249	11
								300	394	17
								400	225	10
3	COLLEGE OF HUMANITES	22,720	279	Business School	5,117	74	Department of Accounting	100	1600	27
								200	1600	27
								300	653	11
								400	543	9
				School of Social Sciences	14,053	205	Department of Psychology	100	648	64
								200	643	63
								300	442	43
								400	356	35