

**IMPACT OF SELF-CONCEPT ON CAREER
DECISION-MAKING SELF-EFFICACY OF
SECONDARY SCHOOL STUDENTS**



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A thesis submitted in partial fulfillment of the requirements for the degree of
MS Career Counselling and Education

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Approval Sheet

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Accepted by the Department of Behavioral Sciences (DBS)

School of Social Sciences & Humanities (S³H), National University of
Sciences and Technology, in partial fulfilment of the requirement for the award of
degree of **MS Career Counselling & Education**.

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DECLARATION

I certify that this research work titled “Impact of Self-Concept on Career Decision-Making Self-Efficacy of Secondary School Students” is my own work. The work has not been presented elsewhere for assessment. The material that has been used from other sources it has been properly acknowledged/referred.

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LANGUAGE CORRECTNESS CERTIFICATE

This thesis has been read by an English expert and is free of typing, syntax, semantic, grammatical and spelling mistakes. Thesis is also according to the format given by the university.

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To my Late Mother, Hajra Begum.

May Allah (s.w.t) bless her with all His blessings.

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Abstract

The purpose of the research is to study the impact of self-concept on career decision-making self-efficacy of secondary school students. The concept of Self-Concept is defined as a portrayal of the self in some character or position performing a set of functions, or in a group of relationships. The phenomena of Career Decision-Making Self-Efficacy (CDMSE) refers to an individual's degree of belief that one can successfully complete tasks necessary to making substantial career decisions. The study is quantitative in nature. The sample comprises of 164 O-Level Final Year-Science stream students of private secondary schools of Islamabad selected through systematic random sampling technique. For data collection, two instruments have been used; Tennessee Self-Concept Scale™, Second Edition (TSCS™:2) (1996) and Career decision-making self-efficacy Scale (CDMSE) (1996) Short Form for studying self-concept and career decision-making self-efficacy of students respectively. The results indicate that self-concept is a significant predictor of career decision-making self-efficacy. The findings and recommendations of the study have been presented in the study.

Keywords: Self-Concept, Career-Decision Self-Efficacy, Career Decision-Making Self-Efficacy.

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LIST OF ABBRIVATIONS

A–Level	Advanced Level
AGOs	Achievement Goal Orientations
APA	American Psychological Association
App_	Appendix
Annex_	Annexure
CDMSE	Career Decision-Making Self-Efficacy
CDMSE-SF	Career Decision-Making Self-Efficacy-Short Form
CDSE	Career Decision Self-Efficacy
HEC	Higher Education Commission
NEP	National Educational Policy
O-Level	Ordinary Level
PBS	Pakistan Bureau of Statistics
PIERA	Private Educational Institutions Regulatory Authority
SC	Self-Concept
SES	Socioeconomic Status
SPSS	Statistical Package for Social Sciences
STEM	Science, Technology, Engineering and Mathematics
STF	System Theory Framework
TSCS	Tennessee Self-Concept Scale

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CHAPTER 1: INTRODUCTION

1.1 Introduction

Career counseling has been recognized as an empirical cognitive problem-solving mechanism while complementing knowledge about self and world of work (Bilal & Malik, 2014). Career development is a life-long progression comprising of physiological, intellectual and emotional development. This progression is affected by multiple factors, generally classified as psychological and social factors. These factors not only impact each other reciprocally but also develop concurrently (Mc Mahon & Patton, 2006). The most important of these factors are knowledge of self, the self-belief and impact of environmental dynamics (Bozgeyikli, Eroglu, & Hamurcu, 2009).

Recently there has been extensive deliberation about the integration of career and personal counseling because of revolutionizing disposition of world of work. Traditional approach of separating an individual's career concerns from personal issues is a simple linear process. Savickas (1993) stated that career is personal thus increasing demand for a more responsive and relevant approach rather than just a problem-solving mechanism. With changing times, there has been a move towards adopting constructive approaches, since there is an increased importance for directing whole attention on all attributes and qualities of an individual (Mc Mahon & Patton, 2006).

Career Counseling is progressively perceived more as indispensable to the well-being of individuals in expeditiously transforming labor market and economy (McMahon, 2005). Mc Mahon and Patton (2006) described that career development is a dynamic progression represented

by means of its process effects, recursiveness and transformation across time as well as opportunities. Bilal and Malik, (2014) described that career development is a progressive contextual framework for developing an understanding of adolescents' decision-making in dominion of career.

Primary pursuits of adolescence is development of several aspects of identity, which is identity formation. Career exploration and formulation of career plans play an important part in overall process of identity development. Career theoreticians emphasize adolescence as a crucial developmental stage in the exploration and formation of probable career objectives. During secondary school years, students make imperative career decisions, such as opting for higher studies vs. pursuing work that will predictably influence their career goals and plans (Sarwar & Azmat, 2013; Kamran & Manzoor, 2011; Gushue, Scanlan, Pantzer, & Clarke, 2006).

Super's (1953) theory of Career Choice and Development hypothesized about developmental psychology and theories of trait-factor and personal construct. These theories originated Super's construct of self-concept. Super (1953) (as cited by Brown, 2002) further theorized that vocational selection is representation of self-concept. Super (1953) further postulated that occupational and life satisfaction are influenced by the degree by how much an individual discovers suitable means for capabilities, requirements, principles, pursuits, personal disposition and self-concept.

Schools have a central place for building citizens of future who are not only capable of managing but also have capacity to grow and prosper within a rapidly changing complex global world. Moving from primary education, secondary school education is instrumental in developing and enhancing an individual's perceptions. These perceptions move from elementary to more insightful knowledge for informed career decisions. At secondary school level, students are more

self-aware and they not only understand but also develop perceptions about themselves and the world around them. Secondary school education has been recognized as a crucial phase for the development of self-awareness, knowledge of labor market in terms of vocational choices and pertinent skills for generating productive members of society (Hussain, 2015; Lynd, 2007; Eubanks & Eubanks, 2002).

Characteristically, career exploration begins by start of secondary school. According to Super's (1990) Career Development Theory, students of secondary school education are at exploration stage (age 14-24) in their career development process (Bounds, 2013; Lynd, 2007). At this stage, individuals make an intentional effort to become familiar with themselves and discover their status in occupational realm. Through classroom learning, internships and placements experiences, job shadowing and extra-curricular activities, they attempt to recognize their pursuits, competences and discover their readiness in view of different careers. While exploring different alternatives, these adolescents make provisional career choices that enable them to ultimately pursue a career after acquiring information and gaining about tentative career choices. Super (1990) suggested that it is during the exploration stage, secondary school students start determining, constructing and establishing their career options whilst taking primary choices about their occupational and professional dominion.

1.2 Problem Statement and Justification

Globally there has been a growing concern regarding factors affecting students' self-concept and self-belief which are fundamental in their holistic development as an individual. This necessitates that career counselors, educational institutions and government legislators also adapt the laws and policies according to the changing norms of global world. Understanding

psychological make up of an individual helps in identifying their occupational interests. It also supports in bridging the gap of what the individual aspires to do and what path can be taken to reach the desired goal. This increases their career self-awareness and leads them towards taking informed career decisions.

Pakistan is a developing country and by year 2025 it will have one of the youngest and largest workforce (Ministry of Planning, Development & Reform, 2013). With an enormous resource of untapped youth potential, it is incumbent to facilitate them towards well-informed career decision making process in order to fully utilize this resource pool. Pakistan Vision 2025 intends to cash in on this demographic advantage. The concept of career counseling is still much unacquainted with in Pakistan; both students and parents may find it difficult to avail career counseling services so as to discuss and decide occupational choices and pertinent educational pathways. Thus educational institutions are producing graduates who are unable to decide their future career goals. That is fairly because they are more focused on meeting academic goals rather than facilitating individual needs of students regarding their self-concept development and career decision-making process. This increases need for reflection by policy makers so as to develop policies in view of global and local labor market demands fluctuations with aim of embracing these changing times. For this purpose, Pakistan Vision 2025 intends to focus on opportune skills development thereby vocational and technical training institutions will be built to improve employability and career counseling centres will also be created which will help students to transition into professional life successfully.

According to National Education Policy (2017), provision of counseling services is mandatory for secondary school students in order to address their career concerns; by having students to identify their self-concept development and teachers to recognize and facilitate them

to take up educational pathways as per their aptitude rather than just socially desirable fields. NEP (2009) also highlights an important factor that is to formulate educational system according to demands of labor market thus preparing students for labor market. This research aims to provide recommendations for career-related curriculum development and establishment of career counseling and guidance services. NEP (2009) aspires to develop a self-sufficient, analytical thinker, creative and dynamic individual by focusing on total personality to produce responsible members of the society and global citizen. Therefore, teachers and educational institutions must be aware of dominant factors determining career decision-making self-efficacy of a student, one of which this research aims to study that is self-concept; then it is more likely that students with dormant capabilities can be refined.

1.3 Significance of the Study

According to acquired literature, concepts of self-concept and career decision-making self-efficacy have not been researched mutually neither internationally nor nationally so this study is aimed to benefit on both perspectives.

The research is envisioned to provide guidelines and framework to manifold levels of: career counselors, educationists and policy makers in national context. The research will contribute towards developing a comprehension for counselors to gain an understanding of students' self-concept and career decision-making processes. This study proposes to help in widening horizon for career counselors to gain an insight of how individuals responds to certain career decision-making situations based on how confident they think of themselves. Study also anticipates to provide guidelines for career counselors to understand dynamics of self-concept and henceforth its effect on career decision-making self-efficacy. It also intends for providing recommendations

and suggestions for career counseling interventions in secondary school formulated for assistance towards career development of students.

Educational institutions in Pakistan are more focused on meeting academic goals rather than facilitating individual needs of students concerning their process of career decision-making thus neglecting both self-concept development and decision-making self-efficacy. The findings of study also seeks to provide strategy to build foundations for educational institutions and in particular teachers and school counselors for understanding dynamics of self-concept and career decision-making self-efficacy as they are linked with basic human development paradigms. This research also proposes to offer guidelines for educational institutions to broaden their horizon in understanding and channelizing individual needs of students instead of being focused only on meeting goals of educational institution.

In any developing country, government policies and legislations prove to be backbone of not only education but also labor market as it creates a bridge between academia and labor market. In lieu of the Pakistan's context, there is a dearth of government policies in this regard. This research intends to provide guidelines for policy making authorities relevant with current needs of stakeholders involved in educational sector as well as labor market. Although there is a growing emphasis in recently documented legislations and acts on providing career counseling services but still a lot is required to be done, especially in terms of providing careers education through curricula. This research entails to prove valuable for policy makers and educationists working on careers education in particular and development of main stream curriculum in general to inculcate careers education.

This research is intended to also promote further exploration and future research internationally and also on national level. The findings of this research may pave way towards exploration of self-concept discovery and pertinent career decision-making self-efficacy processes relevant with fields of career counselling, educational and vocational psychology. Also taking contextual factors of Pakistan's society into account, importance of self-concept along with its impact on career decision-making self-efficacy as wholesome process of career development will come under observation for further study.

1.4 Conceptual Framework

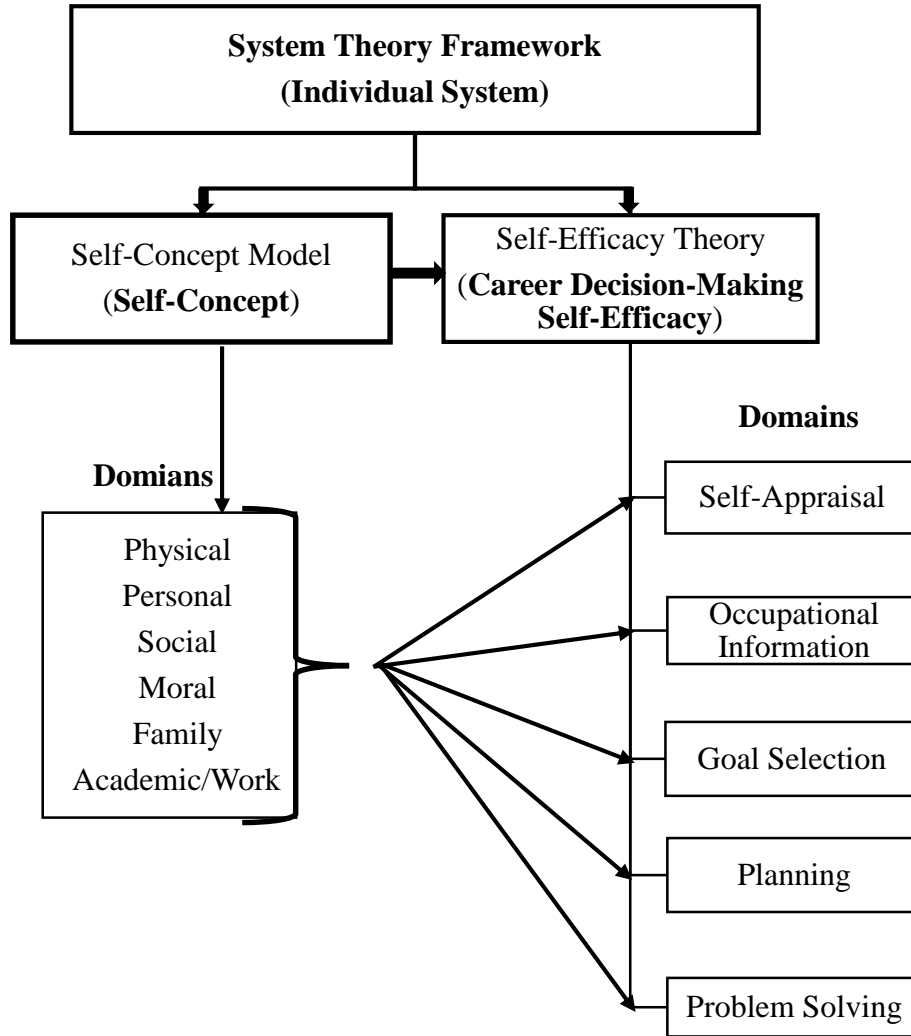
This study is based on System Theory Framework (STF) with incorporation of Self-Concept Model and Self-Efficacy Theory.

Systems Theory Framework (STF) is a theoretical underpinning that “explains for structures and classifications of influences on an individual's career development”. These systems include individual, social, and environmental/societal contexts and each of these systems is subjected to external as well as internal stimuli while simultaneously influencing each other. The central focus of the research is individual system (Patton & Mc Mahon, 2015). Within distinct and open individual system, several interpersonal influences on career development are represented such as self-concept and self-efficacy (Patton & Mc Mahon, 2015).

According to Self-Concept Model, self-concept is “an individual's insights and views of himself shaped through encounters with and understanding of surrounding environments” (Marsh & Shavelson, 1985). This model postulates that general self-concept has four domains: academic, social, emotional and physical. Academic self-concept has been further classified as: specific subject self-concept classifications and ethics. The social self-concept has been sub-divided as;

peer and significant others self-concept. The emotional self-concept denotes distinctive expressive and demonstrative phases such as pleasure, despair, and resentment. Physical self-concept comprises of physical capability and appearance self-concepts.

Self-efficacy theory outlined an individual's "self-confidence about their proficiency and competencies to generate specified levels of accomplishment that employ effect on incidents and experiences which influences their lifespans" (Bandura, 1994). Self-efficacy theory provided principal theoretical foundation for evolution and extension of career decision self-efficacy (Betz & Luzzo, 1996). Taylor and Betz (1983) explained that individuals possess five career choice proficiencies and attitudes described as: accurate self-appraisal, occupational information, goal selection, planning, and problem solving.



CHAPTER 2. LITERATURE REVIEW

The practice of career counseling is regarded as lifelong progression, in which the individuals get involved according to needs and circumstances (Super, 1953). Self-concept and career choice are interdependent constructs as evident in the widely available literature. It has been theorized that career choice is demonstrated as well as elaborated by self-concept. Career choice is developmental process wherein series of decisions are made over a period of time that is from preteen years, persevering self-concept of adolescents through excessive academic hobbies and capacity for and values of an occupational desire (Piña-Watson, Jimenez & Ojeda, 2014).

Super's (1953) theory of Career Choice and Development provided a rationale for trait-factor theory, personal construct theory and development psychology and all these theories set precedent for conceptualization of self-concept. Theory of Career Choice and Development further postulates that individual gets life and professional satisfaction on basis of his values, needs, personality traits, self-concept and self-interests. Later, Super (1980) proposed Life-Span, Life-Space Theory which regards career growth and development as lifelong pursuit. Theory emphasizes on prominence of developing a self-concept along with acknowledgement that self-concept is not only capable of change with new experiences over the period of time but also influence other constructs. The individual experiences work together with professional inclinations in constructing one's self-concept (Super, 1980).

Adolescents ought to assess all options and opportunities for purpose of creating a self-concept (Pizirtzidou, 2014). It is an important concept that constrained career developmental opportunities lead to indecision of career decision-making of preferred profession because of inadequate self-awareness, family support and attachment styles, career-related barriers and social

help perceptions, identity-related elements, self-efficacy views concerning an individual's career planning, occupational selection skills, coping techniques, and vocational interests, trait anxiety, and perfectionism. In brief, each of these character and contextual elements appear to make contributions to career indecision (Pizirtidou, 2014).

Adolescence marks dawn of human development and career development of these individuals has been regarded as a crucial part of overall education of individual (Guan, Capezio, Restubog, Read, Lajom, & Li, 2016). Newman, Obschonka, Schwarz, Cohen, and Nielsen, (2018) stated that with rapid induction of technological and industrialization era resulting in greater range of occupational opportunities in labor market, make career choices for adolescents more demanding and a complex procedure. Su, Zheng, Liang, and Tsai, (2018) described that it is found boys outperformed girls in context of making right career choices. Pfeiffer, (2008) described that aspiration has been described as academic and vocational desires that adolescents have for their future.

Schooling has a significant role in life of a student. It is considered as a second home, where students grow, get nurtured, gain new experiences and knowledge (Stevenson et al., 2014). A school has obligation to develop and empower students as responsible citizens so that they can contribute in the development and growth of national and international community. Secondary school students all around world face career decision-making challenges and each individual undergoes a process of influencing factors such as the context wherein they live, their personal propensities, and educational attainment (Werner-Seidler, Perry, Callear, Newby, & Christensen, 2017).

Schooling transition that takes place, when students shift from elementary to secondary school, suggest a significant change in students' self-concept (Booth & Gerard, 2014). The education at the secondary level is insightful, knowledgeable and assists student in their career progression. Presumably, students at elementary level are assessed to be less knowledgeable and dependent to evaluate academic scenarios and their inner self-concept in a worthier manner. The actual progression in their career takes place, when they transit from primary to secondary education level. The students' awareness increases during secondary school educational years and they focus on understanding themselves, their perceptual experiences, self-concepts and external surroundings (Booth & Gerard, 2014).

Self-concept and self-efficacy have similarities as well as differences (Diseth, Meland & Breidablik, 2014). They have similarities as both constructs are multidimensional in nature, reveal social comparison, demonstrate mastery experience and utilize appraisal as the sources of information, predicts emotion, performance and motivation. On the contrary, constructs reveal dissimilarities with respect to the context specific vs. aggregated judgment, goal reference vs. normative competence evaluation, loosely hierarchal vs. hierarchal structure, future vs. past orientation, malleability vs. temporary stability. Both self-concept and self-efficacy are multifaceted constructs and need to be examined extensively and this process should be invested in by educators in making the students being less preoccupied with normative ability school comparisons (Diseth, Meland & Breidablik, 2014). The chapter is divided as follows:

1. Self-concept

2. Career decision-making self-efficacy

3. Self-concept and career decision-making self-efficacy in adolescents in secondary school education

2.1 SELF-CONCEPT

A considerable pragmatic work has been devoted to discover, explore and comprehend self-concept. Self-concept is a process of negotiations among various external and internal factors wherein self-concept is final outcome. “It is developed by collaboration of innate propensities, biological and hormonal make-up, prospects to carry out several responsibilities, and assessments of magnitude of domains of multiple responsibilities meet with endorsements of authority figures and fellow contemporaries” (Super, 1953). Shavelson, Hubner, and Stanton (1976) defined self-concept “as sense of self shaped by an individual with respect to their interactions with the people in their surroundings”. Self-concept not only indicate present-day conduct but also determines and controls this conduct in future (Markus, & Wurf, 1987). Self-concept has been regarded as dynamic, influential, and proficient in modification. It understands, deduces and categorizes self-related activities and experiences. It has inspirational effects, providing motivations, principles, strategies, instructions for behavior and it has the capacity to alter and adjust in response to encounters from the social setting (Markus, & Wurf, 1987).

Self-concept theory is creating its mark in multiple disciplines of social sciences. Encouraged by cognitive transformation in field of psychology and career counseling, major theoretical developments have been transpired which resulted in adherence to dominant paradigms of self-concept (Rosenberg, 1989). Betz, (1994) delineated self-concept as “collection of characteristics and traits contemplated by an individual to be pertinent in vocational domain”. Earlier, Marsh (1987) assumed self-concept to be dimensionless. While Hogg and Terry, (2000)

stated that self-concept has four main categories; ideal, social, basic and transitory. Self-concept was recognized to be hierarchical and multidimensional construct (Marsh & Craven, 2006). According to study carried out by Vignoli (2015), self-concept is cognitive or thinking aspect of self and commonly refers to totality of a complex, organized and dynamic device of discovered beliefs, attitudes and opinions that all people holds to be genuine about his or her non-public life.

Self-concept is a significant factor in several educational domains (Green, Liem, Martin, Colmar, Marsh & McInerney, 2012). Self-concept is considered to be of crucial standing due to a set of reasons. Firstly, educationalists perceive self-concept as a positive construct, due to its ability of revealing true potential of human being and letting them achieve educational accomplishment. Secondly, increasing self-concept awareness among students may postulate a considerable impact on their educational development and induce a positive change in their behaviors. This enables educators in enhancing ability of learners and promoting self-concept among them (Green et al., 2012).

The determination of self-concept and school accomplishment is of prevailing significance. Students who possess negative self-concept are viewed to be victims of that negative self-concept and as a result they develop negative feelings and perceptions about themselves (Fall & Roberts, 2012). There are a certain number of dissimilarities that emerge with respect to dimensions of self-concept and their link to adjustment during transition to secondary school (Holas & Huston, 2012). Success or failure of an individual is subject to how individual configures one's self-competencies and capabilities, be it in life experiences or academic years. Consequently, school tasks accomplishment reveal its dependency on the self-concept, in which students develop a perception about their own abilities (Williamson, 2013).

2.1.1 Domains of Self-Concept

Two main broad categories of self-concept comprise of academic and non-academic self-concept (Trautner & Schwinger, 2018). Self-concept is theorized to be hierarchical and multidimensional paradigm (Arens & Morin, 2016). There are three definitions of “self”; a belief that person develops for himself is categorized as real self, ideal self is what person idealizes and aspire to be like one, while a social self is perception that individual has about what others think about him and how others perceive about him (Hattie, 2014).

Following is detailed account of these domains of self-concept.

2.1.1.1 Academic Self Concept

Academic self-concept is explained as “outlook, emotions and discernments with reference to scholarly or educational skills of an individual (Cokley, 2000)”. An important correspondence between variables of academic achievement, academic self-concept and achievement motivation was observed. Students with high academic self-concept are motivated and testify higher levels of achievement tests of mathematics (Emmanuel, Adom, Josephine, & Solomon, 2014).

Secondary school students experience lower level of self-concept when they transit from elementary school to secondary level schools (Wilson, Siegle, McCoach, Little, & Reis, 2014). This decline is an adaptive reaction in response to previously developed self-perceptions acquired during elementary school years. The students are unable to critically recognize their internal competencies and abilities and gather information from multitude of sources so an overestimation of competence takes place as they have a shortcoming related to cognitive maturity at such a young age. As development of cognitive ability takes place, students then recognize that how other

individuals visualize their skills and then they make a differentiation between their abilities and efforts. This enhances their self-perceptions accuracy resulting in enhanced self-concept with passage of time (Wilson et al., 2014).

2.1.1.2 Social Self-Concept

Self-concept is fundamental to psychological description of both individual well-being and psycho-social adjustments. Social self-concept is termed as perceptions of an individual about themselves as social beings. These perceptions are either in accordance with their interpersonal contexts or dependent on their evaluation of particular capabilities that are stimulated during an individual's social life. The social concept arises on basis of individual's self-assessment of personal social behavior within the boundaries of social contexts (Fernández-Zabala, Rodríguez-Fernández & Goñi, 2015).

Shavelson, Hubner, and Stanton (1976) described social self-concept as one of hierarchically and multidimensional domains of self-concept. Social self-concept is further divided in to two categories; one is related to family and other related to the school environment (Vogl & Preckel, 2014). Social self-concept has crucial standing as individuals create self-perceptions about what others think of them through social interactions and create perceptions about their social acceptance by people (Spilt, Van Lier, Leflot, Onghena, & Colpin, 2014).

2.1.1.3 Physical Self-Concept

It represents the public face of individual and is identified as “self-assessment of one's physical aspects and features” (Lemoyne, Valois, & Guay, 2015). Physical self-concept is

described as “perspectives of an individuals of themselves in the physical dominion” (Lindwall, Aşçi, Palmeira, Fox, & Hagger, 2011).

Physical self has been established as an imperative contributor towards comprehensive discernments of self-worth in multidimensional and categorized models of self-concept (Lemoyne, Valois, & Guay, 2015). The physical self-concept and perceived physical appearance show a noteworthy impact on the perceived competence. Physical self-concept has an association with children’s and adolescents physical activity (Babic et al., 2014). The physical self-concept (PSC) has a bidirectional interaction with participation in physical activity (PA) and this interaction influences individual’s general self-concept development (Lemoyne, Valois, & Guay, 2015).

2.1.1.4 Personal Self-Concept

Personal self-concept is stated as “awareness and assessment of utmost exclusive and distinct characteristics of an individual’s personality”. These perceptions are based on assumptions of self-fulfillment, autonomy, emotions and honesty (Goñi et al., 2015).

The importance of personal self-concept is demonstrated in how an individual views himself, from distinct perspectives that is academic, social or professional perceptions. Personal self-concept is an individual perception about his personal self be it personality or individual facets (Goñi Palacios et al., 2015). Personal self-concept perspectives are created within a specific private sphere of life and play fundamental role in influencing behavior and conduct of individual (Spilt et al., 2014).

2.1.1.5 Moral Self-Concept

It is characterized as an individual's portrayal of their moral behavioral inclinations (Sengsavang, & Krettenauer, 2015). The domain of moral self-concept denotes ethical and motivational development. The magnitude to which individuals assimilate and incorporate ethical and moral principles into their individuality has been observed to be of prominence importance for daily moral working and performance. Among adolescents, moral self-concept has been shown to predict prospective social competency and adaptive conduct (Coelho, Marchante & Jimerson, 2017).

Moral self-concept when left unattended leads to dissention between moral identity of person and his moral self which results in feelings and emotions of distress (Seppälä, Simon-Thomas, Brown, Worline, Cameron, & Doty, 2017). Moral self-concept is pivotal in leading towards pro-social behaviors and avoidance of antisocial behaviors (He, Zhu & Zheng, 2014). The lack of moral self-concept development is believed to predict both rule breaking and aggression (Hardy, Bean & Olsen, 2015).

2.1.1.6 Family Self-Concept

Family self-concept is another sub-domain of self-concept (Montroy, Bowles, Skibbe, & Foster, 2014). It is defined as perceptions developed as a result of family dynamics, functioning and structure (Sweeney, & Bracken, 2000)

Role of family self-concept on students' multidimensional self-concepts is of fundamental importance. Students belonging to reconstituted families display comparatively lower levels of self-concepts than intact families (Idan & Margalit, 2014). Family self-concept has shared and

direct impacts of externalizing problems in the adolescents (Coelho, Marchante & Jimerson, 2017). Family self-concept has a relationship with adolescent's mental health (Butler, 2015). There is a considerable link between family self-concept and problem behaviors in adolescents (Idan & Margalit, 2014). Among distinct student groups of normal achievers and students with learning disabilities risks, role of family self-concept is observed as enhancing self-concept and self-esteem of students (Emam & Abu-Serei, 2014).

2.1.1.7 Work Self-Concept

Another domain of self-concept is work self-concept (Coelho, Marchante and Jimerson, 2017). It is defined as how individuals perceive their performance in work place settings and how they believe that others perceive them (Hattie, 2014). An individual can hold wide-ranging illustrations of one's self in work self-concept in which they can define themselves in provisions of distinctive traits, bidirectional interpersonal relations or social communal affiliations (Pajares, & Schunk, 2001). Work self-concept is described as degree to which people perceive their own work related attitudes, values, needs and abilities (Fitts, & Roid, 1964).

There is a significant role of work self-concept and professional autonomy in working professional nurses (Lee & Yang, 2015). The conditions that are responsible to create a dedicated work self-concept show a noteworthy difference of work self-concept in secondary and primary school teachers (Hoeve, Jansen & Roodbol, 2014).

2.2 CAREER DECISION-MAKING SELF-EFFICACY (CDSE)

Bandura (1977) initially presented concept of self-efficacy, which is then followed by research scholars in a myriad of disciplines that is; individual welfare, careers and academia. Self-

efficacy is an important aspect that helps in understanding concept of career development. Self-efficacy is considered to get affected by behaviors and their surrounding environment and in turn self-efficacy also influences them (Sheeran, Maki, Montanaro, Avishai-Yitshak, Bryan, Klein, & Rothman, 2016). Individuals, who have a focus on acquiring relevant skills and knowledge that suits their career are believed to be as competent for acquiring knowledge and skills based on self-directive and effective environments. Self-efficacy is subject to both on task outcomes and input that is retrieved from surrounding environments.

General self-efficacy theory has been merged with career decision self-efficacy framework appearing in expanded area of vocational psychology to provide most promising results for comprehensive career development (Kelly & Hatcher, 2013). General self-efficacy in career counseling domain has provided a great rise to potential of career self-efficacy which is foundation of CDMSE framework. Hackett and Betz (1981) pioneered the phenomena of career decision-making self-efficacy in order to understand beliefs of students towards their career-related capabilities as well as educational capabilities. Career decision-making self-efficacy (CDMSE) also referred to as career decision self-efficacy (CDSE), has been developed into an instrument and introduced into the realm of career counseling by Taylor and Betz (1983). “It is an individual’s self-belief that one can successfully accomplish undertakings and responsibilities essential for constructing career decisions” (Taylor & Betz, 1983).

One of the most important factors that impact process of career counseling are inclusive of self-belief, effects of environmental dynamics and knowledge of self (Bozgeyikli, Eroglu, & Hamurcu, 2009). Regardless of gender, career decision self-efficacy is connected with right choice of occupation followed by specific behavior which is important for making right career choices (Rottinghaus, Buelow, Matyja, & Schneider, 2012). CDMSE model also provides reliable results

for career decisions in the individuals. Career decision self-efficacy is affected by contextual in addition to modifications in individual predispositions (Bounds, 2013). For instance, age, gender and other predispositions are considered as individual factors, while learning experiences and family backgrounds are reflected as the contextual variables. Ethnic identity, career decision self-efficacy and academic self-concept are correlated. Academic self-concept is revealed as fundamental marker of career decision self-efficacy as evidence has revealed that a strong connotation exists among career decision self-efficacy and undertakings of career exploration and distinguishing the vocational self-concept (Bounds, 2013).

Career decision self-efficacy is a meaningful construct which impacts career decision making behaviors of students as it is a perception that individual has to complete specific career based tasks (Choi, Park, Yang, Lee, Lee & Lee, 2012). There is an association between math self-efficacy and career decision self-efficacy (Garcia & Pintrich, 2012). The prevailing predictors of career decision self-efficacy are inclusive of ethnic identity, socioeconomic status, chance to acquire quality level education, availability of career based resources and career adaptability (Wright, Jenkins-Guarnieri & Murdock, 2013). Career decision self-efficacy demonstrated negative association with career undecidedness, vocational alternatives and behaviors associated to the career exploration and also observed an association between task accomplishment and career decision-making self-efficacy.

According to study conducted by Hou, Wu and Liu (2014) career decision self-efficacy is the pertinent scale that is used to measure degree of belief that individual possesses about completing necessary task successfully in order to make sure that significant career decisions have been made. Research by Jiang (2014) has further demonstrated that scale of career decision-making self-efficacy can also be used for a short form which is also regarded as one of the most

used instruments incorporated by individuals in wake of taking career-related decisions providing them self-efficacy. Study has further explained that career decision self-efficacy is construct which was first introduced by Hackett and Betz in 1980 in order to demonstrate belief of college students towards their own career-related capabilities as well as educational capabilities. For this purpose, Di Fabio, Palazzeschi and Bar- On (2012) stated that variety of career options should be assessed in order to realize which career decision can provide higher level of self-efficacy in students.

Research carried out by Wright et al. (2014) illustrates that CDMSE framework is designed for individuals to comprehend extent to which they can make career-related decisions and knowing that they can perform tremendously in chosen career. It has also been mentioned in research of Garcia et al. (2015) that construction of scale in the framework of CDMSE is done through five competencies of career choice in the model of career maturity which can later be assessed in inventory of career maturity. Study further demonstrated that CDMSE is identification of behaviour of individuals which is pertinent to their self-appraisal accuracy, occupational information they gather, selection of their goals, future planning and problem-solving initiatives. It has been one of the reasons that study of Komarraju, Swanson and Nadler (2014) has professed that self-efficacy expectations in the domain of career decision making are tasks that are assessed by individuals in order to indicate if they have an ability to complete provided task successfully.

According to empirical analysis conducted by Komarraju, Swanson and Nadler (2014), career decision making self-efficacy scale is one that is also used for purpose of counseling as well as a pre-post measurement for evaluating interventions of a career that was desirable. Study has further explained that CDMSE is the one framework that can show reliable results and consistency in decision-making process regarding career. Research undertaken by Kelly and Hatcher (2013) has professed that self-efficacy theory has merged with the CDSE framework with protracted area

of vocational psychology with most promising results. Research has also opined that self-efficacy in career domain has also provided a great rise to prospect of career self-efficacy which is crust of CDSE framework. Research of Guan et al. (2016) has defined that CDSE is regarded as broad label which is used to encompass expectations of self-efficacy considering wide gamut of behaviours that are being associated with vocational adjustment and career choice as well as career development.

According to the Meta-analysis conducted by Ye (2014), career self-efficacy can be related to different aspects of career development in which CDMSE includes all kinds of self-efficacies. Research further explained that it includes mathematics and academic career self-efficacy, occupational self-efficacy and career decision making self-efficacy. Research by Fabio et al. (2013) has explained that main focus of career decision making self-efficacy is on process of decision making for career development. According to research conducted by Bullock-Yowell, McConnell and Schedin (2014), CDSME model of career decision making has been espoused by relevant and comprehensive decisions made by individuals for their career development which starts from career counselling through their academics.

It has been one of reasons that Makransky Rogers and Creed (2015) stated that self-efficacy that is career-related has subsequent expectations that have been recognized as an important variable in wake of understanding as well as influencing career development in individuals. Regardless of gender, Rottinghaus et al. (2012) stated that career-related self-efficacy is associated with right choice of career followed by specific behaviour which is important for making the right career choices. Therefore, literature has identified that CDMSE model is not only important but also facilitates in providing reliable results for career decision making process for concerned individuals.

Choi et al., (2012) explained career decision making self-efficacy as a perception that individual has to complete specific career based task. Bounds (2013) notified that career decision making self-efficacy is now named as career decision making efficacy. This variable is affected by both contextual and individual modifications. For instance, age, gender and other predispositions are deemed as individual factors, while learning experiences and family backgrounds are deemed as contextual variables. Choi et al., (2012) argued that career decision self-efficacy is a significant construct that impacts the career decision making behaviors of students. Previously, research investigations has revealed that career decision making self-efficacy demonstrated a negative association with career indecision, vocational alternatives and behaviors associated to career exploration (Wright, Jenkins-Guarnieri & Murdock, 2013). Research investigation by Wright, Jenkins-Guarnieri & Murdock (2013) reveal association between task accomplishment and career decision self-efficacy, in sample of African Americans. Choi et al., (2012) explained that theory of social cognitive career is deemed useful in recognizing behavioral influencers of career development. Garcia et al., (2012) revealed an association between math self-efficacy and career decision self-efficacy. On the contrary, Wright, Jenkins-Guarnieri & Murdock (2013) professed that a prevailing predictors of career decision self-efficacy are inclusive of ethnic identity, socioeconomic status, chance to acquire quality level education, availability of career based resources and career adaptability.

Leong & Leong (2014) notified that process of career development is affected by career indecision, job satisfaction and career interest. In context of self-efficacy, most robust markers are inclusive of extraversion and conscientiousness. Arguably, if individuals experience negative career thoughts when they make a decision related to career, outcome may be ineffective decisions and lower decision making capabilities (Kalra et al., 2014). In context of social cognitive decisions

self-efficacy, cultural mistrust is a factor that is deemed to impact decision making process significantly.

2.3 SELF-CONCEPT AND CAREER DECISION-MAKING SELF-EFFICACY OF ADOLESCENTS IN SECONDARY SCHOOL EDUCATION

According to study conducted by Choi et al. (2012), System Theory Framework (STF) is a theoretical foundation that accounts for structures of impacts on an individual's professional development. Study further explains that these systems consist of the individual, social, and environmental/societal contexts and every one of these structures is subjected to external as well as internal stimuli while simultaneously influencing every different aspect of career decision making. However, research carried out by Koumoundourou, Kounenou and Siavara (2012) professed that crucial awareness of domains is mainly associated with career decision making in adolescents because, within distinct and open character system, several interpersonal impacts on professional development are represented inclusive of their self-concept and self-efficacy.

One of major contributions in field of career decision-making self-efficacy has been made by Gadassi, Gati and Wagman-Rolnick (2013) who professed that self-concept model postulates that the overall self-idea amongst adolescents has four domain names: academic, social, emotional and physical. Research has further demonstrated that academic self-idea may be further divided into difficulty particular self-idea classifications and ethics; social self-idea can be sub-divided into; peer self-idea and sizeable others self-concept; and emotional self-idea denotes exclusive emotional levels which include happiness, depression, and anger. Therefore, bodily self-idea in adolescents encompasses bodily potential and physical appearance self-concepts that affect their overall self-efficacy in career decision-making process. Hence, a research conducted by Germeijs

et al. (2012) establishes that career development is a lifestyle long system which includes bodily, cognitive and emotional development. Research has further demonstrated that there are lots of factors which have an effect on lifelong profession improvement system and those are commonly categorized as mental and social factors.

Jansen, Scherer and Schroeders (2015) described that self-concept and self-efficacy are recognized as two most prevailing motivators of educational outputs. The peer ability, educational outcomes and opportunity to learn are based on differential characteristics in between aforementioned constructs. Average peer achievement is a significant predictor for self-concept, and inquiry based learning opportunities are recognized as a prevailing marker of self-efficacy. Both are different with respect to educational outcomes; students achieve motivation that is future oriented, in specific career choice that inspires them and this could be predicted by their self-concept and on other hand current ability of students can be better predicted by construct of self-efficacy.

Research of Schwarzer and Warner (2013) has further demonstrated that low self-assurance tiers of career selection self-efficacy have been associated with issues along with profession indecision and restrained profession exploratory behaviours. Therefore, Di Fabio (2014) professed that it is vital to study diverse methods wherein systemic elements can impact youngsters and adolescents and their typical professional choice self-efficacy so that they can assist college and career counsellors with addressing these troubles. Research undertaken by Michael, Most and Cinamon (2013) also professed that professional development is an important undertaking amongst youngsters which normally starts in centre school and progresses during the lifespan. Study further defined that this project is impeded for plenty of adolescents, especially those from

low socioeconomic backgrounds and inner-town faculties who are at hazard for low educational attainment, confined destiny career alternatives, and significantly reduced earning potentials.

Wu, Watkins, and Hattie, (2014) examined self-concept in the secondary school students and defined it as an expression of one's feeling about self. Self-concept is associated to a myriad of desirable outcomes, for instance, as self-concept of student is reckoned to be high, it impacts coursework selections, academic achievement and educational aspirations of students. Students' academic achievements are based on academic self-perceptions which signifies role of self-concept in academic and educational achievement of student. Self-concept has been identified as protecting students from getting involved and engaging in bullying activities in schools and fulfils ultimate aims of academic education.

Excessive worry of failure, lack of duty and a disproportionate level of responsibility avoidance can cause failure in career decision self-efficacy of adolescents (Bieri Buschor, Berweger, Keck Frei, & Kappler, 2014). It is vital to understand diverse methods wherein systemic elements can impact youngsters and adolescents and their career decision-making self-efficacy so that they can assist college and career counselors with addressing these troubles (Di Fabio, 2014). Braunstein-Bercovitz, (2014) stated aspects that affect career decision-making self-efficacy in adolescents broadened with aid of affecting each different one at same time and most critical function which impacts vocational development is talent of individual.

As a dimension of construct, Ferrari, Nota and Soresi (2012) stated that SES commonly carries one or greater of the subsequent factors that affect career decision self-efficacy in adolescents: parental educational attainment and occupational repute and circle of relatives' earnings; all of these elements, in addition to such corresponding variables as values, possibilities,

and parental encouragement, serve to enhance or restrict a adolescence's capacity of taking right career-related decisions. Coetzee and Harry (2014) proposed that socioeconomic frame (SES) of an individual's circle of relatives can bring improvement in career decision-making self-efficacy. Along with supportive surroundings, an individual's potential occupational success can be predicted. Adolescents vulnerable to low socioeconomic backgrounds and educational attainment can face dilemma of constricted development and earning potential (Rottinghaus et al., 2012). Such adolescents have higher rates of unemployment, lower excessive college graduation costs, and are over-represented in less popular professions and non-academia-restricted academic pathways while matched to respective age-fellows.

The low self-assurance tiers of career decision-making self-efficacy have been linked with issues of professional indecision and restrained professional exploratory behaviors (Schwarzer & Warner, 2013). Michael, Most and Cinamon (2013) described that professional development and career decision-making self-efficacy are important undertakings amongst adolescents which normally starts in the secondary school and progresses during lifespan. This career development is impeded for plenty of adolescents, especially from less privileged socioeconomic circumstances and innermost faculties are at vulnerability for low scholastic achievement, confined prospective career alternatives, and significantly lowered income opportunities.

Self-concept model postulates that overall self- concept amongst adolescents has four domain names: academic, social, emotional and physical (Gadassi, Gati & Wagman-Rolnick, 2013). The phenomenon of self-concept and sense of belonging are reasoned to have an association between them however these variables reveal different results on sample of transnational students (Curtin, Stewart, & Ostrove, 2013).

Given important roles of CDSE and career maturity in career improvement, there is a need to understand place of a particular context within career behavior. In a swiftly transforming world of work and in understandings and structures of career development; relevant modifications are going on within young generation's labor market and also in adolescent educational and career pathways (Cascio, Guzzo, Pace, & Pace, 2013).

There are lots of factors which have an effect on lifelong professional development process and commonly categorized are the mental and social factors (Germeijs, Luyckx, Notelaers, Goossens & Verschueren, 2012). The socioeconomic status (SES) is commonly found to be one of greater of subsequent social factors that induce, prompt and affect career decision-making self-efficacy in adolescents accompanied by parental educational attainment and occupational repute and circle of relatives' earnings in addition to corresponding variables such as values, possibilities, and parental encouragement, serve to enhance or restrict an adolescence's capacity of taking right career-related decisions (Ferrari, Nota & Soresi, 2012).

As stated by Gadassi, Gati and Dayan (2012), process of career decision-making self-efficacy was proved to exhibit encouraging projections on professional development progression and resultant propositions for the youngsters. The personality features of every student abilities, cognition, attitudes, career decision-making self-efficacy and motivations intensely donate towards studying method, facilitating or hindering it and can ultimately lead student to school failure (Koen, Klehe & Van-Vianen, 2012).

A positive self-concept is highly crucial pertaining to adolescents in order to enable them make appropriate decisions regarding their career (Zolkoski & Bullock, 2012). Adolescents appear uncertain and insecure when it comes to aptitude and occupational choices. They tend to base their

ideas on destiny and maintain that their occupational future relies upon on fate and uncontrollable activities. Thus adolescents either avoid exercising the career choice-making process or use inappropriate decisional strategies (Jadidian & Duffy, 2012). According to study conducted by Cascio et al. (2013), in a time of change inside world of work and in understandings and structures of career, associated modifications are going on within young people's labour market and in adolescent educational and career pathways. Study has further demonstrated that given important thing role of the CM assemble and CDSE in career improvement, research wishes to make clear place of a context within career behaviour. Another study conducted by Koen et al. (2012) professed that personality features of every student abilities, cognition, attitudes, and motivations can intensely decide studying method, facilitating or hindering it and can ultimately lead student to high school failure.

According to empirical analysis conducted by Braunstein-Bercovitz et al. (2012), adolescents with high degrees of hysteria, poor thoughts approximately about themselves and identity issues discover extra trouble in choosing their personal route of look at as compared to their peers who do no longer broaden those problems. Research further explained that these topics, like most adolescents who're indecisive, show low, a poorly dependent identification, helplessness, high tiers of frustration and a selection making is particularly complex for the duration of formative years, that's an essential duration of the transition. As per study of Song and Chon (2012), adolescent has to go through evolution task of making best alternatives for his destiny independently, in particular at college and in a continuously evolving society, without reference factors.

On other hand, Zolkoski and Bullock (2012) professed that concerning faculty choices, in particular, many younger humans appear like unsure and insecure, tending to make outside

assignments and they maintain that destiny relies upon on fate and uncontrollable activities and absence consider of their selection-making abilities and to use insufficient decisional strategies (as an example: procrastination and avoidance of the decision external locus of control. Therefore, a positive self-concept is highly crucial to be pertaining to adolescents in order to have them make appropriate decisions regarding their career.

Career decision-making progression and exploration of a profession normally starts off early in adolescents but it is not until college students attain advanced comprehension and capability and understand that deciding on a career turn out to be a high priority undertaking that needs to be accomplished at the earliest (Stărică, 2012).

2.4 LATEST RESEARCH STUDIES

2.4.1 RESEARCH STUDIES IN INTRENATIONAL CONTEXT

Based on pragmatic observations and experiences, self-concept has been described with respect to its three facets: attitudinal, conceptual and perpetual (Scalas, Marsh, Vispoel, Morin & Wen, 2017). One of predominant findings of self-concept and career decision making self-efficacy in adolescents have shown in study of Ogutu, Odera and Maragia (2017) which at professed that self-efficacy have an impact on profession selection making; this has been shown that in Kenya by means of a statistically giant relationship among self-efficacy and profession choice making whilst correlation was run and also while MLR became significant whereas controller variables such as gender, age and kind of faculty attended by way of students also have an effect on profession selection making both negatively or undoubtedly. Exploration of African American youth' career improvement has won increasing consideration in light of research of Bounds (2013) describing numerous limitations impacting their instructional and career improvement and desires;

Social Cognitive career concept (SCCT) changed into used as a theoretical framework to help shed light on contextual factors that have an effect on their career development.

According to study conducted by Mueller and Dato-on (2013), development of era, industrialization and greater range on labour market make profession choice for adolescents' extra tough and complex procedure. Consequently, study of Nota, Santilli and Soresi (2016) stated that professional desire implies new demanding situations for school counsellors and educational psychologists that is a good way to pick maximum suitable career. Research of Pizirtidou (2014) stated that adolescents ought to assess all options and opportunities for purpose of creating a self-concept. Study further explained that it's an important concept that constrained career developmental responsibilities growth difficulty of career-making preference profession indecision amongst adolescents that has been related to a big selection of variables, which includes: inadequate family aid, tricky interplay styles, and attachment, career-related barrier and social help perceptions, identity-related elements, self-efficacy beliefs concerning one's career planning, choice-making skills, coping techniques, and vocational interests, trait anxiety, outside locus of manage, and perfectionism. In brief, each some character and contextual elements appear to make contributions to profession indecision

According to study conducted by Guan et al. (2015), adolescence marks dawn of human development and career development of these individuals has been regarded as a crucial a part of overall education of person. Research carried out by Piña- Watson, Jimenez and Ojeda (2014) professed that improvement studies posit that profession choice is development process wherein series of decisions are made over a period of time this is from preteen years, persevering self-concept of adolescents through excessive academic hobbies and capacity for and values of an occupational desire. Research by Oztemel (2013) opined that training and occupational aspirations

relate to how higher cost assigns to formal training and long way they intend to pursue it all for ensuring their own self-efficacy in near future while they will be making career decisions. Study by Bullock-Yowell et al. (2012) professed that it is in the experience that kind of occupation, which an adolescent goes into, determines manner of life and how lifestyles are spent. On the other hand, Clinkenbeard (2012) professed that aspiration has been described as “academic and vocational desires” that adolescents have for their destiny.

Van der Beek, Van der Ven, Kroesbergen, and Leseman, (2017) examined how self-concept mediates relationship between achievement and emotions in mathematics. There is an established and comprehensive mediation of self-concept on the relationship between mathematics achievement and emotions. Advanced self-concept meant enhanced sense of fulfillment and gratification and a reduced amount of math anxiety in high grade attaining students when equated with mediocre and low scoring fellow students.

Coelho, Marchante, and Jimerson, (2017) examined stimulating a constructive school shift through a randomized control trial to study self-concept and self-esteem. Transitioning in school levels is a prominent age-linked experience influencing adolescents. As students move from elementary level to secondary level school, self-concept grows progressively. This increased freedom that students experience leads towards giving them higher opportunities to be a part of activities in which they consider themselves as competent. Social and physical self-concept exhibited no difference among students transiting to higher grades.

Ehrlich, (2017) used confirmation model to additionally comprehend discrepancy and peculiarity concerning individual-self and collective-self. Increasing levels of self-concept has a trivial association with gender differences. Self-concept among students on basis of gender

differences revealed its association with future identity and thus stated that self-concept is grounded in idea of the sense of self, having a multitude of dimensions of self, with respect to others.

Direito, Connolly, Simon, and Trevethan, (2017) observed gender variances in self-concept, interest in science subjects and occupational ambitions. Girls' self-concept concerning science subjects is significantly lower as compared to self-concept of boys. Girls' self-concept is a crucial factor in affecting their science interest when compared to boys' science interest.

Arens, and Morin, (2016) examined configuration and school-grade linked variation of multifaceted self-concept mechanisms for students engaged in Exploratory Structural Equation Modelling (ESEM). The supremacy of investigative, experimental and empirical structural equation model was reinforced when compared with confirmatory factor analyses for instruments and social self-concept is considered to be structured, multidimensional and hierarchical.

Khan, Gagné, Yang, and Shapka, (2016) explored association among self-concept, offline and online social realms of adolescents. Self-concept and offline social life is moderately affected by online socializing. The connection between self-concept and online socializing is moderated by adolescents reported peer support in their daily actual life.

Guan, Capezio, Restubog, Read, Lajom, and Li, (2016) explored how role of traditions affects interactions among parental assistance, career decision-making self-efficacy and career adaptableness. There is substantial proof for school principals to invest in self-esteem programs, they should advocate ways and approaches that could possibly foster self-concept and self-esteem among secondary school students. Parental support is directly related with career decision self-efficacy and career adaptableness. The provisional subsidiary influences of parental support in

forecasting career adaptableness through career decision self-efficacy are greater among students with less traditional views than with those possessing higher traditional beliefs.

Cheung, and Jin, (2016) investigated bearing influence of a curriculum module of career exploration on career decision-making self-efficacy, compliance, and interpersonal collaboration in Hong Kong. Students experience vocational uncertainty in career exploration activities. The involvement in a curriculum module of career exploration enhances proportion of student's exploration in career undertakings and extent of profession-related evidence they obtain thus augmenting their concentration of vocational decidedness and career decision-making self-efficacy. There are vocational satisfaction ratings but no differences could be seen with respect to the self-efficacy expectations and age, ethnicity or gender-related differences.

Crocetti, Rubini, Branje, Koot and Meeus (2016) conducted multi-phase longitudinal and multi-layered informing research on development and intergenerational transmission to illustrate self-concept (SC) in adolescents and respective parents. There is an impact of family type and age on the adolescent's self-concept that belonged to low and high achieving secondary schools. Adolescent males have higher SCC than females and parents testified advanced SCC than children, and it improved over course of time and this finding was not mediated by gender of adolescent. Parents transfer self-concept clarity to their adolescents.

Fan, (2016) studied how different thinking styles of university students interact and show a relationship with career decision-making self-efficacy. Students' career decision-making self-efficacy is positively affected by means of creativity-generating thinking styles but insignificant relation was observed between career decision-making self-efficacy and thinking styles which are norm conforming.

Chiesa, Massei, and Guglielmi, (2016) explored transformation of career decision-making self-efficacy among Italian school students. Career decision self-efficacy is effectively increased as a result of systematic vocational interventions system. Students' expectations and motivation to change moderately affects association between career decision-making self-efficacy and career choice anxiety.

Blakely-McClure, and Ostrov (2016) examined potential bi-directional interdependence between self-concept and peer relations in terms of interpersonal hostility, interpersonal persecution, and domain specific self-concept. Interpersonal hostility is related with a decline in academic self-concept in middle adolescence and strengthening in sports self-concept in youth. Above average levels of domain specific self-concept direct a decline in interpersonal hostility across the transition to adolescence.

Cvencek, Kapur, and Meltzoff, (2015) studied how self-concept of elementary school students in Singapore correlates with math achievement, stereotypes. Positive self-concept influences academic achievement of students positively and self-concept postulates an indirect and direct impact on student achievement. Individual variances in scholastic features may be a valuable apparatus for educationalists in measuring and evaluating the students' educational output.

Alvarez, Suarez, Tuero, Nunez, Valle, and Regueiro, (2015) explored family involvement, adolescent's self-concept and educational accomplishment. There is a relationship between educational support from family and academic achievement among secondary school students and it influences the adolescent's self-concept. Parental support is a significant marker of student's self-concept and pose a substantial impact on educational accomplishment of student.

Wang and Neihart (2015) explored association of self-concept with academic self-efficacy amongst the 2e (twice exceptional; students with learning and attention issues) students. It was observed in earlier studies that students who were vulnerable with respect to their psychological traits, revealed lower academic self-efficacy and self-concept and that these vulnerabilities are leading causes of these students experiencing academic failures. Students may successfully attain highest academic self-efficacy and self-concept that in return become the part of their academic success.

Veiga, Garcia, Reeve, Wentzel, and Garcia, (2015) illustrated that adolescents' engagement in school is highly correlated with their self-concept. School adjustment among adolescents is based on the paradigms of engagement in school and self-concept. The early adolescents have high self-concept and they continuously narrate above average intellectual, affective, social, and personal activity commitments compared to students with subdued self-concept. The middle adolescents possessing extraordinary self-concept misplace respective earlier high levels of intellectual and agentic commitment.

Xu, and Tracey, (2015) conducted an investigation of intermediation influence of career decision self-efficacy to affirm uncertainty forbearance with career indecision. Career decision-making self-efficacy interceded and intermediated relationship of ambiguity tolerance by means of deficiency in feeling motivated, overall uncertainty, nonexistence evidence, and unreliable information. There was a relatively weak mediation influence of career decision self-efficacy on relationship of uncertainty forbearance with demotivation feeling.

Garcia, Restubog, Bordia, Bordia, and Roxas, (2015) investigated contributing role of appropriate and circumstantial assistance and career decision self-efficacy towards career

optimism. The appropriate and circumstantial assistance of parents and teachers is directly related with career optimism and these associations completely mediate career decision-making self-efficacy. CDMSE is identification of behavior of individuals which is pertinent to their self-appraisal accuracy, occupational information they gather, selection of their goals, future planning and problem-solving initiatives.

Makransky, Rogers, and Creed, (2015) applied Rasch model approach and analyzed paradigm validity and magnitude invariance of the career decision self-efficacy scale. Career decision-making self-efficacy has subsequent expectations that have been recognized as an important variable in wake of understanding as well as influencing career development in individuals. There is substantial evidence for subject matter, organizational, and functional characteristics of validity while independently applying five subscales. The inconsistency magnitude confirmation is established throughout grades although distinct items displayed item operational variance across gender, achievement level, and age-groups.

Srivastava, and Joshi, (2014) explored whether self-concept and self-esteem in adolescents are interrelated and interconnected. Both self-concept and self-esteem are decisive components of an individual's lives as they can influence how an individual develops during childhood and grows into an adult. There is an affirmative association between academic self-concept and self-esteem of urban and rural males and females in high-ranking and low-ranking facility schools. Thus it is extremely important for adolescents to develop a constructive self-concept and self-esteem for them to have a likelihood for a contented and satisfactory future.

Parker, Marsh, Ciarrochi, Marshall, and Abduljabbar, (2014) examined phenomena of juxtaposing self-concept and math self-efficacy as interpreters of long-term achievement

outcomes. Self-efficacy and self-concept suggest different core developments and both are crucial to comprehending the lasting success results. Adolescents are in age where they can retain to explore one-of-a-kind career choice and different options at same time as starting to formulate for alternative choices inclusive of attending university, trade faculty, or getting without delay into team of workers.

Jiang, (2014) explored relationship of career decision- making self- efficacy with emotional intelligence while considering national and gender variations. Career decision-making self-efficacy is regarded as one of extensively applied questionnaire incorporated by individuals in wake of taking career-related decisions providing them self-efficacy.

Marx, Simonsen and Kitchel (2014) examined exactly how career decision self-efficacy is subjective to association of tributary agricultural educational curricula and social influences. Adolescents inclined towards superiorly professions no longer appear to be altered by characteristic features regarding their occupational distinctiveness. Appraisal of career decision self-efficacy has highlighted social tasks which is claimed as an important entity of social competence in adolescence and youth.

Ye, (2014) explored importance of career decision-making self-efficacy among Chinese graduates and risk factors associated with it. Career self-efficacy is associated to different aspects of professional development in which CDSE includes all forms of self-efficacies for instance; mathematics and academic career self-efficacy, occupational and career decision making self-efficacy.

Bullock-Yowell, McConnell, and Schedin, (2014) investigated career decision-making self-efficacy, adverse reasoning, and decision-making difficulties in certain and uncertain students.

The CDSE is most pertinent and comprehensive model for the decisions made by individuals for their career development; which commences from career counselling throughout their academic life.

Hou, Wu, and Liu, (2014) illustrated just how career adaptability among Chinese graduates is affected by career decision-making self-efficacy and their preemptive predisposition. Career decision-making self-efficacy scale used to determine intensity of confidence that a person possesses about successfully completing necessary tasks to ensure that significant career decisions have been made.

Jung, Jeong, and Yoo, (2014) examined relations between career decision self-efficacy, satisfaction in major and vocational distinctiveness of students of nursing. Career decision-making self-efficacy is considerably related with satisfaction in major and career identity of nursing students. It is reasoned indispensable to cultivate and progress an efficient intervention system to develop and expand contentment in subject majors, career decision self-efficacy and vocational distinctiveness of students of nursing.

Di Fabio and Saklofske, (2014) demonstrated comparison of capability and self-description trait emotional intelligence, fluid intelligence and predisposed traits in career decision self-efficacy. Main focus of career decision making self-efficacy is on process of decision-making for occupational development. The variety of career options needs to be assessed in order to realize which career decision can provide enhanced degree of self-efficacy in students.

2.4.2 RESEARCH STUDIES IN NATIONAL CONTEXT

Ahmed and Zaman (2018) explored self-concept and well-being with respect to perspectives of identity and existence in adolescents of Rawalpindi and Islamabad. Adolescents display their traditional presentation of self-concept through their societal uniqueness in connection with explicit notions of identified customary gender roles orientated to spiritual and expected associations approved by community. There are numerous spheres of self-concept, within which children characterize themselves in an explicit traditional framework.

Najmi, Raza, and Qazi, (2018) investigated whether students' functioning and accomplishment acquiring higher education is affected by statistics anxiety while comprehending their dedication, self-concept and compliance. Self-concept, commitment and adaptability of a student have an adverse affiliation with statistics of anxiety and the existence of confirmatory mindsets of students can lessen implication of statistics of anxiety on students' functioning.

Saleem, Aly, and Gul, (2017) examined university students' career decision self-efficacy, constancy in objectivity and educational attainment. The constancy in objectivity is a substantial interpreter of career decision-making self-efficacy and career decision-making self-efficacy is a significant analyst of educational attainment. Government's guidelines and legislation in Pakistan are required to develop and adapt according to requirements of labor market for career development and training of the adolescents to create a self-concept.

Abid, Malik, Fatima, and Abid, (2017) conducted a correlation exploration to investigate the relationship among self-concept, socio-economic class and achievement goal orientations. Secondary school students exhibited an association among mathematics self-concept, socio economic status (SES) and achievement goal orientations (AGOs). Instructors using instructional

approaches which are inclined towards progressing students' mathematics self-concept to enable their goal oriented mastery, are more effective.

Saleem and Shah (2016) examined intermediating function of resilience in students as an offensive against stress from educators towards fouling off the curves. There is a huge concentration regarding the career decision making, career selection and satisfaction which can be followed back to the educational phase when students were necessitated to make choices as labor market has undergone noticeable alterations, unpredictability in career courses and occupational chances. There is relationship of career decision-making self-efficacy with goal-stability and academic achievement. Goal-stability is an important interpreter of career decision-making self-efficacy. Thus, career decision self-efficacy and goal stability can be expanded to develop the students through specialized career counseling.

Javed, and Tariq, (2016) explored conceptualization of career-decision-making self-efficacy and self-esteem amongst adolescents studying in private and public sector educational institutions. Adolescent scholars of public sector educational institutions have greater career-decision making difficulties than students from private sector educational institutions. The girls exhibit more career-decision making concerns and issues when matched with boys. Girls display the lesser self-efficacy when compared with boys but the difference in self-esteem across genders insignificant. Self-esteem reveals noteworthy adverse correspondence with career-decision difficulties alongside its subscales. Self-efficacy has also substantial adverse connection with subscale lack of information career-decision difficulties. Understanding probable careers is effortless the in private institutions than in comparison to the public educational institutions.

Nawaz, Atta, and Khan, (2015) explored by what means the collaborative learning affects self-concept of elementary school students while considering their high or low educational achievement. Cooperative learning technique produced better results on students' self- concepts in comparison to lecture method in educational institutions.

Hussain (2015) opined on education system of Pakistan: questions, issues, problems and solutions. Gender variations among students on career decision making self-efficacy, intention balance and educational fulfillment effects have no great gender variations on career decision-making self-efficacy, aim stability and educational success amongst adolescent students. In Pakistan, focus of educational institutions is more on targeting instructional objectives instead of facilitating character needs of adolescents' concerning their self-concept development and professional choice-making system.

Pakistan is a developing state and by the end of 2025 it is going to have one of the youngest and largest population (Ministry of Planning, Development & Reform, 2013). Pakistan Vision 2025 intends to make use of this demographic advantage. Pakistan Vision 2025 explains that with a giant resource of untapped youngster's population, it is extremely incumbent to facilitate youth closer to well-informed career choice making in order to completely make use of this huge potential resource pool. It has also been explained that idea of profession counselling remains very unusual in Pakistan and thus each college student along with their families may find it hard to opt for professional counselling so as to talk about and decide occupational choices and pertinent instructional pathways. For this purpose, Pakistan Vision 2025 proposes to focus on opportune skills development, vocational and technical education establishments can be built to enhance employability whereas career counselling centers may also be created for adolescents to help them transition into professional life successfully (Ministry of Planning, Development & Reform, 2013).

CHAPTER 3: METHODOLOGY

3.1 Research Strategy

It is a quantitative research intended to obtain an in profound comprehension of the dynamics of self-concept and career decision self-efficacy. For collecting data from representative sample, two questionnaires have been administered to participating students. Lastly, in order to categorize students' family monthly income, ranges by Pakistan Bureau of Statistics (2017) were used. Pakistan Bureau of Statistics (2017) have provided ranges as an average monthly household income in urban settings as follows:

Average monthly household income by quintiles 2015-16

- | | |
|----------------|---------------|
| i- 20441 Rs. | ii- 25292 Rs. |
| iii- 28940 Rs. | iv- 34407 Rs. |
| v- 65950 Rs. | |

3.2 Research Design

For understanding relationship between self-concept and career decision-making self-efficacy, a correlational research design has been used as the research question has both direction and magnitude (Vanderstoep, & Johnston, 2009).

3.3 Research Questions

3.3.1 General

What is the impact of a Student's Self-Concept on their Career Decision-Making Self-Efficacy?

3.3.2 Specific

- Are there any gender differences about self-concept?
- Are there any gender differences about decision-making self-efficacy?
- Is student's family income associated with their self-concept and career decision-making self-efficacy?

3.4 Objectives

Following are the objectives:

- i. To investigate the relationship between Self-Concept and Career Decision-Making Self-Efficacy.
- ii. To investigate the impact of Self-Concept on Career Decision-Making Self-Efficacy.
- iii. To examine the impact of self-concept on career decision-making self-efficacy of secondary school students in terms of gender and family income.
- iv. To compare the responses on Self-Concept across gender.
- v. To compare the responses on Career Decision-Making Self-Efficacy across gender.

3.5 Hypotheses

Following hypotheses have been formulated:

1. Self-concept has significant correlation with career decision-making self-efficacy.
2. Self-concept has significant impact on student's overall career decision-making self-efficacy.
3. Self-concept has significant impact on student's self-appraisal career decision-making self-efficacy.

4. Self-concept has significant impact on student's occupational information career decision-making self-efficacy.
5. Self-concept has significant impact on student's goal selection career decision-making self-efficacy.
6. Self-concept has significant impact on student's planning career decision-making self-efficacy.
7. Self-concept has significant impact on student's problem solving career decision-making self-efficacy.
8. Family income has significant impact on student's self-concept.
9. Family income has significant impact on student's career decision-making self-efficacy.
10. Self-concept impact on career decision-making self-efficacy has a significant difference in terms of boys and girls.
11. Self-Concept has significant difference between mean scores across gender.
12. Career decision-making self-efficacy has significant difference between mean scores across gender.

3.6 Population

Population frame consisted of final year O-level science stream students studying in 43 private schools of Islamabad. The reason for choosing O-Level students instead of matric students was easy accessibility of private schools whereas data collection from public schools demands lot of public sector official paper work and time especially due to the current security concerns of the country. Population frame was designed around final year O-level students because they are on transitional level to explore opportune educational pathways and launch their career development

while deciding their specialization field in A-Level; with emphasis on Science stream students because they are more in popularity given cultural and social context of Pakistan. The reason for not opting A-level students as sample was since they have adequately decided their career pathways after either switching streams (sciences to humanities) or by continuing with the same stream (sciences) as selected during O-Level. With an approximation of 30 Science stream students studying in each school, total population was estimated at 1,290.

3.7 Sample

Recently, researchers have proposed a more advanced method of determining sample size called statistical power analysis, when quantitative research methods are being used. Generally, four factors are taken into account while calculating statistical power; sample size, level of significance, directionality and effect size (Houser, 2014). In order to determine the approximate sample size for testing stated hypotheses, G*Power Statistical Analysis Software has been used as it is widely recommended and used for calculating sample size for social, behavioral, and biomedical sciences researches (Faul, Erdfelder, Lang, & Buchner, 2009; Faul, Erdfelder, Lang, & Buchner, 2009).

Since it's a correlational study and research question intends to study impact of Self-Concept (independent variable) on CDMSE (dependent variable), thus, in software, test family of *t*-tests was selected and statistical test of Correlation: Point Biserial Model was specified against which sample size was to be computed. Conducting a priori power analysis, input parameters of effect size, α error probability, and power were then entered. An average effect size from previous studies calculated to be 0.41 (Killian, 2017) which is medium convention for Pearson's correlation coefficient as well as medium range provided by G*Power Statistical Analysis Software (Faul et al., 2009; Faul et al., 2007, Cohen, 1992; Cohen, 1988; Hill, Bloom, Black, & Lipsey, 2008; Sink

& Mvududu, 2010). Along with effect size, α error probability of 0.05, and power 0.95 were also provided respectively. The minimum sample size required to carry out the desired analysis on the specified parameters was calculated to be $N=67$.

43 private secondary schools are offering O-Levels education in Islamabad territory (PEIRA, 2018). Sampling frame consisted of final year O-Level Science stream students. The convenient random sampling technique was used, with each school from the sampling frame had an equal chance of being chosen to participate in the study. Different summer schools and academies were approached on basis of their location (Islamabad) and mode of education (private and O-level); 19 educational institutions consented to take part in study. 164 O-level students were selected on basis of their selected subject majors that is Science Stream. Lastly, collected data sample size is more than 10% of estimated population size (Gay, 2009).

3.8 Theoretical Definitions

Following theoretical definitions have been acquired from renowned theories which are pertinent to the study.

3.8.1 Self-Concept

“An individual’s perceptions of oneself; that is perceptions molded and established owing to one’s experience with and explanations of one’s surrounding environments alongside circumstances and these discernments are especially predisposed to validations, appraisals by meaningful relationships and one’s acknowledgements for one’s own conduct” (Shavelson, & Bolus, 1982).

3.8.2 Career Decision-Making Self-Efficacy

“An individual’s self-belief and confidence that one can effectively accomplish undertakings and responsibilities essential for constructing career decisions” (Taylor & Betz, 1983).

3.9 Research Instruments

3.9.1 Tennessee Self-Concept Scale (TSCS:2)

Tennessee Self-Concept Scale 2nd Edition (TSCS:2) Adult Form (Fitts & Warren, 1996) was administered for recording responses of students on self-concept construct (see Appendix F). The scale is multidimensional that measures self-concept across life span that is from 7-90 years. Questionnaire has 82 self-descriptive statements comprising of 5-point Likert scale. It provides two basic Summary Scores (Total Self-Concept and Conflict); six Self-Concept Subscales Scores (Physical, Moral, Personal, Family, Social, and Academic/Work) and three Supplementary Scores (Identity, Satisfaction and Behavior). Instrument also provides four Validity Scores in order to check response bias (Inconsistent Responding, Self-Criticism, Faking Good, and Response Distribution). Tennessee Self-Concept (TSCS:2) Adult Form has a Cronbach’s alpha reliability for total self-concept of .95 (Fitts, & Warren, 1996).

3.9.2 Career Decision-Making Self-Efficacy- Short Form (CDSE-SF)

Career decision-making self-efficacy Short Form (CDMSE-SF) (Taylor & Betz, 1996) consisting of 25 items, was used to collect data on career decision-making self-efficacy of students (see Appendix G). 5-point Likert scale comprises of 5 subscales: Self-Appraisal, Occupational Information, Goal Selection, Planning and Problem Solving. The internal consistency reliability

of CDMSE-SF ranges from .73 (Self-Appraisal) to .83 (Goal-Selection) and .94 for the 25-item total score (Taylor & Betz, 1996).

3.9.3 Pilot Testing

Pilot testing of questionnaires was performed. In order to collect comprehensive and representative data, questionnaires were administered to 23 O-Level Science stream students of private secondary schools of educational year 2017-2018 which is adequate sample size for pilot testing (Johanson & Brooks, 2010; Hill, 1998; Isaac, & Michael, 1995). School selected for pilot study was not included in the main study data collection.

3.9.4 Reliability

The reliability of questionnaires determined through Cronbach's alpha reliability coefficient through SPSS-XX (see Annexure A). The reliability coefficients of self-concept and career decision-making self-efficacy are .717 and .848 respectively representing acceptable to high reliability meaning instruments are reliable to be used (Gliem, & Gliem, 2003).

3.9.5 Validity

The validity of scales was established after consultation with specialists and field experts such as educationists, psychologists and career counselors (see Appendix A). In light of their opinions, items and subscales of the questionnaires were retained.

3.10 Procedure

The standardized instruments were bought after seeking the permission of the respective authors of questionnaires. Then, concerned authorities of selected summer schools and academies were approached for data collection permission while describing purpose and advantages of study. The written informed consent of the participating educational institutions was obtained after a

detailed informative session about study. The following ethical standards and practices regarding the participants' well-being were considered during pilot and main study data collection (American Psychological Association, 1994).

- The authors of the instruments were contacted for permission and scales were bought successively (see Appendix B and Appendix C).
- Prior to administration of questionnaires, purpose and rationale of research was explained to educational institutions and students participating.
- The participants were informed about procedure of participation in the data collection that is they have right to refuse or withdraw from data collection process at any given point if they deem it necessary.
- Prior to administering the questionnaires, a written informed consent was obtained from participating educational institutions.
- Confidentiality of responses recorded by participants was maintained by collecting data anonymously and no personal information has revealed during research analysis and results tabulation.
- The researcher ensured that participants are not made to take part in physically or psychologically harming activities and appropriate counseling services were provided whenever it deemed necessary.
- After data collection, students were debriefed about the study.

3.10.1 Sample selection

The primary consideration for identifying summer schools and academies in Islamabad was presence of Science subjects in O-levels curriculum.

3.10.1.1 Inclusion Criteria

Inclusion criterion are a collection of predetermined and specific characteristics used to recognize and classify participants to be included; they should correspond to methodical objectives of research study and are important to achieve it (Salkind, 2010). Sample was devised for main study based on following preset criteria; Science group. Sample included students who would be appearing in their final examination in the October/November 2018 session and May/June 2019 session. Students were selected from these two sessions alone in order to minimize differences in both age and education level of selected sample. Students of both genders (males and females) were approached for participation so to not only ensure equal representation of both genders but also increase generalizability of results in study sample.

3.10.1.2 Exclusion criteria

Exclusion criteria comprise assortment or admissibility conditions used to exclude participants from target populace for a research study (Salkind, 2010). Students enrolled in Humanities group were excluded from the sample. This component was set as an exclusion criterion owing to fact that youth of Pakistan's society is mainly focused in perusing their future careers in fields of Engineering and Medical.

Initially, entire Survey booklet containing; informed consent form (see Appendix D), demographic information form (see Appendix E), Self-Concept questionnaire (see Appendix F), Career Decision-Making Self-Efficacy (see Appendix G) was presented to on duty teachers and coordinators in English language in order to inform them about the nature and the objectives of the study. Parents or legal guardians of students present during data collection were also taken into consideration and were briefed about study in order to avoid any incongruence between stake holders that is teachers, school/academy administration, students and researcher. This helped in

facilitation of not only students but also aided in increasing cooperation of the teachers and the parents.

The entire Survey booklet that was presented to students was in English language including written instructions and examples in order to guide and help participants in understanding and answering to survey questions accurately. The same instructions were read out verbally to participants along with briefing them about description and objectives of study. The consenting students were allowed to ask for help in case of any confusion regarding survey booklet or during exercise in case they felt any difficulty in comprehending instruments' statements.

3.11 Data Analysis

The results of the study have been tabulated in form of Skewness and Kurtosis, Pearson Product-Moment Correlation, Regression Analysis and independent sample *t*-test with the help of Statistical Package for Social Sciences (SPSS-XX). Pearson Product-moment Correlation is a parametric statistical measure which denotes relationship and its direction between two or more quantitative variables (Gogtay, & Thatte, 2017). Regression analysis is used to predict variance in a dependent variable given one or more independent variables (Fox, 2015). The independent sample *t*-test is used to compare differences between two independent groups such as the scores of females and males (Kim, 2015). The skewness and kurtosis are normality tests used to determine whether a data set is modeled for normal distribution (Field, 2017). After analysis of results, implications and recommendations of study are presented.

3.12 Delimitations

Research was delimited to:

- i. Private secondary schools of Islamabad offering O-Levels education.

- ii. Final year O-Level Science Stream Students enrolled in 2018-19.
- iii. Socio-economic status (family income indicator only).
- iv. Income Quintiles provided by Pakistan Bureau of Statistics (2017).
- v. System Theory Framework (Individual System only).
- vi. Tennessee Self-Concept Scale™, Second Edition (TSCS:2) by Fitts and Warren (1996).
- vii. Career Decision-Making Self-Efficacy Short Form (CDMSE-SF) scale by Taylor and Betz (1983).

CHAPTER 4: RESULTS AND INTERPRETATION

Following chapter focuses on results and interpretation of data in order to assess impact of self-concept on career decision-making self-efficacy of secondary school students. The chapter has been divided into four parts.

Part I- This part includes the descriptive statistics, skewness and kurtosis of self-concept scale and career decision-making self-efficacy. Table 1 to 4 display these statistics.

Part II- This part includes Product-Moment Coefficient of correlation (r). It has been calculated to analyze relationship between self-concept and career decision-making self-efficacy. Table 5 represents correlational analysis.

Part III- This part includes Simple Linear Regression analysis to predict value of dependent variable (career decision-making self-efficacy) based on values of independent variable (self-concept). This part will also investigate impact of self-concept on each of the subscales of career decision-making self-efficacy that is; self-appraisal, occupational information, goal selection, planning and problem solving. Tables 6 to 14 represent these statistics.

Part IV- This part includes t -test that describe and compare differences between mean scores of boys and girls on self-concept and career decision-making self-efficacy. Tables 15 to 17 represent these statistics.

Part I

This part includes the descriptive statistics, skewness and kurtosis of self-concept scale and career decision-making self-efficacy scale. Table 1 to 4 display these statistics.

Table 1: *Descriptive Statistics of Age*

	Frequency	Percent
13.0	9	5.5
14.0	25	15.2
15.0	51	31.1
16.0	51	31.1
17.0	20	12.2
18.0	6	3.7
19.0	2	1.2
Total	164	100.0

The table 1 shows the descriptive statistics of age of participants in the study. The total number of participants were 164. The age range of participants lies between 13 years to 19 years.

Table 2: *Descriptive Statistics of Gender*

<i>Gender</i>	Frequency	Percent
Boys	101	61.6
Girls	63	38.4
Total	164	100.0

The table 2 shows descriptive statistics of gender of participants in the study. The results indicate that 101 were boys and 63 were girls out of 164 total participants of the study.

Table 3: *Descriptive Statistics of Data of Family Income from students*

<i>Income Ranges</i>		Frequency	Percent	Valid Percent	Cumulative Percent
	20,000-25,000	4	2.4	2.7	2.7
	25,000-30,000	2	1.2	1.3	4.0
	30,000-35,000	2	1.2	1.3	5.3
	35,000-66,000	13	7.9	8.7	14.0
	66,000- Above	129	78.7	86.0	100.0
	Total	150	91.5	100.0	
Missing	System	14	8.5		
Total		164	100.0		

The table 3 shows descriptive statistics of monthly family income of participants in the study. The results indicate that most of the participants, that is, 129 out of 164 participants had a family income of 66,000 and above.

Table 4: *Descriptive Statistics (Normality of Data)*

<i>Variables</i>	N	Min	Max	Mean	S.Dev	Skewness		Kurtosis	
						Statistic	S.E	Statistic	S. E
Self- concept	164	2.51	4.35	3.2508	.30974	1.044	.190	2.202	.377
CDSE	164	2.00	5.00	3.6971	.57884	-.458	.190	.279	.377

The above table shows normality of the data. It includes standard deviation, skewness and kurtosis. The results indicated that self-concept displays positive skewness (1.044) and kurtosis (2.202). The results of career decision-making self-efficacy display negative skewness (-0.458)

and positive kurtosis (0.279). Responses of all variables from one hundred and sixty-four respondents are within a range with min 1 to max 5. The result of Skewness and kurtosis are within the range of ± 2 (Field, 2013). This shows the data is normally distributed.

Part II

This part includes Product-Moment Coefficient of correlation (r). It has been calculated to analyze the relationship between self-concept and career decision-making self-efficacy. Table 5 represents correlational analysis.

H1- Self-concept has significant correlation with career decision-making self-efficacy.

Table 5: Significant correlation between Self-concept and Career Decision-Making Self-Efficacy.

<i>Variables</i>		Self-concept	CDSE
	Pearson Correlation	1	.246**
Self-concept	Sig. (1-tailed)		.001
	Pearson Correlation	.246**	1
CDSE	Sig. (1-tailed)	.001	

** . Correlation is significant at the 0.001 level (1-tailed)

The Product-Moment Coefficient of correlation was carried out to assess the relationship between self-concept and career decision-making self-efficacy of secondary school students. The range of relationship lies within range of ± 1 to ± 1 ; that is ± 1 to ± 0.75 , ± 0.75 to ± 0.25 , and ± 0.25 to 0 indicate strong, moderate and weak relationship, respectfully (Field, 2013). The results show relationship between self-concept and career decision-making self-efficacy as $r = 0.246$, $n = 164$, $p = 0.001$ which indicates a positive, weak and significant relationship between both variables. Hence, H1 is accepted.

Part III

This part includes Simple Linear Regression analysis to predict value of dependent variable (career decision-making self-efficacy) based on values of independent variable (self-concept). This part will also investigate the impact of self-concept on each of the subscales of career decision-making self-efficacy that is; self-appraisal, occupational information, goal selection, planning and problem solving. Tables 6 to 14 represent these statistics.

H2- Self-concept has significant impact on student's career decision-making self-efficacy.

Table 6: Simple Linear regression for Self-Concept predicting Career Decision-Making Self-Efficacy

Model		Unstandardized		Standardized	<i>t</i>	<i>p</i>
		Coefficients		Coefficients		
		B	S.E	<i>B</i>		
1	(Constant)	2.202	.465		4.738	.000
	Self-concept	.460	.142	.246	3.232	.001

a. Dependent Variable: CDSE

$R^2 = 0.061$; $F = 10.448$; $p < 0.05$

A simple linear regression was performed to predict career decision-making self-efficacy based on self-concept of secondary school students. The results of regression indicate self-concept explains 6.1% ($R^2 = 0.061$) of variance in career decision-making self-efficacy. Therefore, self-concept is a significant predictor of career decision-making self-efficacy ($F = 10.448$, $\beta = .246$, $p = .001$). Hence, H2 is accepted.

H3- Self-concept has significant impact on student's self-appraisal career decision-making self-efficacy.

Table 7: Simple Linear regression for Self-Concept predicting Self-Appraisal Career Decision-Making Self-Efficacy

Model	Unstandardized		Standardized	<i>t</i>	<i>P</i>
	Coefficients		Coefficients		
	B	S. E	β		
(Constant)	2.659	.585		4.546	.000
1 Self-concept	.366	.179	.158	2.042	.043

a. Dependent Variable: CDSE subscale SA

$R^2 = 0.025$; $F = 4.171$; $p < 0.05$

A simple linear regression was performed to predict self-appraisal career decision-making self-efficacy based on self-concept of students. The results of regression indicate self-concept explains 2.5% ($R^2 = 0.025$) of variance in self-appraisal career decision-making self-efficacy. Thus, self-concept is a significant predictor of self-appraisal career decision-making self-efficacy ($F = 4.171$, $\beta = .158$, $p = .043$). Hence, H3 is accepted.

H4- Self-concept has significant impact on student's occupational Information career decision-making self-efficacy.

Table 8: Simple Linear regression for Self-Concept predicting Occupational Information Career Decision-Making Self-Efficacy

Model	Unstandardized		Standardized	<i>t</i>	<i>p</i>	
	Coefficients		Coefficients			
	B	S. E	β			
1	(Constant)	1.862	.553		3.371	.001
	Self-concept	.591	.169	.265	3.492	.001

a. Dependent Variable: CDSE subscale OI

$R^2 = 0.070$; $F = 12.197$; $p < 0.05$

A simple linear regression was performed to predict occupational information career decision-making self-efficacy based on self-concept of students. The results of regression indicate self-concept explains 7% ($R^2 = 0.070$) of variance in occupational information career decision-making self-efficacy. Therefore, self-concept is a significant predictor of occupational information career decision-making self-efficacy ($F = 12.19$, $\beta = .265$, $p = .001$). Hence, H4 is accepted.

H5- Self-Concept has significant impact on student's goal selection career decision-making self-efficacy.

Table 9: Simple Linear regression for Self-Concept predicting Goal Selection Career Decision-Making Self-Efficacy

Model	Unstandardized Coefficients		Standardized Coefficients	<i>t</i>	<i>p</i>
	B	S. E	β		
1 (Constant)	2.678	.601		4.458	.000
Self- concept	.330	.184	.139	1.792	.075

a. Dependent Variable: CDSE subscale GS

$R^2 = 0.019$; $F = 3.210$; $p > 0.05$

A simple linear regression was performed to predict goal selection career decision-making self-efficacy based on self-concept of students. The results of regression indicate self-concept explains 1.9% ($R^2 = 0.019$) of variance in goal selection career decision-making self-efficacy. However, it was proven by the result that self-concept is insignificant predictor of goal selection career decision-making self-efficacy ($F = 3.210$, $\beta = .139$, $p = .075$). Hence, H5 is rejected.

H6- Self-concept has significant impact on student's planning career decision-making self-efficacy.

Table 10: Simple Linear regression for Self-Concept predicting Planning Career Decision Making Self-Efficacy

Model		Unstandardized		Standardized	<i>t</i>	<i>p</i>
		Coefficients		Coefficients		
		B	S. E	β		
1	(Constant)	1.724	.585		2.948	.004
	Self-concept	.614	.179	.260	3.428	.001

a. Dependent Variable: CDSE subscale P

$R^2 = 0.068$; $F = 11.751$; $p < 0.05$

A linear regression was performed to predict planning career decision-making self-efficacy based on self-concept of students. The results of regression indicated self-Concept explained 6.8% ($R^2 = 0.068$) of variance in planning career decision-making self-efficacy. Therefore, self-concept is a significant predictor of planning career decision-making self-efficacy ($F = 11.751$, $\beta = .260$, $p = .001$). Hence, H6 is accepted.

H7- Self-concept has significant impact on student's problem-solving career decision-making self-efficacy.

Table 11: Simple Linear regression for Self-Concept predicting Problem Solving Career Decision-Making Self-Efficacy

Model		Unstandardized		Standardized	<i>t</i>	<i>p</i>
		Coefficients		Coefficients		
		B	S.E	β		
1	(Constant)	2.073	.624		3.322	.001
	Self-concept	.405	.191	.164	2.121	.035

a. Dependent Variable: CDSE subscale PS

$R^2 = 0.027$; $F = 4.497$; $p < 0.05$

A linear regression was performed to predict problem solving career decision-making self-efficacy based on Self-concept of students. The results of regression indicated self-concept explained 2.7% ($R^2 = 0.027$) of variance in problem solving career decision-making self-efficacy. Thus, self-concept is a significant predictor of problem solving career decision-making self-efficacy ($\beta = .164$, $p = .035$). Hence, H7 is accepted.

H8- Family income has significant impact on student's self-concept.

Table 12: Simple Linear regression for Family Income predicting Self-Concept

Model	Unstandardized		Standardized	<i>T</i>	<i>p</i>
	Coefficients		Coefficients		
	B	S. E	β		
(Constant)	3.023	.154		19.649	.000
1 Family Income	.047	.032	.120	1.468	.144

a. Dependent Variable: Self-concept

$R^2 = 0.014$; $F = 2.156$; $p > 0.05$

A linear regression was performed to predict self-concept based on family income of students. The results of regression indicate family income explains 1.4% ($R^2 = 0.014$) of variance in self-concept. However, the results proved that family income is an insignificant predictor of self-concept ($F = 2.156$, $\beta = .120$, $p = .144$). Hence, H8 is rejected.

H9- Family income has significant impact on student's career decision-making self-efficacy.

Table 13: Simple Linear regression for Family Income predicting Career Decision-Making Self-Efficacy

Model	Unstandardized		Standardized	<i>t</i>	<i>p</i>
	Coefficients		Coefficients		
	B	S. E	β		
(Constant)	3.970	.283		14.027	.000
1 Family Income	-.053	.059	-.073	-.895	.372

a. Dependent Variable: CDSE

$R^2 = 0.005$; $F = 0.802$; $p > 0.05$

A linear regression was performed to predict career decision-making self-efficacy based on family income of secondary school students. The results of regression indicate family income explains 0.5% ($R^2 = 0.005$) of variance in career decision-making self-efficacy. Nevertheless, results showed that family income is an insignificant predictor of career decision-making self-efficacy ($F = 0.802$, $\beta = -.895$, $p = .372$). Hence, H9 is rejected.

H10- Self-concept impact on career decision-making self-efficacy has a significant difference in terms of boys and girls scores.

Table 14: Simple Linear regression for Self-Concept predicting Career Decision-Making Self-Efficacy in terms of boys and girls

Gender	R	R ²	F	p	Beta	β	t	p
Boys	.235 ^b	.005	5.780	.018 ^b	.378	.235	2.404	.018 ^a
Girls	.247 ^b	.061	3.954	.051 ^b	.565	.247	1.988	.051 ^b

a. Dependent Variable: CDSE

b. Predictors: (Constant), Self-concept

A simple linear regression was performed to predict career decision-making self-efficacy based on self-concept in terms of the gender of secondary school students. The range of R squared value should be within 0 to 1. The results of regression indicate value of 0.005 and 0.061 of boys and girls, respectively. This shows 0.5 % of variance in career decision-making self-efficacy is accounted for by the variation in self-concept in terms of boys and 6.1 % of variance in career decision-making self-efficacy is accounted for by the variation in self-concept in terms of girls. Self-concept impact on career decision-making self-efficacy has a significant difference in terms of boys and girls scores (Boys: $F= 5.780$, $\beta=-.235$, $p=.018$; Girls: $F=3.954$, $\beta=-.247$, $p=.051$). Hence, H10 is accepted.

Part IV

This part includes *t*-test that describe and compare the differences between the mean scores of boys and females on significances of self-concept and career decision-making self-efficacy. The tables 15 to 17 represent these statistics.

Table 15: *Group Statistics of students (boys and girls)*

<i>Variables</i>	Gender	N	Mean	Std.	Std. Error
				Deviation	Mean
Self-concept	Boys	101	3.2741	.32360	.03220
	Girls	63	3.2135	.28465	.03586
CDSE	Boys	101	3.7612	.52107	.05185
	Girls	63	3.5942	.65229	.08218

The above table provides basic information about group comparisons, including sample size (n), mean, standard deviations, and standard error for self-concept and career decision-making self-efficacy by gender groups. The table indicates that there are 101 boys and 63 females who responded on self-concept and career decision-making self-efficacy questionnaires. The mean score of boys are 3.27 and 3.76 on self-concept and career decision-making self-efficacy questionnaires, respectively. The mean score of girls are 3.21 and 3.59 on self-concept and career decision-making self-efficacy questionnaires, respectively.

H11- Self-Concept has significant difference between the scores of boys and girls.

Table 16: *Independent Samples t-test of students (boys and girls) on Self-Concept*

	Levene's Test for Equality of Variances		<i>t</i> -test for Equality of Means				
	F	Sig.	<i>t</i>	<i>df</i>	<i>p</i>	Mean Difference	S.E Difference
Self-Concept	.512	.475*	.220	162	.224	.06058	.04965

The above table indicates the independent samples *t*-test that compares two sample means to determine whether the population Means are significantly different across gender. There are two parts of the table that provide different piece information, (A) Levene's Test for Equality of Variances and (B) *T*-test for Equality of Means.

The value of Levene's test of Equality ($p < 0.05$) shows the assumption of equal variance has been validated. However, the Levene's Test is $p = 0.475$ (Self-Concept) that indicates that assumption of equal variance is insignificant. But, *t*-test for Equality of Means; the results indicate that there is strong evidence of a no difference in the mean scores of boys and girls under the self-concept questionnaire ($t = 1.2$, $p = 0.224$). Hence H11 is rejected.

H12- Career decision-making self-efficacy has significant difference between responses of boys and girls.

Table 17: *Independent Samples t-test of students (boys and girls) on Career Decision-Making Self-Efficacy*

	Levene's Test for Equality of Variances		t-test for Equality of Means				
	F	Sig.	<i>t</i>	<i>df</i>	<i>p</i>	Mean Difference	S.E Difference
CDSE	4.754	.031*	1.810	162	.072	.16701	.09229

The above table indicates independent samples *t*-test that compares two sample means to determine whether population means are significantly different across gender. There are two parts of table that provide different piece information, (A) Levene's Test for Equality of Variances and (B) T-test for Equality of Means.

The value of Levene's test of Equality ($p < 0.05$) shows the assumption of equal variance has been validated. However, the Levene's Test is $p = 0.031$ (career decision-making self-efficacy), thus this indicates that assumption of equal variance is significant in case of career decision-making self-efficacy. But, *t*-test for Equality of Means; the results indicate that there is also strong evidence of no difference in mean scores of boys and girls under career decision-making self-efficacy questionnaire ($t = 1.8$, $p = 0.072$). Hence H12 is rejected.

CHAPTER 5: DISCUSSION AND RECOMMENDATIONS

5.1 Discussion

Self-concept was well-explained by Shavelson, Hubner, and Stanton (1976) as a sense of self that an individual develops, when he/she have an interaction with other people in surroundings. Self-concept theory has until now made successful grounds in domain of social sciences, psychology and career counselling (Rosenberg, 1989). Self-concept is a significant factor that influences the students during their career growth and academic achievement. It fosters students' academic development and motivates them to accomplish their goals successfully. Nevertheless, if students have a negative self-concept, then they face an array of challenges during their academic years (Fall & Roberts, 2012). This research is aimed at investigating role of self-concept and its impact during academic life of students, specifically acquiring secondary school education and its association with career decision-making self-efficacy has also been tested and analyzed. Moreover, impact of self-concept was also studied on subscales of career decision-making self-efficacy i.e. Self-Appraisal, Planning, Occupational Information, Problem Solving and Goal Selection. Lastly, role of gender in addition to socio-economic status in terms of family monthly was also considered. Findings of current research will be helpful for both academicians and research scholars in understanding student's self-concept and association to career decision making self-efficacy.

The results of current research have affirmed that self-concept posits a significant correlation with career decision making self-efficacy (H1). The current study supports findings of Braunstein-Bercovitz, (2014) that there are multiple factors at play that effect career decision-making self-efficacy thus affecting the career advancements of adolescents. Additionally, this study also supports the findings of Di Fabio, (2014) that there are subsequent factors that affect an

adolescent's career decision-making ability. Thus concluding, it can be deduced from the current study that self-concept can be one of numerous multidimensional factors that impact career decision-making self-efficacy.

During progression of career, schooling plays a significant role in the life of an individual. It is the time, to gain knowledge and awareness, recognize internal potential, capabilities and interest and gain new experiences (Stevenson, Peterson, Carrier, Strnad, Bondell, Kirby-Hathaway, & Moore, 2014). The study herein is aimed to foster self-concept and career decision making awareness, in the sample of secondary school students. The process of career decision making is impacted by gender, age, ethnicity, socio-economic factors, social and personal experiences, family support and many other. The self-concept and association to career decision making self-efficacy go side by side (Bounds, 2013). Thus, the current study supports findings of Ehrlich, (2017) that there is a relationship between genders of the adolescents with their self-concept development. Self-concept stands grounded in the idea of an individual's sense of self and is differentiated in terms of gender of the adolescents.

Adolescents studied in Kenya were unable to make career based decisions that were creating a constraint in their career progression (Ogutu, Odera & Maragia, 2017). High school students were focused on acquiring education from a well-known university and did not have a focus to enhance their skills and talents that were the demands of the job market. Ogutu, Odera & Maragia (2017) explored self-efficacy influence on career decision making in the sample of 364 secondary school students, acquiring education in Busia County, Kenya. The control variables for self-efficacy co-relation with career decision making were inclusive of school type, age and gender. The results of the Spearman correlation revealed a significant correlation between career decision making and self-efficacy (H2).

Career decision-making processes of students are influenced by career decision making self-efficacy, by impacting perceptions of students. Present research supports findings of Bounds (2013) revealing that self-concept has a significant impact on career decision making self-efficacy. Bounds (2013) reviewed association between academic self-concept, ethnic identity, academic achievement and career decision making self-efficacy in sample of school going African-American students. African American students were deemed to acquire lower grades, education attainment and test grades. Study revealed that academic achievement perceptions have an influence on career development self-efficacy. Study by Bounds (2013) found that perceptions based on self-concept and expectations related academic outcomes play their part as significant moderators between career choice and academic behaviours, and student personalized learning experience. During the course of the study, Social Cognitive Career Theory (SCCT) was also integrated to understand career development related factors. Therefore, research provided clear insights for understanding career development and self-concept association in the sample of African Americans.

Murugami (2010) explained that it is challenging to assist academic learners having disabilities (visual impairment) in achieving vocational self-concept. These students need to develop capabilities for self-evaluating and self-appraisal so that they could protect themselves from the societal stereotypical pressures they are receiving. Murugami (2010) revealed an association between self-appraisal and self-concept with respect to school and their mother's education level as factors. Results of current study (H3) can be supported by results by Murugami (2010).

Study herein affirmed that self-concept posits a significant impact on career decision making self-efficacy based student's goal selection (H5) and occupational career decision making self-efficacy (H4). Reddan (2015) showed similar results to current research investigation. Reddan

(2015) conducted a research in order to assess role of academic elective course (Project A) that enhances student's work-based integrated learning and career development learning. Fostering self-efficacy of students in order to make positive and effective career decisions and adopted SOAL model. The course was inclusive of self-awareness activities namely; Personal style inventory, lifeline exercise, sensing disciplines, recognizing abilities and skills, reinforcing external factors, Myer-Briggs personality indicators. Aspirations based activities were also part of the course, that enable the students in choosing career goals. Results of Reddan (2015) research notified that course was influential in increasing student awareness regarding their personal weaknesses and strength with respect to their employability and upgrade their knowledge specific to their job descriptions. Students during the course of research revealed that after recognizing their self-efficacy they are able to solve their occupational career decisions based problems, they are now able to set goals for themselves and their capabilities have significantly increased with respect to problems associated to career development (H7).

Abid, Malik, Fatima, and Abid, (2017) explained that self-concept; academic goal accomplishment and mathematics self-concept has a significant association. This study supported research results as obtained in current study (H5). Abid, Malik, Fatima, and Abid, (2017) suggested that teachers have a significant role in creating awareness and influencing students to attain their goals and recognize their self-concept. During the review of literature, it has been found that there is an association between gender differences and self-efficacy (Ahmed and Zaman, 2018). Study established that children follow traditional roles playing displayed in their surroundings. Also, this study supports findings of Mir (2016) that female adolescents are hesitant in career related decision-making process in a male dominant society which as a consequence affects their career development. Due to which, it is a common held belief that females lack the expectations of career

self-efficacy. Taking into account gender differences, current study also supports findings of Sadruddin (2015) that gender differences are prevalent with reverence to factors affecting career decision-making self-efficacy.

Furthermore, current study shows similar findings that of Shahid, Jabeen, and Ansari, (2016) which show there are insignificant gender differences in undergraduate students' academic self-concept. On the other hand, present study does not support findings of Crocetti et al., (2016), which established that there are insignificant differences in scores of both boys and girls on self-concept; while Crocetti et al., (2016) illustrated that boys have scored higher on social self-concept clarity than girls. The possible reason can be sighted that ratio of female participants in the current study was lower than the males. Another reason could be that in Pakistan, like other Asian countries, there is a collectivistic approach to social norms and females are more family oriented than focusing on individual career development.

Evidence has shown that self-concept changes can be best explained during the process of career decision making, in a series of stages. This approach is inclusive of awareness, planning, commitment and implementation. Awareness stage creates awareness regarding the current stage of the individual, past and consequent future. During the awareness stage, the self-appraisal further creates a sense of satisfaction in individual while dealing with current circumstances or make individual dissatisfied with respect to past decision that had been taken and recognized during awareness phase. Planning stage is inclusive of crystallization and examination of decision-making process related to career. This relates to results of the current study (H6), revealing that self-impact assist an individual in career decision making process. During planning phase, individual explores possible options that can be assessed with respect to opportunities that they bring in with them. Most importantly, individual makes a choice of career on basis of his/her self-concept. When

individual is ready after planning phase and making a wise selection related to career, then next phase is commitment phase. In this phase, individual stays committed to decision taken for a specific career and then finally take steps to implement them in the next stage. For implementation phase, individual seeks the involvement of family members and friends, consolidating self-concept as a sequence. In implementation phase, individual then finally develop a contingency plan, in case if things don't work out, then she/he may have a backup plan.

Thornton (2017) explored career decision-making process in undergraduate students. Student's self-concept was assessed through a course and its impact on career decision-making process of students was examined. Previously, social constructionist theory, Gottfredson's and Super career theory and related theoretical foundations have to enlighten association between self-confidence, understanding in process of career decision making in sample of students. Results of those theories have clearly postulated that societal and personal factor, career education presence and planning phase in which student acquired experience; all assist them in making a future career making decisions. Result of this study supports current findings of the research (H6). Thornton (2017) explained that subjective experience that students have shared reveals their initial career development model phase. Research revealed that intrinsic and extrinsic factors impact success of students in phase of career development.

A number of social and economic factors impact academic performance of students. Parental socio-economic status including income levels, status, educational and occupation levels are deemed to impact academic performance of students and their self-concept (Chohan & Khan, 2010). Parental socio-economic variables are dynamic in nature. It has been found that an association between parental socio-economic status and academic performance of adolescents are associated. Research has shown that students fail to accomplish good grades due to lower cognitive

abilities, socio-economic backgrounds, home environment, and parental support. On other hand, results of Chohan & Khan (2010) study revealed that parental support posits significant impacts on the academic achievement as well as students' academic self-concept development. Research has concluded that family support in form of income levels, enable a student to have a better self-concept and accomplish a good academic status during school years. However, in current study hypothesis that family incomes posit a considerable impact on student's self-concept is rejected, revealing that there is no impact. Similarly, present study does not support the results of Abid et al., (2017) that emphasize that an adolescents' self-concept is correlated with socioeconomic status (SES) (H8).

During review of the literature, it has been found that in Pakistan, the students are unable to make an appropriate decision related to their future career choices (Afzal, Atta and Shujja, 2014). They are less aware of career choices and there is a need to foster career decision making process and awareness. Malik, Yasin and Shahzadi (2014) mentioned that Pakistani academic institutes have a higher focus towards targeting of instructional dreams, and practical implementation is scarce. They deem a shortcoming character needs of the students that require working on their professional career decision making and self-concept development.

Understanding association between career-related outcomes and parental social status, evidence has shown a bunch of academic resources debating on this topic. Parental social status is deemed to influence decision-making process and attitudes and behavior of their children. Literature in this domain can be found doing a discourse on the child-rearing patterns to low-income academic consequences of adolescents (Metheny & Mcwhirter, 2013). Lower parental socioeconomic status is revealed to impact the development of adolescents negatively with respect to academic achievement, socio-emotional functioning, and cognitive development. Metheny &

Mcwhirter (2013) examined role of family support and social status (including family income) in college student's career decision-making process. A path model was integrated into research objectives, in order to predict career related outcome expectations and career decision making self-efficacy. Study was based on sample of 270 college going adult students. Variables of study included income levels, socioeconomic status, career-related interactions based on family intentions and perceived family support and social status. Metheny & Mcwhirter (2013) divided sample into validation and calibration sample. Their research concluded that socioeconomic status (including family income) and family support is associated with career decision making self-efficacy. However, study also revealed that socioeconomic status variables as education, income, and parental income are not primary subject of modification in last few years. There is a need to focus on enhancing parental support and other sources for getting positive career-related decision-making outcomes for college-going students. This study reveals opposite results to current research investigation notifying that no significant association exist in between career decision making self-efficacy and family income in a sample of secondary school students (H9).

Research results of Igbo, Onu & Obiyo (2015) supports findings of current research investigation, explaining that self-concept has a considerable impact on academic achievement and career decision making self-efficacy with respect to gender. Self-concept is a multi-dimensional facet that has an association with the individual's capabilities and self-knowledge evaluation after the individuals make a judgment related to his/her experiences and interactions in the external environment. Self-model is further comprising another facet of self-assessment. The characteristics of self-concept take the form of occupations, abilities, skills, physical characteristics and hobbies. The self-concept is not limited to present only, individuals may assess the facets of self-concept with respect to past experiences and future intentions and proposition. In

this perspective, self-concept reveals an association with career decision making self-efficacy, in which individuals take a decision that has high worth for their future career path or goal accomplishment or academic achievements. Igbo, Onu & Obiyo (2015) study results revealed that gender-based stereotypic perspectives have a potential influence on self-concept and academic achievement of secondary school students. The concept of stereotype refers to the generalization that is related to features of a specific group of people. The stereotyping group members are expected to post a negative emotional and cognitive burden that could threaten an individual's performance and expectations. Igbo, Onu & Obiyo (2015) claimed that gender stereotypes have impacted the self-concept of female negatively and they are denied their privileges and rights due to the negative influences of stereotypical groups. These females are impacted significantly and as a consequence has revealed negative academic outcomes. Self-concept is deemed as a combination of an individual's feelings, beliefs, emotions self-image. The results of the study revealed that gender stereotypes have an impact on the academic achievement of both girls and boys. The results of the current research can be supported by Igbo, Onu & Obiyo (2015). On the contrary, the current study did not support the findings of Makransky, Rogers, and Creed, (2015) as it was ascertained that there is substantial evidence for inconsistency and variation across genders in the responses of career decision-making self-efficacy. The study concluded that in terms of gender, students exhibit a different response pattern on career decision-making self-efficacy. While the current study supports the findings of Hussain (2015) that there are insignificant gender variations among college adolescents on career decision making self-efficacy, aim stability and educational success. A reason for this discrepancy can be sighted as the difference of societal and cultural norms in the population of the mentioned studies (H10).

The result of the study herein (H12) can be supported by the study of Arens & Hasselhorn (2014) describing that self-concept has no significant difference in its association to self-esteem with respect to gender differences. In addition, current study also supports findings of Fatima, et al., (2017) that there are insignificant differences in terms of gender in adolescent students' career decision-making self-efficacy. Furthermore, Were, Indoshi & Yalo, (2010) conducted a research on sample of visually impaired individuals. Gender difference between academic achievement and self-concept had been revealed in this study. The population of the study was inclusive of 291 visually impaired subjects, and samples of 262 subjects were part of the study. Study adopted a stratified sampling technique and selected 110 females and 152 males. Researcher adopted two research questionnaires, one for academic achievement and other for testing the self-concept. A t-test was performed at the significance level of $p \leq 0.05$. Results of the study oppose the findings of current research (H12) revealing that a significant difference in gender can be seen when determining association between self-concept and academic achievement. Study revealed that the boys were having lower self-concept in contrast to females and it should be enhanced through counseling and appropriate interventions.

In accordance with social cognitive theory, career-based self-efficacy and expectations related to outcome are deemed as significant variables in recent era. Vocational outcome based expectations and career decision making self-efficacy reveal both positive and negative motivations towards career related behaviors. Both of aforementioned factors have a significant role in making effective career based decisions and performing specific career based behaviours.

Furthermore, Creed, Wong & Hood (2009) examined association between occupational expectations/aspirations (status and type) career and self-efficacy based barriers, and decision making barriers on a sample of 498 high school Chinese students. Findings of study revealed that

gender differences exist when individuals are focused on making career decisions. Results of study showed that males are aspired to be enterprising and investigating kinds, having expectations related to enterprising and realistic life. On other hand, females are recognized as conventional and enterprising kind, having social and conventional expectations.

Moreover, study also supports findings of Guan et al., (2016) as it was ascertained that family self-concept (parental support) has a correlation with career decision-making self-efficacy and career adaptability. Therefore, students with higher parental support show better career decision-making abilities. This study concluded that parental support is crucial to fostering student's self-concept and thus enhancing their career decision-making self-efficacy. Likewise, current study supports conclusions of Garcia et al., (2015) as it was shown that relative support of parents (family self-concept) and teachers is correlated with career optimism and this correlation has a mediatory effect on career decision-making self-efficacy. Moreover, current study supports findings of Muhammad and Rasool (2014). Study established that role of parental support (particularly father) that is family self-concept in shaping career decisions of children is of central importance. Another finding of study also showed that monetary aspects have a noteworthy role in determining an adolescent's career decision-making process of the students, nevertheless, this notion was supported by current study. The reason can be sighted that as sample of current study comprised of O-Levels final year students availing education from private secondary schools; adolescent students belong to either middle and upper middle class of society thus they do not have financial constraints and worries.

Moreover, it stood determined that CDSE helps in identifying the behavior of students which is relevant to their self-appraisal, occupational information they acquire, in their goals selection, planning of future and the problem-solving. This study also supports findings of Wright

et al., (2014) as it was determined that students with secure attachment systems exhibit advanced levels of career decision-making self-efficacy that is social self-concept has an influence on career decision-making self-efficacy. CDSE helps in facilitating students to understand scope of their career-decision making self-efficacy so that they are able to identify that they can accomplish in their chosen career.

Lastly, the results of this research have contributed to existing Pakistani literature available on career decision making self-efficacy and self-concept. The study tested a number dynamics associated with self-concept and career decision making self-efficacy constructs and revealed that these two constructs have a strong association for adolescents acquiring secondary school education. When students become aware of their personal self-concept, it becomes easier for them to accomplish their career goals, by a set of careful planning, self-concept appraisal and career decision making goal accomplishment. Furthermore, a dire need to structure policies and strategies is required to assist students in their goal accomplishment.

5.2 Conclusion

Following conclusions have been derived on basis of results and findings;

1. There is a relationship between Self-concept and Career decision-making Self-efficacy of secondary school students
2. Self-concept has an impact on Career Decision-making self-efficacy of secondary school students
3. Self-concept has an impact Self-Appraisal, Occupational Interests, Planning and Problem Solving Career Decision-making self-efficacy of secondary school students

4. Self-concept does not have an impact on Goal Selection Career Decision-making self-efficacy of secondary school students
5. Family Income does not have an impact the Self-concept and Career Decision-making self-efficacy of secondary school students
6. Self-concept impacts Career Decision-making self-efficacy in terms of girls and boys differently. In terms of boys, self-concept has an impact on Career Decision-making self-efficacy but in terms of girls self-concept does not have an impact on career decision-making self-efficacy among secondary school students.
7. Across gender, difference in scores of Self-Concept and Career Decision-making self-efficacy are not found among secondary school students. There is no difference evident in the scores of boys and girls on the self-concept questionnaire among secondary school students. There is no difference evident in the scores of boys and girls on the Career decision-making self-efficacy questionnaire among secondary school students.

5.3 Recommendations

Following recommendations are derived from the conclusions of the study;

1. Secondary school educational institutions may launch career counselling programs to enhance career decision-making self-efficacy of students by making career counseling sessions mandatory for secondary school students throughout the academic year, especially when they begin their secondary school education.
2. Secondary school educational institutions may emphasize on equal development of boys and girls for their career decision-making self-efficacy. Since elaborated in study that both girls and boys are moderately confident on their results of career decision-making self-efficacy. So

career awareness seminars, workshops trainings, and internships can be arranged with extra-curricular activities in order to motivate them towards building a more productive and secure future.

3. Secondary school educational institutions can encourage students to attend more individual career counselling, group career counselling sessions by providing them motivation of increased their awareness related to their interests, career opportunities and choices, educational pathways considering its importance and relevance with their potential future careers, labor market information and its accessibility and utility and thus help increase their ability to take more informed decisions.
4. School counselors may facilitate students with opportunities for psychological guidance opportunities for both genders (boys and girls) by providing individual and group career counseling sessions and arranging psychological awareness seminars in order to help develop and enhance their self-concept. Since study elaborated that both girls and boys are unclear on their scores of self-concept; therefore, these sessions can focus on increasing the students' self-awareness about their predisposed personal traits and attributes, and their abilities in order to align with their aptitude, interests, career choices, world of work information and enable them to make informed decisions.
5. More research is needed; to identify students' self-concept and career decision-making self-efficacy among other secondary school students other than O-Levels Science stream such as those pertaining to O-Levels Humanities stream and Matriculation so as to provide effective psychological and career counseling sessions so as to facilitate them as well in the career decision-making process.

6. Study may be replicated in public secondary schools in order to establish and promote validation of employing psychological and career counselling in the public sector educational institutions of Pakistan.
7. There is a need to develop and design indigenous instruments that measure self-concept and career decision-making self-efficacy of Pakistan's secondary school students. There are multiple self-concept scales that have been developed in Pakistan in English as well Urdu version but they are not comprehensively inclusive of multiple and hierarchical domains of self-concept (mostly deal with academic self-concept). Career decision-making self-efficacy scale also needs to be developed and studied in local context by keeping the societal, educational and financial concerns in mind.
8. Due to time and financial constraints, research could not study and explore numerous relevant variables such as availability of psychological and career counseling services, parenting and attachment styles, teaching methodologies, personality, personal beliefs and values, peer influence and many other variables. Thus it is recommended to take these variables into account as well for future studies when assessing the factors that may or may not influence career decision-making self-efficacy.

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APPENDIXES

Appendix A

Lit of Field Experts

Dr. Ayazul Haq

-Lecturer

University of Central Punjab

-Research Coordinator

Arid Agriculture University, Rawalpindi

Federal Urdu University of Science and Technology, Islamabad

Rawalpindi Campus

Dr. Atiq-ur-Rehman

-Ph.D. Entrepreneurship

-CEO People Talent Tech, Malaysia

Dr. Arif Amanat

-Assistant Professor

University of Central Punjab

Appendix B



SHOP:	ASSESSMENT AREA	PROFESSION	AGE RANGE	INTERVENTION RESOURCES
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W-320C	TSCS:2 Manual	1.00	92.00	92.00
W-320A	TSCS:2 Adult AutoScore™ Form (Pack of 25)	1.00	66.00	66.00
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				Shipping & Handling:
				Sales Tax:
				Total:
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				0.00
				165.90

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Appendix C



Rashida Maqsood <rashida.maqsood1@gmail.com>

Permission for Using Career Decision Self-Efficacy (CDSE) Scale

10 messages

Rashida Maqsood <rashida.maqsood1@gmail.com>
 To: Karen Taylor <ktaylor4@alaska.edu>
 Cc: Rashida Maqsood <rashida.maqsood1@gmail.com>

Tue, Aug 9, 2016 at 2:15 PM

Hello Madam,

Hope you are doing great.

My name is Rashida Maqsood. I am a student of MS Career Counselling and Education at Centre for Counseling and Career Advisory, National University of Sciences and Technology (NUST), Islamabad. Currently I am enrolled in last semester and working on the dissertation. The topic of my dissertation is "Impact of Self-Concept on Career Decision-Making Self-Efficacy of Secondary School Students". I intend to study the impact of various domains of self-concept, such as; personal, social, physical, family and moral, on the career decision-making self-efficacy of students while they are progressing through the secondary school studies. The sample will comprise of O-Level (O2) students of five private sector Islamabad secondary schools affiliated with University of Cambridge.

While searching for the literature review and pertinent instruments I came across your scale. I found it to be very comprehensive and applicable for my research. In order to study the career decision-making self-efficacy of the students, I need your permission to apply the scale "Career Decision Self-Efficacy (CDSE) scale by Taylor & Betz (1983)". Please guide me about procedure to acquire the said scale.

In case of any confusion, queries are appreciated.

Thank you.

Activate Windows

Rashida Maqsood <rashida.maqsood1@gmail.com>
 To: Karen Taylor <ktaylor4@alaska.edu>

Fri, Sep 23, 2016 at 2:16 PM

Hello Madam,

Hope you are doing great.

My name is Rashida Maqsood. I am a student of MS Career Counselling and Education at Centre for Counseling and Career Advisory, National University of Sciences and Technology (NUST), Islamabad, Pakistan. Currently I am enrolled in last semester and working on the dissertation. The topic of my dissertation is "Impact of Self-Concept on Career Decision-Making Self-Efficacy of Secondary School Students".

Earlier on 13th May 2016, I emailed requiring your permission for using the scale of "Career Decision-Making Self-Efficacy (CDMSE) Scale Short Form by Taylor & Betz (1983)" from my official university email account (nust201463491mc3a79114@c3a.nust.edu.pk). Later, on 9th August 2016, I sent another email from my personal account (Rashida.Maqsood1@gmail.com) stating the same purpose. On 10th May 2016, prior to engaging in the email process, I had called the designated number provided on the website "http://www.mindgarden.com/" to inquire about the process of obtaining permission for the scale. Since then I have been anxiously waiting for your positive response as it is mandatory for my thesis. I have completed the first phase of thesis entailing the topic choice, instruments used and brief introduction of thesis according to university requirements. The second phase involves literature review and permission for scales to be used (and data collection in third phase).

Since it is highly necessary and ethically binding by NUST to acquire permission for using scales, in order to successfully complete second phase and proceed to third phase, I am unable to progress in my thesis effectively. However, two of my peer members (Noor Raza Cheema and Tayyeba Abid) working on their dissertation involving the same variable domain and using the same scale of Career Decision-Making Self-Efficacy (CDMSE) Scale Short Form by Taylor & Betz (1983), have successfully completed their second phase and progressed to their third phase of research. On this note, not only that they were granted the permission to use your scale but that too without any costs being incurred. While during the telephonic inquiry, I was told to purchase the scale.

Please understand that being a student and not-working, it is very difficult for me to afford the cost of the scale since I belong to the same background as of my peer-members. I hope to receive a positive reply soon.

Thanking you in anticipation.

Regards,

Rashida Maqsood.


Activate Windows

Rashida Maqsood <rashida.maqsood1@gmail.com>
 To: "Taylor, Karen" <taylor.45@osu.edu> Fri, Sep 30, 2016 at 1:04 AM

Hello Dr,
 Once again thank you for granting permission and for your time and support. I will get back to you as soon as I receive the confirmation email sent by Dr. Betz to my colleague.
 Have a good day,
 Regards
 Rashida Maqsood

On Sep 30, 2016 12:49 AM, "Taylor, Karen" <taylor.45@osu.edu> wrote:
 Hi Rashida,
 Thank you again for your persistence in reaching me. Our telephone connection was just cut off so I am sending this email to confirm our conversation that grants you permission to use the Career Decision Self Efficacy Scale. It is permission for the current study in which you are engaged.
 I await your confirmation of a colleague who was granted permission to use the scale by Dr. Betz and will follow-up with her regarding this decision.
 Good luck with your research and as I said in our phone conversation, you exhibit great persistence which will serve you well in your future career.

Karen M. Taylor, Ph.D.
 Associate Director
 Director of Training
 Counseling and Consultation Service
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 THE OHIO STATE UNIVERSITY

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Hi, Rashida Maqsood

Thank you for shopping with Mind Garden!

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Appendix D

Informed Consent Form

The O-Levels students of your esteemed school are invited to participate in a research designed primarily to study the “Impact of Self-Concept on their Career Decision Self-Efficacy”. This research project is being conducted by Ms. Rashida Maqsood as a degree requirement for MS Career Counseling and Education.

By participating in this survey, your students will be helping to better understand different aspects of self-concept and its contribution towards student’s decision-making abilities. This research is being conducted in various private schools and colleges located in Islamabad that provide O-Levels Education. There are no known risks involved nor are there any costs for participating in this research study. The information collected from your students in this research may not benefit them directly, but the learning from this study should provide general benefits to the understanding of student’s self-concept, their career decision making abilities and the relationship between the two phenomenon.

This research is anonymous and the student’s participation in this study is voluntary. If the students choose to participate, kindly instruct them to not write their name on the questionnaire. No one will be able to identify the students given the generality of the information asked. The students have the right to refuse and/or withdraw from participating in this research.

If you allow your students to participate in this study, please provide your consent below. Please ask the students to provide the required demographic information and honest responses on the attached questionnaires. Your support and participation will be highly appreciated.

Statement of Consent: I have read the information in this consent form. All my questions about the research have been answered to my satisfaction. My signature below indicates my consent to allow students to take part in this research in agreement to the conditions described above.

Signature of Principal / Coordinator

Date _____

Thank you for your support and help in this research!

Appendix E

Demographic Information Form

Instructions

Please provide a response for each of the following questions.

Personal Information

1. Your Age? _____

2. Your Gender?

Female

Male

3. Your parent's estimated monthly income range?

20,000 - 25,000

25,000 - 30,000

30,000 - 35,000

35,000 - 66,000

66,000 - Above

Academic Information

Name of your School/College?

Appendix F**Tennessee Self-Concept Scale – Adult Form (TSCS:2) (Abridged)**

This scale asks you to describe how you feel about yourself. Encircle your choice.

Answer **1** if the statement is **Always False**

Answer **2** if the statement is **Mostly False**

Answer **3** if the statement is **Partly False and Partly True**

Answer **4** if the statement is **Mostly True**

Answer **5** if the statement is **Always True**

Statements	1	2	3	4	5
I am an attractive person.					
I am an honest person.					
I am a member of a happy family.					
I have a healthy body.					
I consider a sloppy person.					
I am a decent sort of person.					
I get angry sometimes.					
I am full of aches and pains.					
I'll never be as smart as other people.					
I like to work with numbers.					
I am as sociable as I want to.					
I should love my family more.					
I'd rather win a game than loose one.					
I am not good at games and sports.					
I look fine just the way I am.					
I have trouble sleeping.					
I am no good at all in social situations.					

Appendix G

Career Decision-Making Self-Efficacy Scale (Short Form)
(Abridged)

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 circle on the answer sheet.

No	Very Little	Moderate	Much	Complete
Confidence At All	Confidence	Confidence	Confidence	Confidence
1	2	3	4	5

Sr. No.	Questions	Choices				
1.	Use the internet to find information about occupations that interest you.	1	2	3	4	5
5.	Accurately assess your abilities.	1	2	3	4	5
9.	Determine what your ideal job would be.	1	2	3	4	5
13.	Change majors if you did not like your first choice.	1	2	3	4	5
15.	Find out about the average yearly earnings of people in an occupation.	1	2	3	4	5
20.	Choose a major or career that will fit your interests.	1	2	3	4	5
25.	Identify some reasonable major or career alternatives if you are unable to get your first choice.	1	2	3	4	5

ANNEXURE A**Reliability Statistics of Tennessee Self-Concept Scale - Adult Form (TSCS:2)**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.732	.745	82

Summary Item Statistics of Tennessee Self-Concept Scale - Adult Form (TSCS:2)

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Correlations	.034	-.814	.830	1.643	-1.020	.067	82

Reliability Statistics of Career Decision-Making Self-Efficacy Scale – (Short Form)

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.833	.849	25

Summary Item Statistics of Career Decision-Making Self-Efficacy Scale – (Short Form)

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Inter-Item Correlations	.184	-.673	.758	1.431	-1.127	.072	25