Testing a Conceptual Model of Three Key Strengths of Psychosocial Well-being in Saudi Gifted Adolescents

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DECLARATION

I, Wafaa Jan declare that the PhD thesis entitled: Testing a Conceptual Model of Three Key Strengths of Psychosocial Well-being in Saudi Gifted Adolescents in no more than 100,000 words in length including quotes and exclusive of tables, figures, appendices, bibliography, references and footnotes. This thesis contains no material that has been submitted previously, in whole or in part for the award of any academic degree or diploma. Except where otherwise indicated, this thesis is my own work

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ABSTRACT

The important role of psychosocial well-being in increasing the manifestation of intellectual giftedness in adolescents is evident in the literature. In this thesis three psychological perspectives have provided the theoretical background for the development of a conceptual model of the psychosocial well-being in adolescents:

1. Psychosocial theory relating psychosocial development in adolescence to the successful resolution of identity crisis in the form of the ego strength of fidelity.

2. The social cognitive identity style model which adds additional insight into the identity function of adolescents as processing self-relevant information about self and constructing self-identity.

3. The constructive-developmental theory that refers to complexity of mind as a means of understanding the mental health of adolescents.

The major aim of this thesis was to examine the usefulness of the conceptual model as a construct of the three key strengths to explore the psychosocial well-being in Saudi gifted adolescents. The usefulness of the conceptual model of psychosocial well-being in Saudi intellectually gifted adolescents was examined using a two stages approach. The first stage investigated the conceptual relationship between identity style and psychosocial ego strengths with 226 Saudi gifted high school students. The sample comprised 134 males and 132 females, ranging in age from 15 to 17.

Identity style and psychosocial ego strengths were assessed using two validated instruments. Markstrom's Psychosocial Inventory of Ego Strengths (PIES) was developed to measure Erikson's eight ego strengths (hope, will, purpose, competence, fidelity, love, care, and wisdom). Berzonsky's Identity Style Inventory (ISI-3) was used to measure three styles of identity processing orientation: the informational, normative and diffuse-avoidant styles. Both instruments were translated in Arabic.

Analysis was undertaken using statistical tests including ANOVA and stepwise regressions to test whether males and females differed in the use of three identity styles, and to test the relationships between identity style and the total PIES score and the PIES subscale fidelity as associated with the positive resolution of identity crisis in adolescence. Recruited from Stage 1, 18 structured interviews were undertaken in Stage 2. These interviews followed the Structure of Subject- Object Interview (SOI) procedure and analytic structure developed by Lahey, Souvaine, Kegan, Goodman and Felix in 1990.

Gender differences were examined for the three identity styles of processing (ISI-3) and the eight ego strengths subscales. Both males and females used all three identity styles; however, the males scored significantly higher on the information and normative styles than the females whereas females scored higher on the diffuse/avoidant styles. For the PIES, females scored higher than males on the subscales of love and care. There were no significant differences for the other six subscales.

Stepwise linear regression was used to assess the relative contribution of the three identity styles and gender to the PIES total score, and for the PIES subscale *fidelity*. Informational style accounted for 14% of the variation in the PIES total score. The diffuse–avoidant style was negatively associated with the PIES total score and gender was significant. 23 percent of the variance in the PIES total score was explained by these three variables. All ISI-3 styles and gender were significantly associated with the *Fidelity* sub-scale, with approximately 17% of the variance explained.

The findings of the Subject–Object Interview (SOI) analysis, which focused on complexity of mind, were limited as all participants showed no evidence of higher order of mental capacity more than the socialized mind among all three identity styles.

The conceptual model has confirmed the relationships between the social cognitive processing self-relevant information and the psychosocial ego development. The psychosocial health

among intellectually gifted adolescents can be understood through the identity styles as functional aspects of psychosocial well-being. The complexity of mind explains the order of mental capacity among intellectually gifted adolescents.

CHAPTER 1

INTRODUCTION AND OVERVIEW

1.0 Introduction

While psychosocial well-being in intellectually gifted adolescents is essential for developing prosperity and outstanding success in life, some gifted adolescents may be affected by their unsolved psychosocial needs. Incidences of psychosocial maladjustment among gifted adolescents may place their academic performance and psychosocial well-being at risk (Neihart, 1999, Jones,2013).

The literature of gifted education has recognized several variables associated with the psychosocial well-being of gifted adolescence. For example, Cross (1997) points to the individual characteristics needs of gifted children and adolescents as endogenous and to the interactions and psychosocial needs of gifted children and adolescents as exogenous. In addition, Dombrowski's (1966) theory of overexcitabilities addresses many of the emotional and psychological needs of gifted individuals.

Depth psychology offers more coherent insights about the construction of psychosocial well-being in adolescents. Eminence psychologist and psychoanalyst Erikson (1950-1987), known for his theory of ego psychosocial development. Erikson (1964,1968) views psychosocial well-being, by its very origin is an integrated phenomenon that implicitly develops as the outcome of the ego functions of adaptation and integration activities in the process of identity formation (Erikson,1963;1968). Berzonsky (1986,1990) expends Erikson's theory of self-identity and establishes constructivist model of identity style. Berzonsky's contemporary view asserts the role of self-activates in the integration of self-identity. Modern constructivists Robert Kegan (1982, 1994) has distinguished view about self-development and

adolescents crisis in modern world. These three perspectives outline a complex study related to the psychosocial well-being of gifted adolescents.

I have synthesized three theoretical foundations to explore the psychosocial well-being of Saudi intellectually gifted adolescents: (1) Erikson's (1959,1998) psychosocial perspective of ego development, (2) Berzonsky's (1990, 1993a) constructivist model of self-theory, and (3) Kegan's (1982, 2009) constructive-developmental theory of the order of mind or meaning-making. These three theories represent an integral view of issues related to ego development, identity formation, and the mental demands of self for studying the psychosocial health in a sample of intellectually Saudi gifted adolescents. Therefore, in this thesis, psychosocial well-being in adolescence has been addressed from the integration of these three perspectives, outlined below.

1.01 Psychosocial Perspective

Erikson (1959,1998) outlines eight psychosocial stages of ego development throughout the life cycle within normal growth and healthy personality development. Erikson's theory of life-cycle ego stages has a deliberate ontogenetic understanding of ego maturity in adolescence pertaining to key concepts of identity formation and ego strengths. Moreover, Erikson (1950, 1964) redefines the nature of ego development within three connected themes: the ego function of mastering the individual's experiences, the uniqueness of ego synthesized method, and the ego strength for sustaining a sort of wholeness and sameness over the life cycle. Erikson (1959, 1964) postulates an epigenetic pattern of unfolding ego growth cross eight stages of the life cycle, each stage characterized by ascendance of unique ego quality or strength. Over the lifespan, individuals must develop the eight ego strengths throughout eight structural age-specific stages.

Ego identity in late adolescence is assigned to mature psychosocial ego development (Erikson,1968). Erikson (1963, 1968) is the first psychologist to ascribe the developmental

identity crisis to the fifth stage of ego psychosocial development that corresponds to the adolescence years. Erikson emphasizes the positive nature of increased the psychological conflict in adolescence. This conflict influences the ego function by enabling it to integrate the adolescents' experiences and to maintain the adolescents' sense of sameness and continuity. The fluctuation of the ego's capacity of synthesizing the adolescent's experiences is assumed to be increased by the psychosocial demands upon the young generation, which is a trigger of the psychosocial identity crisis in adolescence. For Erikson, identity crisis in the adolescence years is a healthy mode of ego configuration of all new identifications and the newly synthetized experiences within the body of the ego structure. Therefore, the successful resolution of identity crisis in adolescence is the outcome of ego stability in the form of the ego strength of fidelity. In addition, Erikson correlates identity development to overall psychosocial well-being as identity formation facilitates personal functioning and psychosocial well-being.

1.02 Constructivist Identity Style Perspective

Berzonsky (1990, 1993a) extends the psychosocial focus on ego conflict in adolescence to encompass the social cognitive base of the individual differences by which adolescents process information about who they think they are. This epistemological view approaches identity crisis in adolescents as individual differences in the processing of self-relevant information about the self and of building a theory of self. Identity development, then, is "what you construct, or you fail to construct" (Berzonsky, 1986b, p. 3). Berzonsky assigns different a social-cognitive orientation or style by which individuals prefer to approach or avoid the identity crisis in adolescence. Accordingly, identity development is the product of an individual's constructivist process of processing information about oneself. Berzonsky constructs three styles of self-theorist that demonstrate scientific procedures in processing self-relevant information about the self. The significance of Berzonsky's model of identity orientation can be seen in his important research findings that support the outcomes of the

association of the three identity styles with positive and negative identity crisis- resolution and psychosocial ego development in adolescents.

1.03 Constructive-Developmental Perspective

Kegan (1982, 1994) recognizes the core challenges of the process of adolescence in modern life as youth need to develop a higher order of mind to meet the complex situations of cultural phenomena and modernity. According to Kegan's theory, adolescents may practice the process of identity-crisis resolution as they transform their meaning-making in the attempt to experience the most fitting choices and ways of knowing who they are. Kegan (1982, 1994) also refers to the capacity of mind to react to different life challenges. In his famous contribution of the constructive-developmental theory, Kegan (1994, p. 5) claims that young people in modern life may be "in over their heads" in trying to meet increasing social demands. This contemporary view assumes that adolescents need to develop or transform their meaning-making structure from the "durable categories" which is the concrete capacity of the principle of mental organization (Kegan, 1994, p. 23) to a more complex mental principle called "cross-categories" (Kegan, 1994, p. 24).

Kegan (1994, p. 6) uses the subject–object structure of mind to identify the principle of mental organization in an adult's mind as an "analytical tool for examining contemporary culture". Kegan's argues that, in contemporary culture, not all youth and adults are able to meet the mental demands of schools, societies, cultures, and knowledge. The subject–object structure of mind potentially is implemented into ways of knowing.

The principles of the mental organization are the conceptualization of the mind's growth in three different levels of mental capacities in hierarchy orders. It is a qualitatively different way of knowing, constructing thought and feeling are assumed to be included in this mindset. Kegan (1994, p. 21) suggests that the three principles of organizing meaning represent

different epistemological ways of knowing associated with different capabilities of meaning-making.

The independent elements are the first and the least complex set of constructed experiences. Young children make meaning from this very basic way of knowing. Kegan (1994, p. 20) explains that self emerges at this stage, from being a moment-to-moment relationship between their desires, preferences, and abilities to one that expresses its desires and preference. The "durable categories" is the second principle of the mental organization: It is the world of concrete and logical thinking. Usually, children in the stage of latency start creating a class or a category to order "or organize things, others, and self as possessors of elements" (Kegan, 1994, p. 29). When young people construct their way of knowing from the "durable categories", they are able to create a mental organization that is capable of ordering elements. These elements have a separate existence from the young person's momentary perception of them. The limitation of knowing from this order of mind, as Kegan (1994, p. 23) states, is that it is expressive of a single form of consciousness.

The third and the most complex principle is the "cross-categorical knowing": This is the world of abstract thinking, reasoning and the ability to experience self-reflexive emotion (Kegan, 1994, p. 29). The capability of subordinating durable categories to the interaction between them is associated with an advance in social relationship skills, where the basic elements of loyalty and commitment to the social norm present themselves. Kegan (1994, p. 10) links cross-categorical thinking to adults' mind development, namely the Traditional, Modern, and Postmodern orders of mind in which the socialized mind, the self- authoring mind and self- transforming mind are operating (see Chapter 6).

The structure of meaning-making at each level, on which the principles of mental organization operate, reflects how the capacity of mental organization integrates the

interpersonal and the intrapersonal experience with thought and feeling in creating the psychological self. The content of our experience is not relevant to the mental structure inherited in our world of knowing. Basically, people can make meaning from various orders of mind, but the structure of the evolution always operates in relation to the mind's current or particular mental principle.

1.04 Focus of the study

Thus, these three perspectives that are mentioned in this introduction offer a broad and complex understanding of psychosocial health in relation to three concepts: (1) the psychosocial ego strengths, (2) identity style, and (3) the complexity of mind. In this thesis, I have addressed these concepts as key strengths of psychosocial mental health that are embedded in an individual's ability to develop a healthy identity style and promote the individual's psychosocial well-being.

I use the three key strengths as a conceptual model to understand how the successful resolution of identity crisis and the construction of self-theory occurs in gifted adolescents. My work binds these key strengths together to provide a coherent framework for understanding the psychosocial well-being in intellectually gifted adolescents.

Within this mixed method design, I address two key strengths within the quantitative part of the investigation (n=266): the ego strengths and identity style. Intrigued by Kegan's theorization about the complexity of mind as a meaning-making system, I employ a respected qualitative method to distinguish the complexity of mind among subgroups of my sample. This has provided useful data for analysis related to the third key strength.

1.1 Key Strengths: Basic

In this section, I present a general overview of Erikson's, Berzonsky's, and Kegan's perspectives in mapping out the theoretical background of the three key strengths: the ego

strengths, identity style, and the complexity of mind. The relationship between these strengths will be addressed as a complex construct of the conceptual model of the three key strengths. In addition, the two processes of exploration and commitment as major aspects of identity development will be addressed in relation to the three identity styles and psychosocial well-being within the following points.

1.1.01 Ego Strength

The first concept relevant to the construct of psychosocial well-being is the ego strength. It refers to the quality of ego development and the hallmark mechanism of human psychosocial development. Ego strength is a psychodynamic concept. Erikson views the ego strength as the quality of an ego-synthesis process that "guards the coherence and the individuality of experience"(1963, p. 35). Erikson (1968, 1987) charts eight ego strengths emerging as a result of healthy psychosocial ego development at eight stages of human life. For example, in infancy, hope is the first ego strength developed as the virtue of a first step in psychosocial adaptation. Therefore, hope is the favorable ratio of basic trust over basic mistrust that marks the psychosocial ego's conflict in infancy. Hope emerges as a virtue of ego strength when the infant positively reconciles the psychosocial crisis of the first stage of the life cycle.

The next ego strength developed in childhood is will. This is the virtue of the positive resolution of the favorable ratio of autonomy over shame and doubt. The diagram of the eight ego strengths (see the life cycle in Chapter 4) includes the rest of the eight virtues: purpose, competence, fidelity, love, care, and wisdom across the life cycle. Important to the holistic view of Erikson's theory is that "the psychosocial strength is depend on the total process which regulates individual life cycle, the sequence of generation and the structure of society simultaneously, for all three have evolved together" (1987, p. 609). The psychosocial crises and thus the ontogenetic sources of adaptation and of maladjustment are arranged according to the epigenetic principles (Erikson, 1987, pp. 599-600). Thus, ego has the capacity to deal

positively with the psychosocial conflict at every stage of the ego development. However, an understanding of the psychodynamic process of the eight psychosocial human strengths cannot be separated from Erikson's psychosocial perspective of the ego functions. Erikson's (1963, p. 16) major attention to the ego's function is the "capacity to unify individual's experiences and his actions in an adaptive manner". Therefore, the eight ego strengths can be understood as the paradigm of psychosocial adjustment and mental health.

1.1.02 The Ego Strength of Fidelity

Erikson's notion of the epigenetic growth, and his ladder of the psychosocial ego strengths, confirms that every stage of the life cycle presents a different form of healthy ego development. Erikson (1964, p. 125) describes fidelity as "the ability to sustain loyalties freely pledged in spite of the inevitable contradictions of value of systems". Accordingly, fidelity is virtue or the form of the psychosocial adaptation in the fifth stage of the life cycle which is the stage of adolescence (Erikson, 1959, 1964). The virtue of ego development in adolescence obtained only when individuals approach identity crisis in a positive and active manner. Fidelity, as a qualitative change in the form of the psychosocial development in adolescence, presented in the individual's behavior, attitudes, and commitment to identity choices. The antithesis of fidelity is role repudiation; it is a negative perspective characterized by an absence of commitment and positive identity construction (Erikson, 1968; Marcia, 1980). Fidelity and commitment are two traits characterized the identity achievement. The absence of fidelity and commitment is associated with psychosocial problems and maladjustment behaviour.

1.1.03 Assessment of the Ego Strengths

The dynamic relationship between the ego strengths and psychosocial health is implicit in Erikson (1963) foreseeing that the "ego is the apparent measure of all components of human development, the somatic, social and psychological growth". These three components are basic processes common to Erikson's healthy developmental attitude and the pathology of the ego-

impaired. Therefore, their functional aspects are indispensable to the ego's epigenetic development and mental health. The integral functions of ego strength have been taken as a given for anticipating the aspects of normal healthy psychosocial development. Markstrom, Sabino, Turner, and Berman (1997) designed the Psychosocial Inventory of Ego Strengths (PIES). Empirically the PIES has proved its affiliation to Erikson's theory of ego development. The PIES model approaches the eight ego strengths in bipolar fashion in relation to the ego strengths and weakness. Markstrom et, al' (1997) model of the PIES provides empirical evidence that the total score of the eight ego strengths as measured by the PIES is an indicator of psychosocial well-being in a sample of high school students in two studies (Markstrom, Li, Blackshire, & Wilfong ,2005; Markstrom & Marshall, 2007). The PIES has been utilized in many studies to predict the ego strength of fidelity in adolescents and youth (Markstrom & Kalmanir, 2001).

1.1.04 Identity Development and Identity Style

Erikson's seminal theory of identity formation considers the process of identity as "a process located in the core of the individual and yet also in the core of his communal culture, a process which establishes, in fact, the identity of those two identities" (Erikson, 1968, p. 22). In Erikson's (1968, p. 23) view, identity is a lifelong individuation phenomenon, always changing and developing throughout the ego's synthesizing strategy.

Berzonsky's social cognitive identity style is well-integrated with Erikson's perspective of identity development. Berzonsky employs the social cognitive factors as basic elements of three epistemological types of the construction of the self-theory of self. Berzonsky (1988) structures identity as a self-generated theory about self that is grounded on the same assumption of scientific theory (see more on Epstein, 1973, Berzonsky, 1988). This model assures the role of a personal epistemic assumption in the process identity development (Berzonsky, 2004a).

Identity styles as conceptualized by Berzonsky (1990, 1993) emphasizes the active role of individuals as they construct a theory of themselves.

In many studies, the three identity styles have been mapped within Marcia's (1980) model of identity status, and the relation between the two measurements supports Berzonsky's hypothesis about the function of the social cognitive identity model. The first identity style is the information style. This is the type of self-theory that is built based on active endeavor whereby young people actively process self-relevant information, gaining additional self-insight and generate knowledge about themselves. Informational style individuals have been classified as identity achievers, or as having moratorium status in Marcia's (1980) identity status model (Berzonsky & Neimeyer, 1994; Krettenauer, 2005). The second type is the normative style. This identity style is classified by the absence of the exploration of and individual commitment to what the individual has internalized and feels comfortable with. The third identity style is diffuse/avoidant. Individuals in this identity orientation are characterized by their tendency to procrastinate, strive to avoid identity crisis, and to escape decision-making about who think they are. The three identity styles represent three identity decision-making styles (Berzonsky, 2010), reflecting individuals' active endeavor towards healthy identity development.

1.1.05 Assessment of Identity Style

Berzonsky's (1992b) social cognitive model is known as the revised Identity Style Inventory (ISI-3). This model provides a measure of identity commitment as well. The three identity styles have been employed in a number of studies among adolescents in relation to a strong indication of the psychosocial ego strengths, identity status, and the need for cognition. Berzonsky's epistemological assumptions about processing self-relevant information demonstrate significant perceptual differences between the three identity styles, resulting in

two healthy patterns of identity development: the informational and normative identity styles and the less healthy diffuse/avoidant identity style.

1.1.06 Complexity of mind

The third key strength focuses on the meaning-making experiences of gifted adolescents and the growth of their capacity of mind to deal with the increasing demands of the external world. The principle of linking meaning-making to psychosocial well-being in gifted adolescents is that the meaning-making context is the construct of complexity of mind. Interestingly, complexity of mind is not age related, and it is independent of the IQ that is the significant feature of intellectual giftedness. Kegan (1982, 1994) revisits Piaget's vision in which "there are not two developments, one cognitive and the other affective" (cited in Kegan, Noam, & Rogers, 1982, p. 105); therefore, ego or self brings cognition and affect into being (Kegan et al., 1982). This evolutionary theory contributes to an understanding of the development of ego, self, and mind as a structural process. Complexity of mind is the third key strength that this thesis employs to understand the structure of the subject–object relationship among gifted adolescents. Kegan (1982, 1994) expands our understating of the epistemological nature of self as a meaning-making system. The prospect of the transformation process of meaning-making in adolescence, therefore, is seen as an active dynamic practice of identity crisis resolution in which young individuals alter their order of mind to experiment with the most fitting values and choices, and ways of knowing who they are.

More recently, Kegan (2009) has focused on adaptive challenges, the concept that Heifetz invented to describe mental growth as a kind of change challenge versus a technical challenge, which refers to the skills that are well-defined and not necessarily related to development. Kegan sees that adaptive challenges require a process of transforming the mindset or developments of the mental capacity to its greatest capacity. Kegan employed this idea into his model of mental growth in which the activity of adaptive challenges is understood

as a way of reconciling "the relationships between the cultural demands of our minds and our mental capacity to meet them" (1994, p. 9).

Kegan (1994, p. 10) specifies the cultural phenomenon in modern life as a hidden curriculum, which characterizes the expectations that modern societies place on adolescents and adults to make meaning out of their experiences. Different sources and literatures (the marriage literature, the management literature, and the education literature) offer a consistent view of the role of consciousness (Kegan, 1994, p. 5). Kegan adheres to a kind of qualitative evolution of the organizing principle of our way of making meaning to meet the challenges of modern life. The adaptive challenges provide a strategy for approaching mental growth and offers a useful method for evolving a more complex mindset system, attributed to mental growth in general and the evolution of a sense of self.

Kegan (1994) devotes his theory of adult development to how the personal unfolding experience is organized. Accordingly, the transformation of one's mindset is an adaptive way to reorganize experience into a more distinguishable form of a meaning-making system. Autonomous relationships, independency, and self-authorship are the most sophisticated coordination principles that are central to the complexity of the meaning-making context and, therefore, to the complexity of mind. Autonomous relationships raise the epistemological structure of the subject–object relationship, and how a more complex way of knowing the world can be achieved. The forms of meaning-making in the evolutionary process operate on three different levels of mental structures: Traditionalism, Modernism, and Postmodernism (Kegan, 1994).

1.1.07 Assessing Complexity of Mind

Complexity of mind is assessed based on Kegan's framework of the theory of meaning-making. The Subject–Object Interview (SOI) is an assessment tool of 90 minutes duration, and

it is a semi-structured interview. As Kegan states, a "subject-object interview so named because the complexity of a mindset is a function of the way it distinguishes the thought and feelings we have from the thought and feeling that have us" (Kegan,2009, p. 22). The SOI is a measure of the complexity of mind that emerges from Kegan's theory of adult development. During the SOI, the interviewer attempts as much as possible to get inside the participant's own experience of the world, particularly her characteristic ways of understanding the world and organizing her experience. (Berger, 2009, p. 7).

1.2 Key Strengths: The Construct

In light of the nature and definition of the three key strengths introduced in this chapter, the psychosocial well-being is seen as a conceptual construct or model of these key strengths. In this thesis, the three key strengths conceptually correlated based on the following theoretical assumptions: (1) that identity development influences the psychosocial well-being (Erikson, 1964, 1968), (2) that ego strengths are indicative of the psychosocial well-being, and (3) that complexity of mind is not independent from the ego strengths and the constructivist identity styles.

1.2.01 Identity Formation and Psychosocial Well-Being

The first correlation relates identity formation to psychosocial well-being and healthy ego development. Erikson (1968, p. 165) states that "the optimal sense of identity is experienced merely as a sense of psychosocial well-being". Erikson's coherent view of personality psychosocial development (see Chapter 4) correlates the process of identity formation to the ego strengths or the ego's qualities at eight stages of the life cycle and to overall healthy, normal growth and psychosocial well-being. Erikson (1959,1968) views that identity development is associated with the ego synthesis method as the ego function of positive resolution of identity crisis against the negative psychosocial function of role-confusion.

Schwartz, Mullis, Waterman, and Dunham, 2000, stated that "Erikson placed identity as one pole on a dimension pertaining to self-knowledge, which extended to identity confusion as the opposite pole". (P. 504-505).

Many studies investigate the relationship between different variables of psychosocial well-being and identity formation (Sandhu, Singh, Tung & Kundra, 2012). Therefore, the literature investigates identity formation as the functional aspects of psychosocial well-being (Waterman, 2007; Gfellner & Córdoba, 2011).

1.2.02 Identity Style and Psychosocial Well-Being

As identity style represents individual differences in the strategies individuals use to explore identity-related issues, the three identity orientations functionally influence the psychosocial well-being in adolescents differently. Studies on identity style have outlined a different pattern of psychosocial development predicted by identity style (Berzonsky & Kuk, 2005; Soenens, Berzonsky, Vansteenkiste, Beyers, & Goossens, 2005). The social cognitive base of the identity style model assesses different epistemological assumptions held by individuals to process self-relevant information and make decision about who think they are. Regarding the psychosocial adjustment, previous research has consistently shown a positive relationship between identity social cognitive style and different variables of psychosocial well-being (Beaumont & Pratt, 2011; Berzonsky, Branje & Meeus, 2007; Phillips & Pittman, 2007; Vleioras, 2007).

Since the three-identity style ISI-3 consistently have been validated within Marica's (1966) identity status model (e.g., Berzonsky,1990; Schwartz et al., 2000), the literature has used the three identity styles primarily to differentiate between a healthy pattern of identity development and less mature or less adaptive identity styles. Findings on identity styles also confirm these identity functions as well. The three-identity orientations have been associated

with patterns of psychosocial adjustment-maladjustment (Adams, Munro, Poirer, Munro, Petersen & Edwards, 2001).

1.2.03 Identity Style and Fidelity

The correlation between identity style and psychosocial well-being pertains to adolescent identity crisis and self-exploration. Regarding the psychosocial identity crisis, it has been broadly argued (Erikson, 1963; Berzonsky, 1993; Marcia, 1980; Waterman, 1994) that the developmental crisis in adolescents influences a young person's psychosocial adjustment and fulfillment of self-growth.

Prior research shows an empirical link between the three-identity styles and the following syntheses: the positive synthesis of identity experiences in the form of fidelity and the negative synthesis of identity elements in the form of role-confusion. The three self-theories, the informational, the normative, and the diffuse/avoidant identity styles were developed as a methodological construct of identity construction by which the constructivist assumptions underlie the individual's synthesis of positive or negative identity functions. Research findings highlight the relationships between identity styles and the two aspects of identity development: fidelity and commitment. Informational identity style is used to actively explore alternative choices, negotiate possibilities, and show loyalty and commitment to individuals' theories of self. Individuals primarily adopt informational or normative identity styles.

The ego strength of fidelity represents a psychosocial pattern of adjustment in adolescents (Erikson, 1959, 1968; Marcia, 1980). Fidelity is the quality of ego's successful synthesis of identity experiences into a coherent whole.

1.2.04 Ego Strengths and Psychosocial Well-Being

Erikson's view of psychosocial well-being inclines to healthy personality development and the correlation of psychosocial well-being to the eight ego strengths across the life cycle. Ego strengths as the qualities of the socio-genetic ego development represent the individual's psychic ability to synthesize internal as well as outer experiences at different stages of human life cycle. Ego strengths as indicative of psychosocial well-being has been validated through different measures (See Chapter 4). Considering that ego strengths have the integral functions of the psychosocial aspects of human growth according to the psychodynamic stance, the ego strengths have been taken as a given for anticipating the aspects of normal, healthy psychosocial development (Erikson, 1959; Markstrom et al., 1997). Studies prove that ego strengths as qualities of ego maturity are indicative of psychosocial well-being and the absence of psychopathology (Markstrom, Marshall, & Tryon, 2000).

The meaningful relationship between identity and psychosocial well-being can be understood as the ego strengths anticipate the psychosocial ego development, which is observed as psychosocial well-being. The optimal sense of identity achievement is characterized by a high level of commitment and positive integration of the ego strengths of fidelity. Focusing on the specific measure of ego strengths, Markstrom et al.'s (1997) PIES has been used to anticipate psychosocial adjustment and well-being.

1.2.05 Complexity of Mind, Ego Strengths and Identity Style

The complexity of mind refers to structural subject–object relationships and the constructive-developmental theory of Kegan (1982, 1994). The impacts of Kegan's s theory upon the structure of the order of mind and the adolescent's epistemology have a potential association with constructivist assumptions about identity style. Therefore, gifted individuals

in the informational identity style supposed to be operate from a higher order of mind than those gifted adolescents who are classified as normative or diffuse/avoidant.

1.3 Current Study: Aims and Research Statement

1.3.01 Aims

The first aim of the current thesis is to examine the usefulness of the conceptual construct of the three key strengths: the ego strengths, identity style, and complexity of mind as model for exploring the psychosocial well-being in Saudi intellectually gifted adolescents. Several demographic variables are influence the process of identity development and psychosocial well-being in gifted adolescents. This study investigates the influence of age and gender on adolescents' psychosocial well-being.

The conceptual propositions of the relationships of the three key strengths are proposed as follows:

1. Adolescents who have psychosocial well-being will receive high scores on the PIES.

2. Adolescents with less developed psychosocial well-being will receive low scores on the PIES.

3. Adolescents who have psychosocial well-being process self -relevant information about who they think are adapt either an informational or a normative identity style.

4. Adolescents with less developed psychosocial well-being process self -relevant information about who they think are adapt a diffuse/avoidant identity style.

5. The psychosocial profile of the adolescents who are classified as informational or normative styles will be characterized by an active period of exploration and a positive form of the ego strengths of fidelity.

6. The psychosocial profile of the adolescents who are classified with diffuse/avoidant identity styles will be characterized by passive periods of exploration and an absence of the ego strengths of fidelity.

7. The complexity of mind as a structure the subject-object of full Stage 3 or higher (see Chapter 9) represents the adolescent's epistemological ways of fitting with the complex demands of the stage of adolescence in the highest ego strengths scores.

8. The complexity of mind as a structure of the subject–object of the transition of Stage 3 or less represents the adolescent's epistemological ways of fitting in with the complex demands of the stage of adolescence in the lowest ego strengths scores.

The second aim of the present study is to propose a theoretical linkage between the construct of psychosocial well-being and advanced cognitive development as intellectual giftedness in adolescence. The framework of this thesis, which is scoped in the following chapter, implicitly highlights the cognitive functions of ego as mastering the individual's experiences, the social cognitive structure underlying the individual's choices of preferred identity style, and the evolutionary transformation of the order of mind or ego or a psychic system. Although the formal operational thinking in adolescence is theoretically linked to identity development in many studies, the empirical basis of this connection has never reached common agreement. Erikson's theory of identity development and Piaget's (1958) view of the cognitive structure assure the cognitive development in adolescence as an important component of psychological growth and ego development.

Nonetheless, the claim I make in the present study is based on a theoretical understanding of the wholeness and unifying functions of personality development. Using the theoretical framework of the key strengths in this thesis, I maintain that advanced cognitive abilities potentially offer explanation for the argument that psychosocial mental health creates a atmosphere where the cognitive processes and the ego's functions (identity style and complexity of mind) are structured.

Understanding the way in which intellectual giftedness works in relation to psychosocial mental health entails an analysis of the impact of the advanced intellectual competence and the socio-genetic of identity development. Identity styles are the psychological methods by which self-theorists deliberate their constructs. Therefore, identity style employs significant cognitive processes associated with encoding, analysing, evaluating information about oneself.

Research around the hypothetical role of the cognitive basis of the identity style model has addressed the relative value of the cognitive functions of identity style (Berzonsky, 2008; Berzonsky & Kuk, 2005; Nurmi, Berzonsky, Tammi, & Andrew, 1997). The literature review in this thesis presents the findings in this area and shows evidence to support the relationship between identity styles and different cognitive experiences.

Drawing on the theoretical framework of the identity style model and the findings of prior studies, I conclude that the social cognitive structure underlying the ego process and the orientations towards a sense of self-theory are more likely to be observed in gifted adolescents as an informational processing style. Therefore, gifted adolescents who identify with an informational identity orientation may activate cognitive strategies corresponding to the cognitive development of intellectual giftedness. They actively process information about themselves, their academic interests, and their strong area of giftedness to construct mature identity orientation before making commitment to who they think are. Fidelity, then, is the positive form of identity achievement, it "promotes feelings of belongingness, necessity for producing ethical strength, and enhances the social order by allowing youths to correct or destroy aging ideologies and provides a sense of purpose in life" (Markstrom &Dougher, 1994, p.445).

Accordingly, I argue that the adaption of a healthy mode of identity processing information is important, whether it be in relation to the informational or the normative identity styles. Here, the positive form of the ego strength of fidelity has a positive influence on the sociocultural process, which enhances the qualities of ego and the adolescents' overall psychosocial adjustment. Yet, there are differences between the informational and normative identity styles. Unlike adolescents who adopt an informational style, those who adopt a normative identity orientation exhibit a passive period of exploration associated with commitment to the most adaptive roles, attitudes, and influencing identities.

Fidelity, as a positive form of the normative self-theory may have a protective position, preventing gifted adolescents from acting against their attitudes, and denying their intellectual differences in favour of social acceptance. The normative cognitive structure, as an epistemological way of building a theory of self upon the process of ego development, is speculated to be less influential than the informational epistemological style. This is because the informational style is believed to better resemble the ego's method of synthesizing individual experience. Thus, the influence of identity styles on the ego process is theoretically supported.

The diffuse/avoidant identity style, which is a maladaptive orientation of self-theory is specifically associated with a passive period of exploration, and it has a negative association with the ego strength of fidelity. The diffuse/avoidant style has been characterized as the antipathy of informational and normative identity styles, and it correlates positively to the role-confusion identity status. This type of processing information about self may present negative influences upon the ego process and the psychosocial ego strengths. Therefore, adolescents who prefer the diffuse/avoidant identity style are at risk of less mature ego development in the lowest of the ego strengths scale.

In this thesis, the idea about the usefulness of the qualitative experience of the subject–object relationship is limited to the theoretical justification about the epistemological method of the subject–object structure (see Chapter 9). The structure of Subject-Object relationships demonstrates the adolescent's mental capacity to cope with the sociocultural and academic demands. This mental capacity is an ongoing process of self-evolution (Kegan, 1994). Adolescents need to transfer their definite mental capacity to meet the demands of their days. As I have discussed in the basic understanding of the key strength of complexity of mind, the qualitative change in the self, ego, and the meaning-making system tend to be observed as transformative experiences and to have an epistemological structure of the subject-object relationships. Kegan (1994) highlights the constructive activities that help adolescents and adults deal with the social demands; the "cross-categories" mental principle.

The subject–object technique is rarely conducted among adolescents, and it is never examined in relation to ego strengths or identity style. However, the integral theoretical framework (see Chapter 2) supports the connection between the identity styles, ego strengths, and complexity of mind as key strengths of the construct of psychosocial well-being in adolescents. Thus, I argue that there is a parallel impact between the complexity of mind and the identity styles upon psychosocial well-being in Saudi gifted adolescents. Complexity of mind is assessed by the level of the subject–object structure. Kegan (1994) links two different levels of subject–object structures to the adolescents' and adults' complexity of mind: Stage 3 and Stage 4. Stage 3 is the interpersonal, and Stage 4 is the institutional. Therefore, the predictions about the complexity of mind of the Saudi gifted adolescents in this thesis were generated in relation to these two stages, whether transition or full Stage 3 or higher (Stage 4).

To summarize, the current thesis focuses on the psychosocial well-being of Saudi intellectually gifted adolescents by exploring the usefulness of the conceptual model construct of the three key strengths, identity style, ego strengths and complexity of mind. The usefulness

of the conceptual model is the ability of this construct to predict psychosocial well-being as function of identity development.

In the flowing chapter, the constructed relationships between the three key strengths as constructed model with the pattern of psychosocial well-being are addressed.

1.3.02 Research Statement

Based on the aims of this thesis, I addressed the following far-reaching question: To what extent and in what form do the three key strengths effectively define psychosocial well-being as a constructed model in a sample of intellectually gifted students in high school?

The theoretical linkage of the three key strengths was used to establish the conceptual model as a construct of the psychosocial well-being in gifted adolescents.

The profiles of the psychosocial well-being of the Saudi gifted adolescents who were in the highest ego strengths and who were in the lowest ego strengths were drawn, based on the conceptual hypotheses stated in section 4.1 of this chapter.

1.3.03 Research Hypotheses

The conceptual model was examined through the following theoretical hypotheses:

1. Null hypothesis H01: There are no significant gender differences in the three identity styles (informational, normative, and diffuse).

2. Null hypothesis H02: There are no significant gender differences in the strength of identity commitment as the subscale.

3. Null Hypothesis H03: There are no significant gender differences in the scores of the eight ego strength subscales and the total score of the PIES.

4. Null Hypothesis H04: There are no significant differences in the scores of the identity styles, commitment, and age.

5. Null Hypothesis H05: There are no significant differences in scores of the eight subscales and the total score of ego strengths.

6. Null Hypothesis H06: Identity styles have no significant effect on the eight subscales, the total score of ego strengths, and identity commitment.

7. Hypothesis H7: The informational identity style and normative identity style correlate positively with the total score of ego strengths, fidelity, and identity commitment.

8. Hypothesis H8: The diffuse/ avoidant identity style correlate negatively with the total score of ego strengths, the ego strength of fidelity, and identity commitment.

9. Hypothesis H9: The bivariate correlation between fidelity, the total score of ego strengths, and the three identity styles, vary between males and females.

10. Hypothesis H10: the identity processing styles predict the total score of the ego strengths as the function of the psychosocial well-being.

11. Hypothesis H11: The three identity styles would predict the psychosocial ego strength of fidelity as a function of identity development.

CHAPTER 2

THEORETICAL FRAMEWORK AND CONCEPTUAL MODEL

In Chapter 1, I introduced the construct of three key strengths to explore the psychosocial well-being in gifted adolescents. These key strengths comprise:

1. the ego strengths,

2. the social-cognitive identity style, and

3. Kegan's concept, the complexity of mind.

Following the introduction of this construct, I discussed the three key strengths as a construct of inseparable components for addressing adolescents' psychosocial development and mental health. I then outlined the method for examining the relationship between the three key strengths in the current study.

This chapter is divided into two parts and explores the functions of the key strengths as conceptual references for understanding the psychosocial health of adolescents. The first part highlights the theoretical framework, which encompasses the core foundation of the three theories of Erikson's ego strengths, the epistemological view of identity style, and the constructive-developmental tradition of the complexity of mind. The second part of the chapter addresses the conceptual model, which is a hypothetical construct of the three key strengths in two forms.

The overall purpose of this chapter is to trace the development of the conceptual framework used in this thesis and to provide a justification for the conceptual model.

2.0 Theoretical Framework

In addition to emphasizing the core background of the three key strengths mentioned previously, this theoretical framework represents the integral relationships between these key strengths as a means of exploring psychosocial well-being in gifted adolescents. In this section,

the integration of the three key strengths is discussed: (1) ego strength and identity development; (2) ego strengths and the complexity of mind; and (3) the relationship between identity style and the complexity of mind. Analogous to the relationship drawn between the three key strengths, in relation to the above components, are the hypotheses made in this thesis about:

1. ego strength and identity development

2. parallels between development of psychosocial ego strengths and levels of subject–object balance underlying the complexity of mind, and

3. identity styles and complexity of mind.

I conclude this section by addressing the theoretical relationship between cognitive development and psychosocial well-being in adolescents.

2.01 Ego Strength and Identity Development

The first point addresses important aspects of the relationship between two key strengths: (1) ego strength and (2) identity development. Although these views are based on Erikson's basic understanding of psychosocial development, Berzonsky's (1993) constructivist view of identity development explains the construct between the ego strengths and identity development epistemologically.

Erikson (1959, 1968) assumes that identity formation is the work of ego, that it is fundamentally linked to psychosocial ego strengths and mental health. It is the ego's method of synthesizing the adolescent's experiences that plays a major role in sustaining the individual's sense of sameness and continuity, the basic sense of identity. However, Erikson (1964, p. 128) asserts that "identity proves itself strongest where it can take a chance with itself". Accordingly, the epigenesis as well as the ontogenetic nature of ego psychosocial development verifies the emergence of the ego strength of fidelity in adolescence. Practically, the measure of identity achievement in adolescence is not only ego development at this stage

but also the successful resolution of the ego's psychosocial crisis from the first stage to adolescence. This emerges as capacity for fidelity that Erikson theorized as a quality of the ego's virtues inherent in the age of adolescence.

Erikson systematically relates the process of identity formation to the ego strengths within normal growth and within the healthy fulfilled resolution of identity crisis in adolescence (Erikson, 1964,1968). Further, identity development is the positive functional aspect of ego strength and psychosocial well-being. The concept of psychosocial well-being, by its very origin, is an integrated phenomenon. It implicitly develops, according to the outcome of the ego's functions of adaptation and integration activities that inform the process of identity formation. Erikson's (1968, p. 165) statement that the "optimal sense of identity is experienced merely as a sense of psychosocial well-being" correlates identity formation to the construct of psychosocial health. Healthy personality as defined in the psychosocial perspective is the outcome of the successful resolution of the eight identity crises over the life cycle, observed in a clear, relatively stable sense of ego identity.

Social-cognitive variables significantly influence identity functioning in adolescents. Erikson (1968) describes the process of identity development as psychosocial relativity, and he implies an interplay between psychological, social, and historical development. Berzonsky's (1990) identity style model is informed by Erikson's perspective of identity formation. The three identity styles bring relevance to the social cognitive base of identity formation in adolescents. The self-theorist style has been linked with many variables actualized in the constructivist structure of the three identity styles and its underpinning social-cognitive matrix (a full review is provided in the literature in Part 2).

The constructivist identity style, as a measure of identity construction, is a particularly useful tool for studying a phenomenon as complex as identity, particularly in light of giftedness. It is a form of assessment that combines the social cognitive identity style with an

individual approach of focusing on the meaning system for each person. Berzonsky (1988, 1990) developed a process-oriented and dynamic model of identity formation focused on how individuals seek, process, and use identity-relevant information.

Berzonsky's model is grounded in social cognitive assumptions of three identity crises-resolution:

1. Information-oriented individuals experience identity issues as a negotiation process of relevant, available information. They scientifically respond to the identity-resolution state. Informational-style individuals employ the core principle of the reasoning process of seeking, interpreting, and evaluating self-relevant information to solve identity problems and building self-theory (Berzonsky, 2010).

2. Normative- oriented individuals may accept the identity handed to them by significant others (e.g., parents or authority figures). This identity style is characterized by the absence of the identity exploration process. Therefore, the decision making preceding the active endeavor of problem solving is particularly about essential identity elements.

3. Diffuse/avoidant oriented individuals prolong the moratorium period by avoiding procedural actions of problem solving and decision making.

The three identity style have been linked to psychosocial well-being as measured by the PIES, the virtue of ego strength of fidelity and complexity of mind within the conceptual model of psychosocial well-being.

2.02 Parallels between Ego Strengths and Levels of Subject–Object Balance Underlying the Complexity of Mind

In this second point, I draw the attention to the development of ego and self as presented in Erikson's theory of ego strength and its relationship to Kegan's theories of complexity of mind. However, the literature has not to date posited the relationship between ego strengths and the complexity of mind. Although the theories of ego strength and complexity of mind are

assessed from different methods (quantitative and quantitative), theoretically the psychosocial perspective of ego development and the constructive-developmental theory have similarities and describe the growth of the psychic system as revolution (Erikson, 1968) and transformation (Kegan, 1982).

The first consideration here is how the self and the ego evolve across the life-span. Erikson describes ego maturity as a quality or strength emerging from the positive resolution of the psychosocial crises in eight hierarchal stages. The psychosocial growth is associated with the ego's ability to reach the favourable ratio at any given stage of ego development. Kegan, on the other hand, outlines six structured hierarchal developmental stages of a self–other construction known in the literature as a subject–object relationship. In the context of the subject–object structure, self takes a different psychological quality in the process of identifying what is subject and what is object. The psychological growth accrues as the self organizes more and more object experiences that can reflect on, and not be subject to, the self. Therefore, the self becomes more complex and able to deal with complex events.

The second consideration here relates to the integration between the development of the ego and complexity of mind as ego identity formation, which Erikson describes as a specific task to be achieved by the ego during adolescence. The mission of the ego in adolescence is to integrate the childhood identifications with the newly added elements of the adolescence stage. However, as this process psychosocially unfolds, the ego fluctuates between its familiar role, the expectations imposed upon it, and the evolution of the adolescence stage. The possibility of the ego's failure to synthesize the adolescent's new experiences can result in an identity crisis and role confusion. The ego has the capacity to reach a positive resolution of psychosocial conflict and establish a sense of identity. This balance at the adolescence stage is incorporated in identity vs. role confusion. Adjustment vs. maladjustment is the outcome of ego maturity at

this stage. The positive resolution of adolescents' identity crisis in adolescence takes the form of the ego strength of fidelity.

Kegan describes the increasingly structured nature of the subject–object relation at the heart of the activity of adaptation, and he interprets the qualitative changes in the subject–object structure as the subject–object's evolution. Identity or meaning-making is an ongoing process in which the boundaries between self and other become structured, lost and reformed (Kroger, 2004).

Reflecting Erikson and Kegan's roles as developmental theorists, the notion of healthy personality development (Erikson, 1959, 1968) and the transformation of meaning-making (Kegan, 1982, 1994) emphasizes the capacity of the psychic structure (ego or self) to synthesize the content of the individual's experiences (Erikson, 1968) and organize the structure of this experience. In Erikson's account of adolescence, the ego's capacity to organize individual experiences leads to an approaching sense of ego identity and solves the psychosocial conflict of identity crisis. In contrast, Kegan's insight about the developmental task of adolescence is associated with the expectations and demands from family, school, peers, and what Kegan calls "cultural curriculum". Therefore, identity development is the product of the adolescent's transformation of his or her meaning-making system, a shift in the balancing of the subject–object structure, and complexity of mind.

2.03 Identity Style and Complexity of Mind

The third important relation highlighted here is between identity style and the complexity of mind; the two theories have emerged from modern constructivist theory, but they have different backgrounds in relation to the construction of self and identity. Berzonsky's model points to individual differences in the way self-relevant information is processed to build a self-theory. The social-cognitive foundation of the three identity styles provides an understanding of how individuals absorb, encode, and process information about themselves.

It has been hypothesized that the three identity styles reflect different cognitive strategies and decision-making about the self-theory of self (see the explanation above). In contrast, Kegan's theory posits major shifts in how people construct their understanding of themselves and the world. Identity is a process of the evolution of self or the meaning-making system. It is a personal effort and activity in constructing meaningful ways of knowing.

2.04 Summary

To summarize, the integrated relationship between the three keys of ego strength, identity development, and the complexity of mind have been introduced in this section. It is clear that the foundation of the psychodynamic and the constructivist backgrounds explain the psychosocial development in adolescents.

2.1 Conceptual Framework

In the previous section, the theoretical framework presented the integrated and complex relationship between the three key strengths as a coherent construct of understanding psychosocial well-being in gifted adolescents. The conceptual framework embraces this construction in two aspects of this study. In this section, the overall aims of the conceptual model are outlined. The interrelated relationships between the three key strengths are explained as a way of examining psychosocial well-being in gifted adolescents. At the end of the chapter, profiles are provided, which illustrate the predicted outcomes of the three key strengths based on the research hypotheses.

2.1.01 Aim of the Conceptual Model

This conceptual model developed following my close reading of the theories of Erikson (1959, 1963, 1964, 1968, 1998), Berzonsky (1988, 1990, 1993) and Kegan (1982,1994). My reinterpretation of those theories led to a reconceptualization of how they interrelate and how this provides a new way of observing and explaining adolescent development. The main aim

of my conceptual model is to provide a clear demonstration of how the integration of these theories has been employed empirically.

Specifically, this conceptual model aims to represent the complex set of relationships between:

1. the total score of ego strengths as the predictor of the psychosocial-well-being,

2. the subscale ego strength of fidelity,

3. three identity styles, and

4. the two encoded stages of subject–object relationship or order of mind as assessed through the complexity of mind.

2.1.02 Patterns

Two patterns of psychosocial well-being have been theorized among Saudi gifted adolescents.

1. The first pattern links the two-healthy choices of identity style, informational (INFOST) and normative (NORMST) identity styles, to the ego strength of fidelity for Saudi gifted adolescents who were considered to be in the highest of the total score ego strengths. This relates to quartile Q4 (which anticipates psychosocial well-being).

2. The second pattern links the less mature diffuse/avoidant (DIFFST) identity style to the ego strength of fidelity for Saudi gifted adolescents who were considered in the lowest of the total score ego strengths quartile. This relates to quartile Q1 (which anticipates psychosocial well-being).

In addition, the complexity of mind has been argued as not being independent from the choice of identity style. This adds a further explanation to the two patterns of psychosocial well-being among the individuals in the three identity styles. Accordingly, these patterns have

been established as profiles to explain the complex construct of the three key strengths in this thesis. The sitting of the two profiles is addressed in the following section.

2.1.03 Structure of the Conceptual Model

The structure of the conceptual model was developed within the mixed method design that allowed the possibility of focusing on the most effective key strengths to understand the psychosocial well-being of the participants. The first part of the study was the quantitative investigation of the relationships between the ego strengths and identity styles. The inferences of the scores of the ego strengths and identity styles were obtained from two measurements of the Psychosocial Inventory of Ego Strengths (PIES) and the Identity Styles Inventory (ISI-3) among the original sample. The second element of the study was the qualitative enquiry. The constructed relationships between the three key strengths have been manifested in two profiles. In the following section, I reconsider the core of the ego strengths and identity styles before sketching the correlation between them and how they influence the adolescents' psychosocial well-being.

2.1.04 Ego Strengths

In this thesis, the theoretical framework and the measurement of the ego strengths are based on Erikson's (1959, 1998) psychosocial theory of ego development. Erikson considers ego strength to be present at each stage of ego development. He also considers ego strength to be a parameter of the ego's quality. I utilized the PIES of Markstrom et al. (1997) as an instrument to measure Erikson's model of eight ego strengths. The eight ego strengths were examined among the original sample of 266 Saudi intellectually gifted high school students (132 females, 134 males). The assessment of ego strengths by the PIES was to be undertaken to offer an indicator of psychosocial health at any stage of the ego development. The total score of the PIES was expected to anticipate overall psychosocial health. Therefore, the significant differences between high and low total score of the ego strengths would then be interpreted as

adjustment vs maladaptive behavior. In addition, the score of the ego strength in the fifth stage would be used to predict the ego strength of fidelity, which is the quality of the successful resolution of identity crisis in adolescents.

2.1.05 Identity Style

Berzonsky's (ISI-3) constructive model is one of the more prominent measures of identity formation that determine identity development rather than its outcome (Soenens et al., 2005). Berzonsky proposed three social cognitive identity styles:

1. Informational (INFOST)

2. Normative (NORMST) and

3. Diffuse/avoidant (DIFFST)

Each of these styles presents different modes of approaching or avoiding the task of identity formation.

2.1.06 Ego Strength and Identity Style

In the first study, the quantitative approach, I address Erikson's (1968, p. 165) thesis that "the optimal sense of identity is experienced merely as a sense of psychosocial well-being". Accordingly, I investigated the relationships between the total score of the ego strengths as an indicator of psychosocial well-being and identity styles as a model of identity development.

2.1.07 Complexity of Mind

The qualitative study is the second part of this study. The Subject–Object Interview is a semi-structured assessment of the complexity of mind, which is assumed to vary in relation to the highest and lowest ego strengths and the social cognitive identity styles.

2.1.08 Profiles

The first profile predicts the correlation between three variables:

1. the total score of the ego strengths as the paradigm of the psychosocial well-being,

2. the ego strength of fidelity as the virtue of the positive resolution of identity crisis in adolescents,

3. the two identity achievement identity styles, the informational and normative identity styles and

4. the less mature diffuse/avoidant identity style.

To assess the usefulness of this model of psychosocial well-being I theorised that:

1. Identity styles as measured by the ISI-3 have the power to predict the total score of the ego strengths as measured by the PIES. This is a preliminary testing of Erikson's (1968, p.165) contention that "an optimal sense of identity is experienced merely as a sense of psychosocial well-being".

2. Informational and normative identity styles correlate positively to fidelity and the total score of ego strengths.

3. The diffuse/avoidant identity style correlate negatively to fidelity and to the total score of ego strengths.

4. Two stages (3 and 4) of the complexity of mind, the interpersonal and the institutional correlate to the identity styles.

Figure 1: Profile 1- Identity style, psychosocial-well being and complexity of mind
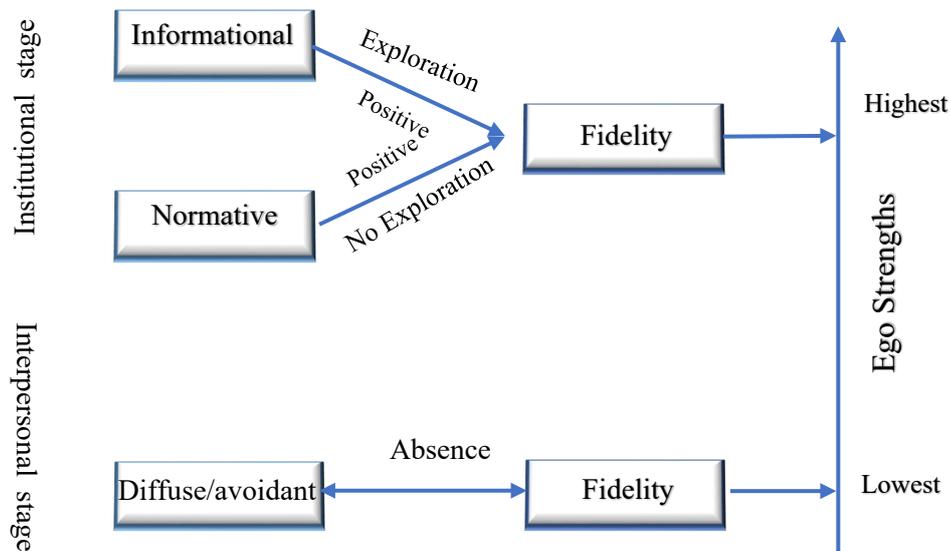
As it is shown in profile 1, the two patterns of psychosocial well-being are presented. The three identity style are linked to the paradigm of psychosocial well-being as measured by the total score of the ego strengths (follows the direction of the arrows). The highest on the total score of ego strengths represents the psychosocial well-being whereas the lowest on the total score of ego strengths represents the risk of maladjustment. In the first pattern of psychosocial well-being, the two identity achievement: informational and normative identity style are linked to the virtue of fidelity and to the highest of the total score of ego strengths. Informational identity style is linked to fidelity as positive resolution of identity crisis with active period of exploration in adolescence. Normative identity style is linked to fidelity as positive resolution of identity crisis without active period of exploration in adolescence. In the second pattern of psychosocial well-being, the less mature identity development, the diffuse/ avoidant identity style is associated with the lowest of the total score of ego strengths with absence fidelity. The Institutional stage of complexity of mind is assumed to be associated with the first pattern of psychosocial well-being whereas the interpersonal stage of complexity of mind is associated with second pattern.

The second profile proposes a relationship between the ego strengths of fidelity as the virtue of the positive resolution of an identity crisis in adolescents, the two mature or healthy identity styles (informational identity style and normative identity style) and the less mature style (diffuse identity style).

To examine the forms of fidelity according to this model, I theorised that:

1. Identity styles as measured by the ISI-3 have the power to predict the score of the ego strength of fidelity as measured by the fifth stage of the PIES.

2. Informational and normative identity styles correlate positively to the score of the ego strength of fidelity.

3. The diffuse/avoidant identity style correlates negatively to the ego strength of fidelity.

Figure 2: Profile 2- Identity style and Fidelity
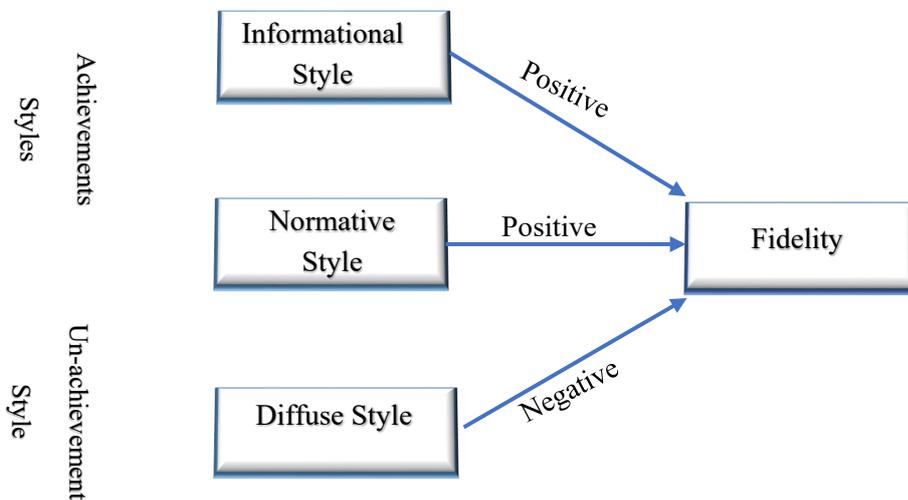
As it is shown in profile 2, the three identity style are linked to fidelity, the virtue of ego strength in adolescence. Fidelity as a positive form of identity crisis is associated with the two achievement forms of identity development: information and normative identity style. Fidelity is associated negatively with the less mature identity development, the diffuse/avoidant identity style.

PART 2

The first section in part two presents the literature review in four chapters starting with chapter three that focuses on the intellectual giftedness and cognitive development in adolescence. The conceptual foundation of the three key strengths presents through the Erikson's theory of ego psychosocial development, Berzonsky's theory of social cognitive identity style, and Kegan's theory of constructive development in chapter four, five, and chapter six. Previous research of the field, from which my construct of the three key strengths derives, has been highlighted to correspond with the curial variables implemented in this thesis. The three theories mentioned above were constructed in this section to display their holistic contribution to present research in identity development and the construct of psychosocial well-being. However, these theories also provide, to some extent, their own understanding of cognitive development and intellectual ability not, of course, as cognitive theories but as developmental theories (Erikson & Kegan) and as an epistemological perspective (Berzonsky). This point is important to an understanding of these theories and it has been highlighted within the theoretical framework of Chapter 2.

The second section of part two includes the methodology, analyses, the result and discussion in chapters seven, eight, nine and ten.

LITERATURE REVIEW

CHAPTER 3

GIFTEDNESS AND ADOLESCENCE

This chapter, which is the start of the second part of the thesis highlights several points related to the phenomenon of giftedness and adolescence in two major sections as follow.

3.0 Giftedness

3.1 Adolescence

3.0 Giftedness

In this thesis, the review of the literature of giftedness is limited to the most significant studies on the nature of intellectual giftedness, including traditional views as well as relatively new contributions to the field.

The main goal of this section is to deliver a brief discussion about the intellectual giftedness, how it has been viewed and measured from different perspectives. Drawing on research on intelligence and intellectual giftedness, the conceptual link between intelligence and giftedness is reviewed. Modern theories that have built on multidimensional aspects of intellectual ability are highlighted next. Two theorises of cognitive development are presented next in relation to its origin view of intelligence. Different conceptions of giftedness finally are amalgamated. Therefore, I outline the following:

1. the conceptual link between intelligence and giftedness

2. the evolution of multitrait theory of giftedness

3. cognitive developmental theories

4. conceptualization of giftedness

3.01 Conceptual Links Between Intelligence and Giftedness.

Historically, Galton (1822-1911) known for the conceptual link between intelligence and giftedness (Mcintosh & Dixon,2005). Galton conceives intelligence as a "natural ability" and fixed intelligence for which he creates measure for mental ability. Over the next forty years researchers began to question the theory of fixed intelligence, and they started to understand intelligence through a variety of perspectives (e.g., Spearman, Cattell, Binet). The history of giftedness links to psychometric intelligence since the beginning of twentieth century (Dai, 2018), were most emerging models of study giftedness draw on Spearman's (1904) discovery of the structure of general intelligence theory. Spearman (1863-1945) develops the first major empirical theory of general intelligence (Wassermann, & Tulsk, 2005). Under the assumption of his model of law of universal unity of the intellectual function, Spearman assumes intelligence encompasses of a general factor (*g*) and two specific factors, verbal ability, and fluency (Suzuki, Short, & Lee, 2011, p. 278). Spearmen suggests a conception of intelligence that accepted by authors and users of intelligence tests. He believes that each person has a certain general level of intellectual ability, which the person can show in most areas of endeavor, and it will be expressed differently under different situations (Willis, Dumont, & Kaufman,2011). Spearman believes that general intelligence represents an intelligence factor underlying specific mental abilities.

Sternberg and Kaufman (2018, p.32) pointe to the fact that hierarchical psychometric theories of intelligence are built on statistical structure of mental abilities, in addition, they are not theories of giftedness perse. It is assumed that beneath the factor of general intelligence (*g*), hierarchically related abilities contribute to intellectual gifts. All tasks on intelligence tests, such as verbal and mathematical abilities, were influenced by the general factor (*g*). Most modern intelligence tests such as the Stanford-Binet and Wechsler Intelligence Scale for Children are assessment of cognitive factors constitute general intelligence.

Other scholars pointed out that the traditional psychometric assessments of potential intellect are problematic. High achievement in nonintellectual performances area have received less focused and appreciation. The measurement of general intelligence IQs has raised issues of classifying individual base on how smart they are. A major shift in conception of giftedness is occurred with the early (g) factor model. Multitrait Theories of Giftedness have different perspective has been influence by the two factors theory of intelligence.

3.02 Multitrait Theories of Giftedness

Other psychologists argue against the Spearman's view of general intelligence, and therefore, the reliance on the IQ tests for assessing intelligence. The multidimensional construct of intelligence includes different perspectives defined intelligence as multifaced rather than single entity, Guilford (1967) and Thurstone (1947), and more recently psychologists Howard Gardener (1983). Gardener defines intelligence as "biopsychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture" (Chen &Gardener, 2005, p.78). He focuses on the potentials instead of on fixed abilities which was the dominant view since the work of Galton. Gardener's (1983) view has played an important role in extending intelligence into domain-specific by identified eight areas of intelligences. Gardner considers "each ability, as a separate intelligence, not just as a part of a single whole" (Sternberg, 2015, p.229). The eight intelligences comprise linguistic, musical, logical-mathematical, spatial, bodily kinesthetic, interpersonal, intrapersonal, and naturalistic areas (with a ninth existential area proposed). These areas represent the interaction of genetics and environment (McIntosh, Dixon, & Pierson, 2012).

Gardener constructs his eight areas of intelligences on a selective eight criteria: (1) potential isolation by brain damage, (2) the existence of idiot savants, prodigies, and other exceptional individuals, (3) an identifiable core operation or set of operations, (4) a distinctive development history, (5) an evolutionary history and evolutionary plausibility, (6) support from

experimental psychological tasks, (7) support from psychometric findings, and (8) susceptibility to encoding in a symbol system" (Sternberg & Kaufman, 2018, p.32).

Some authors claim that the theory of MI is not fully separated from the traditional psychometric general intelligence (e.g., Spearman theory). Further, Gardener's theory of multiple intelligences has extended the opportunity to students in schools. The potential for any type of intelligence can be developed and foster to be at the produced level. Teachers may focus more on the potential of the intelligence and prepared developmental tasks to challenge student's thought and knowledge. The theory of MI has been greatly welcomed in the literature of giftedness in the classroom and in gifted programs. However, the far-reaching implications of Gardener's contribution have faced skepticism and methodological issues when the theory has been put into practice.

Sternberg (2001) provides a more modern perspective that sees giftedness as a stable or static quality in an individual that develops as a result of heredity and environment. Sternberg conducted a further understanding of the development of intelligence through his triarchic theory of successful intelligence. The triarchic theory integrates an individual's intelligence and the passage through the individual's internal world, experience, and external world, which ultimately forms the basis of intelligent behavior (Sternberg, Jarvin, & Grigorenko, 2011). Sternberg (2001) believes in the theory of an expertise model that describes the integration of static and dynamic views of giftedness. This model describes the gifted individual developing expertise at a quicker rate and at a higher level than a non-gifted individual. According to Sternberg (2001), intelligence and its corresponding abilities are connected to the same psychological mechanisms. Developing expertise is not a static process, but a dynamic one of ongoing instruction, participation, and role modelling. This new theory examines the connections between abilities and expertise. Dai (2003) is supportive of the view that Sternberg's model of giftedness is focused on the dynamic processes of intelligence, creativity,

and wisdom, which are in constant creative motion. Sternberg's theory of expertise (2001) has five interactive components that influence knowledge and learning: meta-cognition, learning, thinking, knowledge, and motivational skills. Sternberg (1997) also investigated the theory of successful intelligence by focusing on three types of mental processes (analytical, synthetic, and practical) and their relationship to giftedness. In Sternberg's theory, analytical, synthetic, and practical expertise need not be present in all domains of expertise at the one time (Sternberg, 2001). In addition, he explains that the expertise model is not intended to compete with other models such the one proposed by Gardner (1983) and an earlier model proposed by Sternberg (1997). Rather, it is important to look at characteristics in those earlier theories as being flexible and dynamic as opposed to fixed and static.

In a shared study by Sternberg, Ferrari, Clinden beard, and Grigorenko (1996), 326 gifted high school students were tested for analytical, creative, and practical abilities. One group of students received triarchic teaching, which includes analytical, creative, and practical instruction, while the other group did not receive this teaching. The results showed students from white backgrounds to be analytical and students from diverse ethnic backgrounds to be creative and practical. Students who had been taught in a way that corresponded with their triarchic abilities achieved better results than students who had been taught in a way that did not correspond with these abilities (Sternberg, 2001). In another study conducted by Sternberg (2001), 141 middle-class eighth-grade students who were instructed "triarchically" in social studies or science for successful intelligence (based on skills of analysis, creativity, practicality, and memory) surpassed students who were taught only analytical or memory ability skills. Testing of analytical, creative, and practical skills was utilized, as were multiple-choice questions for memory. The analytical, creative, and practical testing required the children to analyse, compare, evaluate, imagine, and apply what they had learned into practice (Sternberg, 2001). For Sternberg, triarchic teaching is successful because it utilizes the components of the

expertise model. Sternberg (2001) also believes that students from different ethnic backgrounds developed different analytical, creative, and practical expertise skills from blending genetics and socialization. This could explain why students from more challenging backgrounds develop creative and practical skills in order to survive. According to Sternberg (2001), traditional tests that measure analytical, creative, and practical abilities are manifestations of expertise. These tests measure skills that are important in today's world, and families of those who are identified as gifted will depend upon the assortment of abilities that are evaluated (Sternberg, 2001). This may suggest that students from disadvantaged backgrounds could be at risk when tested by traditional methods because their expertise and abilities may not coincide with what the tests define as school and life performance abilities.

3.03 Cognitive Developmental Theories

Developmental theories define and explain the changes in children's concepts, thinking and understanding of the world, over the course of development (Halford,2020). Theories of development offer a framework for understanding human growth, development, and learning (Bormanaki & Khoshhal, 2017). The main feature of developmental perspective is the qualitative change in the cognitive ability, structure, and functions.

Jean Piaget (1896–1980), is the most influential psychologist in the science of the cognitive development (Oesterdiekhoff, 2016). Piaget proposes that mental structures at any stage of development are general rather than specific and universal rather than cultural. (Chen &Gardener, 2005). Further, the developmental nature of intelligence is qualitatively rather than quantitively (Chen & Gardner,2005). Piaget believes that cognitive development is a succession of cognitive structures (scheme/ schema) or stages that are recognized as patterns of physical or mental action underlying specific intelligence (Tribe, 1982). The change in the intellectual abilities is sequential rather than specific age characteristic. Therefore, the

development of higher stage is depended on maturation, experience, and social transmission (Monks, Emanuel, & Mason, 2000, p.143). Piaget (1963) hypothesizes four stages of cognitive development identified as the logic of action in infancy, the faulty half-logic (egocentrism) of representations in preschool years, the logic of concrete operations in childhood, and logic of formal operations in adolescence (Rose& Fischer, 2009). Intellectual development is the adaptation of cognitive structures to meet the demands of the environment (Malim & Birch, 1998). Piaget's perspective of assimilation and accommodation describes how people adjusted to the environment by building their schema that was created and modified by intellectual functioning. Assimilation and accommodation take place in four stages (sensorimotor, preoperational, concrete operational, and formal operational). Piaget thought that assimilation and accommodation enabled people to transition from physical functioning into mental functioning as they learned to adapt to the environment (Ford et al., 2012). In education setting, active participation and interaction with the environment leads to stimulate children's natural curiosity and developing higher level of cognitive development (Malim & Birch, 1998). Piaget (1977) proposes that cognitive development determines by four factors: maturation of the nervous system, social interactions, experiences based on interactions with the physical environment, and equilibration. Central for understanding intelligence is equilibration, it is a "process that involving assimilation of aliments to structures and accommodation of structure to new some-what different ailments" (Sadock, et.al, 1975, p.292). Equilibration is the self-regulating process, the interaction between organism and the environment leads to the emergence higher level of self-regulating process (Müller, et al,2015). Piaget's equilibration concept received little attention in relation to cognitive development in gifted. Research in this area reports different findings. Study conducted by Roberts (1981) founds that gifted and typically developing children are differ in how they develop equilibration. Considering the sequences of intellectual stages, gifted children more likely to progress through the cognitive

stages significantly in accelerated rates, thus, reaching the formal operation stages earlier than average children (Carter, 1982). In addition, intellectually gifted children were advanced up to 2 years ahead of typically-developing peers in stage of development (Carter, 1985). However, moderate and highly gifted students are not differed in their speed along intellectual stages (Bekey & Michael, 1987). In area of the identification of giftedness, previous research proved that Piagetian assessment would be useful tool from age (10 to 14), but it could be not significant with the age of formal operation. (Carter, 1982).

Vygotsky (1978) offers an alternative view to child cognitive development: sociocultural theory, which focuses on social communication through language as a means of developing cognition (Ford et al., 2012). Vygotsky believes that knowledge is built at the social level with others (not individually). Vygotsky's work differed from that of Piaget, focusing instead on the universal stages in the development of cognition. However, Vygotsky asserts that "children are curious, problem-solving, and they play an active part in their own development"((Malim & Birch, 1998, p.469).

According to Zembar and Blume (2009), Vygotsky proposes that in cognitive development there were no all-inclusive stages. Rather, learning took place in social interaction that influenced child learning (Ford et.al, 2012). Vygotsky's work was centralized on the zone of proximal development (ZPD). Vygotsky describes the ZPD as "the distance between the actual developmental level, as determined by independent problem solving, and the level of potential development, as determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978, p. 86).

3.04 Conceptualizations of Giftedness

Traditionally, intellectual ability was the central variable used to distinguish high-ability people from the average population (Fernández et al.,2017). Borland (2005), the author

of chapter Gifted Education Without Gifted Children "The Case for No Conception of Giftedness", defines two major factors that led to the invention of the construct of gifted child. The first is the movement on mental tests since its emergence which began in the early 20th century as a scientific method and assessment tool of intelligence. Second, was the need to control the increasing of diversity in school population. However, there are various basic reasons for increasing research on intellectual giftedness. In addition, there are many areas of disagreement among gifted specialists, especially with respect to conceptualizing giftedness. Despite decades of research on intellectual ability, there is continuing controversy surrounding the general concept of intellectual giftedness. Therefore, psychologists and educators acknowledge the lack of global agreement on the definition of giftedness.

Current understandings of intellectual giftedness are based on various perspectives. Traditionally, giftedness is understood as "exceptional intellectual ability of the sort measured by intelligence tests" (K´arolyi & Winner, 2005, p.381). Primary, scores from intelligence tests are estimated of general intelligence. Tests for examining of individuals such as the Stanford-Binet test, and Wechsler's Scales are leading the current psychometric assessment of intelligence. The psychometric standard is used to rank and classy individuals based on mental ability test scores (Deary, 2000). The psychometric method conceived giftedness as high intellectual abilities, and stresses the generic, innate quality of individual (Robinson, Zigler, & Gallagher, 2000). According to this perspective, the construct of giftedness is equated with a high score on the assessment test of intelligence. It has been argued that a high IQ is a guarantor of a high level of intellectual performance.

The view of general the factor represents the theoretical basis for postulating that intelligence can be measured with a single IQ score (Ardila, 1999). The link between intelligence and giftedness is articulated to be synonymous with high IQ to the traditional psychometric assessment (Shavinina,2008, p.117). The current psychometric model of IQ-

based is the most influential method, and the one that has produced the most influential research (Neisser et al. 1996, p.). Influential psychologists who have led the psychometric method in gifted education are Terman (1877-1956) and Hollingworth (1942). They define giftedness as manifested in high IQ performance (Robinson &Jolly, 2014). Terman believes in the theory of general intelligence and describes a good intelligence test as one able to assess abstract thinking, so he stressed the use of verbal and language-based tests of arithmetical reasoning and abstract thinking (Benisz et al.p. 2015, p. 166). Terman adapts and develops the Stanford Revision of the Binet-Simon Intelligence Scale (SB). The Stanford-Binet Scale (SB) has become the leading measure of intelligence since its publication. Terman equates intelligence with a number achieved on one intellectual assessment (Reis & Renzulli, 2011, p. 241), thus, high intelligence was believed to be reflected in high scores on tests of intelligence. Yet, Terman (1926) defines gifted individuals as (the upper 1%) level in general intellectual ability, as measured by the Stanford-Binet Intelligence Scale or a comparable instrument. Gifted children score two standard deviations above the norm on the Stanford-Binet Intelligence Scale. Therefore, he creates a classification structure of the IQ score by which gifted students must be classified in school. A student with an IQ score above 135 is defined as "moderately gifted", above 150 as "exceptionally gifted," and above 180 as "severely and/or profoundly gifted" (Webb, Meckstroth, & Tolan,1982). Columbia University's Leta Hollingworth (1886-1939) considers that the top 1% (IQs 130 to 180) as measured by intelligence test are gifted (Rimm, Siegle, & Davis, 2018). Conceiving giftedness as above -average on general intellectual abilities have been dominant the theoretical formulation of the traditional view. There is increasing evidence on the credibility of how traditional tests measure of general intelligence and specific cognitive functions related to school achievements (Naglieri & Bornstein, 2003). In addition to the debate about what constitutes the measure of general

intelligence, a major limitation of these tests is that they do not assess specific talents such as music, art, and leadership skills.

Cross and Cross (2019) believe that the concept of giftedness as the ability, or potential to achievement an exceptional level is a social construction, therefore, the definition of giftedness is influenced by societal values. Subotnik, Olszewski-Kubilius, and Worrell (2011) proposed a comprehensive definition of giftedness that incorporated most aspects of the concept:

"Giftedness is the manifestation of performance or production that is clearly at the upper end of the distribution in a talent domain even relative to that of other high-functioning individuals in that domain. Further, giftedness can be viewed as developmental, in that in the beginning stages, potential is the key variable; in later stages, achievement is the measure of giftedness; and in fully developed talents, eminence is the basis on which this label is granted. Psychosocial variables play an essential role in the manifestations of giftedness at every developmental stage. Both cognitive and psychosocial variables are malleable and need to be deliberately cultivated" (p. 7).

Modern psychology has much to offer the field of giftedness, a Gagné (1993) model introduces Differentiated Model of Giftedness and Talented (DMGT). Gagné's (2000. P.67) model is defined a "clear-cut distinction between the concepts of giftedness and talented". Gagné's proposes four aptitude domains: intellectual, creativity, socioaffective, and sensorimotor. These gifts (*G*) natural abilities and partially controlled by the individual's genetic endowment. School tasks such as: learning, reading, specking a foreign language, are challenge children' intellectual abilities; creativity to solve different problems, make decision; physical abilities involving sport, music and art; sensorimotor need social ability for interaction with others (Gagné, 2009). Talents (*T*) progressively emerge from the transformation of natural abilities or gifts into the well-trained and systematically developed competencies

(Gagné',2004). The (DMGT) is developmental theory of giftedness (Cohen, Ambrose, &Powell, 2000). The model provides valuable explanation on how children may present high performance in one type of giftedness.

Sternberg and Kaufman (2018) point to two different ways of conceptualizing giftedness: an explicit or implicit theory of giftedness. An explicit theory of giftedness is empirically developed by the scientist or educator in the field of psychology. They used scientific method to deliberate their understanding of intellectual giftedness. All psychometric approaches of study the intellectual ability is an explicit theory of giftedness and have dominated the literature on giftedness. The implicit model is much like insight about what constitute intellectual giftedness, unlike psychological researchers, layperson come to implicit view about gifted behavior withought formal research. The important of the implicit method is that it provide variety of ways by which people make judgments of the world and of those who inhabit it (Sternberg, 1993). Therefore, 'implicit theories deliver the structure by which we giftedness is defined, where explicit theories deliver the content that is embedded within that form or structure" (Sternberg, 1993, p.6).

3.1 Adolescence

Adolescence is a normal biological, psychological, and social transition (Steinberg, 2005). It is also a phase of a major adaptive task of personality development. (Freud, 1946, 1958) and a developmental task of identity formation (Erikson, 1959). The literature of adolescence describes this phase as a time of significant transformation from the childhood world to a world of adult-like roles and responsibilities.

Piaget's theory of the stages of cognitive development is one of the earliest theories on this topic to be linked more widely to developmental perspectives in the literature of adolescence. The Piagetian theory of intellectual development suggests that the structure of formal operations is established in individuals from about the age of 12 until 15 years of age.

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Increasingly sophisticated forms of logical thinking, reasoning, and rationality develop as a result of this (Inhelder & Piaget, 1958). Piaget hypothesizes that adolescent thinking operates from this formal operation structure, which is the single stage of an adolescent's cognitive development. However, as Tribe (1982) mentions, "not every adolescent is formal operator, but every normal adolescent displays some signs of formal operations in science, moral judgement, and literary understanding" (p. 110).

3.1.01 Cognitive Development in Adolescence: An Implication of Identity Crisis

The effect of the role of formal operational thought on the process of adolescent identity has received the attention of researchers. What is less understood, however, is how the cohesive self operates from a different cognitive structure. Also, less well known is the extent to which advanced cognitive development contributes to the process of ego development and self-complexity.

The research on psychosocial development argues that the cognitive base of ego identity is the psychic process (mental) of organizing the individual's experience. In this sense, the cognitive development during adolescence is vital to the healthy function of ego synthesis. This ego synthesis provides a means of maintaining the individual's sense of sameness and continuity. Erikson (1968) asserts that the process of adolescence encompasses the adolescent's increasing self-awareness of "discontinuity". As the young individual moves from the industrial stage of childhood to adolescence, discontinuity is understood to be associated with learning the emerging skills of formal operational thinking (Elkind, 1978), understanding the context of entering a social role (Erikson, 1964, 1968), and learning about social expectations (Kegan, 1994). In addition, the cognitive development is seen to be an essential component of the self, contributing to the total configuration of self and the functional aspect of ego development and identity formation. Erikson (1964, 1968) assumes that identity formation is

the work of ego, and that it is fundamentally linked to psychosocial ego strengths and mental health.

There is a strong case to be made that Erikson's eight stages of ego development justify the crucial role that the adolescents' cognitive foundation plays in the process of identity development and identity-crisis resolution. This can be seen in ego functioning and the unique integration of all the identity elements that are synthesized into a new whole.

The cognitive base of the ego is confirmed by Freud's (1932) definition of the ego as an organizing structure with cognitive functions-thought. This base enables the ego to establish contact with the outside world and adapt the individual's instinctual drives to the requirements of the environment or reality (Snarey, Kohlberg, & Noam, 1983, p. 304). The framework of psychosocial development claims that the cognitive base of ego identity as a psychic (mental) process organizes the individual's experience. This identity "refines and expands with each stage the capacity for accurate and conceptual interplay with the factual world" (Erikson, 1998, p. 76). Erikson adds to this view the merit of the individual's developing cognitive structure at each stage of ego development. This constitutes a "new pattern of the verification which pervades a person's whole being" (Erikson, 1964, p. 172). In this sense, the cognitive development during adolescence is vital to the healthy function of ego synthesis capacity.

The cognitive ability of formal operational thought in adolescence plays a significant role in the process of identity exploration and identity commitment (Erikson, 1968; Inhelder & Piaget, 1958) These are the two psychosocial aspects of establishing and achieving a sense of identity. Piaget (1965) believes "there are not two developments, one cognitive and the other affective, two separate psychic functions" (as cited in Kegan, Noam, & Rogers, 1982, p. 105). Erikson (1963, 1964) adopts a similar position in his psychosocial diagram of the life cycle. He asserts that cognitive development has primary strengths in the psychosocial developmental view of ego development. Therefore, the cognitive processes, including formal operational

thought in adolescents, are prominently implemented in the structures of ego and self. This implementation occurs in the formation of identity development (Erikson, 1964, 1968) and the structure of meaning-making (Kegan, 1982, 1994).

3.1.02 Identity Crisis and the Intellectual Development in Adolescence

The primary development that provides a lens through which to comprehend the process of identity crisis is the cognitive transformation in adolescence. The science of adolescence describes the cognitive capacities that emerge during the adolescence years, yet the transition of the mind is as dramatic as the pubertal and physical growth (Erikson, 1968). Some authors consider the dramatic changes and growth in adolescent thinking as more obvious than the physical changes (Gentry & Campbell, 2002). From the psychoanalytic perspective, the background of the psychosocial theory of human development recognizes the cognition in relation to the unconscious and conscious mind. Freud (1939) named two qualitatively different kind of thinking; the primary process which presents in the mind from birth and the secondary process as mature logical conscious thought (Tyson & Tyson, 1990). Primary Process thinking consists of those mental processes, which are directly related to functions of the primitive life forces associated with the Id. Primary Process is characteristic of unconscious mental activity; it is marked by unorganized, non-logical thinking and by the tendency to seek immediate discharge and gratification of instinctual urges. When the Primary Process plays a significant role in a person's thinking, he or she is incapable of being inner-directed. Secondary Process thinking consists of those mental processes which are directly related to learned and acquired functions of the ego. It is characteristic of conscious and preconscious mental activity, marked by logical thinking and by the tendency to delay gratification by regulation of the discharge of instinctual demands. Cognitive modes and organizations range in a continuum from the drive-dominated, prelogical, preverbal,

imaginative thinking of Primary Process to that of the reality oriented, goal-directed, logically ordered, rational, concrete and/or abstract conceptual thinking of Secondary Process.

In adolescence, the cognitive development of formal operation can be seen in "the operational synthesis which is established between primary and secondary process thinking" (Tyson & Tyson, 1990, p. 191). Piaget's stages of cognitive development form one of the earliest theories of cognitive development that link widely to the developmental perspectives in the literature of adolescence. Piaget hypothesizes that adolescent thinking operates from the formal operational structure; cognitive development in early adolescence can be characterized as a discontinuous reorganization towards a higher level of complexity (Granic, Dishion, & Hollenstein, 2008, p. 6). Formal logical thinking in adolescence is associated with important qualitative changes in the structure of thought, reasoning, and thinking about possibilities (Inhelder & Piaget, 1958). The demonstration of formal operational thought is assigned to the development of the abstract, idealistic, and logical thoughts which must be manifested in the early adolescence phase but increased gradually by late adolescence (Inhelder & Piaget, 1958). The "schemes" of the cognitive development in adolescence develop simultaneously and become synchronized into a structure of new integrated wholeness important for individual problem solving (Inhelder & Piaget; Bart & Mertens, 1979). Overton, Staidly, Johan, Staidly, Rosenstein, and Horowitz, (1992, p. 502) assert that "formal thinking gives the adolescent tools that are even more directly related to the regulation of overt behavior" and supports the individual's rational decision-making. The advanced cognitive skills of formal thinking are the most differentiated and integrated structure as the child moves through the cognitive stages to the higher order of thinking. Therefore, adolescent thinking is characterized by hypothetical-deductive reasoning (Inhelder & Piaget, 1958; Santrock, 2011).

The by-product of this cognitive structure is the development of a more complex thinking process with increased cognitive ability to think about thought itself or metacognition.

Research in the area of intellectual development has different approaches to cognitive development in gifted adolescents. Some researchers consider the Piagetian stages of cognitive structures, while the psychometric measures of the mental abilities of IQ are widely applied in gifted education to assess the mental competency in gifted adolescents. The assumptions of what underlies the advanced cognitive development in gifted adolescents are not fully addressed. An exploration of the research in this area might provide a more accurate depiction of the impact of cognitive development in the process of identity formation. In the line of progression through the formal operation stage, the early imperial findings showed that gifted, average, and retreated children all pass through the cognitive developmental stages in similar fashion.

Rreviewing the empirical studies on the relationship of the Piagetian formal operation of thought and intelligence, Overton et al. (1992) conclude that the IQ and Piagetian operational thought have a moderate relationship to each other, and it has been argued that an adolescent's formal thought may play a role in regulating the affect and behavior of the adolescent. The implications of these theoretical formulations for establishing identity formation in adolescents are essential. The process of secondary thinking or formal operational thought are applicable to the cognitive activity of exploring individual identity and theorizing about one's identity.

3.1.03 Identity Crisis and Identity Development in Gifted Adolescents

Erikson (1968) points to the adolescent's increase of self-awareness of "discontinuity", as the young individual moves from the industrial stage (during the early years of childhood) to adolescence. Not only does this discontinuity occur because of the sudden physical and libidinal changes but also because of the shifts associated with the individual's social role, and social expectations (Erikson, 1968). Therefore, identity crisis in gifted adolescents in contemporary societies is influenced by the following factors: adolescents' recognition of their giftedness, demands upon their roles in schools and families, and opportunities that are

available to them regarding their academic success. Research on identity formation in the matrix of giftedness and creative performances in adolescents has been extended since the formulation of the empirical bases of identity measurements; among these is Marcia's (1966) identity status mode.

Findings from the literature on identity development in gifted adolescents confirms that gifted adolescents may suffer from identity crisis like all adolescents (Zuo & Tao, 2001; Cross, 2001). Nevertheless, a small amount of research accounts for the potential factor of the cognitive structure of formal operational thought and advanced cognitive ability. The relevance of intellectual giftedness to the process of identity development is clearly recognizable when we see how much each concept explains the process of development. Identity crisis as a normative form of the ego's conflict in adolescence is fuelled by all available psychological, environmental, and sociocultural resources. Intellectual ability is an essential component of self, and it contributes to the total "configuration" of self and to the functional aspects of identity development. Therefore, dealing with different sources of conflict is an essential task for individuals during adolescence as they learn to construct a sense of identity and maintain ego resiliency.

Research on identity crisis in gifted adolescents highlights that gifted adolescents encounter confusing images in Western culture about what it means to be a gifted person, and many adolescents may try alternative behaviours to meet the expectation of how they should behave (Coleman & Cross, 2001; Cross, 2000). Erikson considers the active human effort and creativity in the process of the successful identity-crisis resolution. Erikson (1968, p. 134) suggests that "we can study the identity crisis also in the lives of creative individuals who could resolve it for themselves only by offering to their contemporaries a new model of resolution". Gifted adolescents may encounter the normative psychosocial identity crisis as a very natural part of their transitional trajectory to the adulthood and the establishment of a sense of ego

identity. Intellectually gifted individuals may experience more complex sources of identity-crisis.

The motivation to achieve academic success and the high expectations and social demands placed on gifted adolescents all create a critical context of identity crisis. The diversity in the quality and intensity of the psychosocial crises of childhood and adolescence is associated with different ego strengths that necessitate an adjustment to these demands. Therefore, the vulnerability that is associated with the revolutionary stage of adolescence (Erikson, 1959) is more likely to be intensified by the characteristics of giftedness (Cross, 2001; Dabrowski, 1970), anti-intellectual environmental contexts (Erikson, 1968), and extreme sociocultural demands. Therefore, the transition to adolescence becomes further complicated for advanced cognitive individuals (Colangelo & Assouline, 2000).

Previous findings about identity development in gifted adolescents confirmed the intensity of identity crisis among adolescents gifted students (Zuo & Tao, 2001; Cross, 2001). Therefore, the relevance of the intellectual giftedness to the process of identity development is clearly recognizable when we are seeing how much each concept explains the process of psychosocial mental health. The process of identity formation in psychodynamic activities is tied to different aspects of self and identity crisis; therefore, it can be triggered by different psychosocial sources. Intellectual giftedness is an important psychological source that may create important possibilities and encourage vulnerabilities during the period of normative crisis and normal exploration. Identity formation and intellectual giftedness are two fundamental aspects of human experience relevant to personality development in adolescence.

Silverman (2005, p. 2, cited in Bailley, 2009, p. 2) describes giftedness as "creating a different organization of the self, an unusual mind coupled with unusual emotions leads to unusual life experiences throughout the life cycle". Therefore, this expanded human ability

may be raising questions about the effect of the intellectual advanced capacity on the process of identity formation and personality development. Erikson's (1959, 1968) famous biographical studies of outstanding individuals have been a rich source for understanding of the extreme aspects of the identity problem. Furthermore, these biographic studies delineate the complexity of the phenomena of identity crisis in relation to other personality components. For example, the studies express the embodiment of ideological belief in the core identity of Luther and the personality problem at the core of George Bernard Shaw's identity.

Adolescents in the midst of their crisis may exhibit a primary achievement of the sense of identity but not until the strong sense of identity is preceded by identity confusion. The basic and simple feature of a young person having a sense of identity is the feeling of one's being at home in one's body, a sense knowing where one is going (Erikson, 1959). Erikson conceptualizes the ego identity based on the psychosocial vision of ego synthesizing habits and the corresponding outcomes of the eight virtues through the developmental process.

3.1.04 Psychosocial Well-Being in Gifted Adolescents

The issues of mental health and psychosocial adjustment in intellectually gifted students has strong disputes about whether intellectual giftedness breeds psychosocial wellness or whether it hinders feelings of worthiness. This ongoing debate finds supports for its two sides as the research into the psychosocial health of gifted students continues. The history of gifted education refers to Hollingworth (1942) first raising the concern about psychosocial adjustment in highly cognitively gifted children who had IQs of 180. Twenty years earlier, Terman (1924) had reported that in comparison to children with average intelligence, gifted children with IQs of 140 or more are better psychosocially adjusted (Terman & Oden, 1947).

Since then, the flood of interest in psychological adjustment and social interactions in the gifted population grew vastly with an emphasis on different personality variables, e.g.

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Myers Briggs Type Indicator (MBTI) by Cross, Neumeister, and Cassady (2007). This study raised practical implications about the type of personality common in gifted adolescents. Dabrowski's (1966) theory of positive disintegration (TPD), has been addressed very designative insight about personality development in gifted. Evidence recruited in the literature of giftedness supported the conflicting views and failed to reach a general conclusion about whether gifted children and adolescents are psychosocially well adjusted or whether giftedness creates more personal and academic difficulties.

However, it seems that researchers using a well-established scale of emotional and behavioural problems have been more supportive of the point of view that gifted students at least adjusted similarly well to their average peers (Colangelo & Zaffrann, 1979). Empirically, some studies have found that gifted children may be better adjusted the other children.

The impact of the intelligence as measured by IQ on the psychosocial adjustment in gifted children shows that there is, to some degree, a converse relationship between intelligence and psychosocial adjustment, but his applies only in cases where children have very high IQ (Tannenbaum, 1983). Superior adjustment also has been found in highly gifted individuals in results recorded from different studies conducted among children identified by the IQ's A level of giftedness, high and moderate (Norman, Ramsay, Martray, & Roberts, 1999), and this finding has also been questioned in relation to the psychosocial adjustment.

As the disagreement continues, one major study (Cross, Cassady, Dixon, & Adams, 2008) has investigated the response of gifted adolescents on the Minnesota Multiphasic Personality Inventory-Adolescent (MMPI-A) as a personality scale. This well-established personality inventory measurement does not empirically support the common assumption that gifted individuals may experience personality difficulties and more elements of neuroticism

than is the norm. Cross et al. (2008) concluded that this study has demonstrated no abnormal behaviour. among gifted adolescents.

Erikson's (1959, 1987) theory of psychosocial development has fundamental potentiality for broadening our scholarly understanding of identity formation and psychosocial well-being in relation to a number of personality developmental variables. Cognitive development and intellectual giftedness have primary strengths in the psychosocial developmental view of ego development. The coordination of Erikson's holistic view of psychosocial development, identity development, and the psychosocial needs of gifted adolescents have the potential to advance our understanding of personality development in the light of giftedness. Mental health in gifted adolescents is different in its nature and intensity from that of other adolescents, due to the fact that the gifted adolescents have advanced cognitive ability and competence. Yet some studies confirm that gifted adolescents enter the cognitive structure of formal operation ahead of their peers.

CHAPTER 4

FIRST KEY STRENGTH

THE PSYCHOSOCIAL PERSPECTIVE OF EGO STRENGTH

This chapter presents the foundation of the first key strength of the psychosocial ego strength, Erikson's psychosocial perspective of ego development. The literature review of Erikson's theory in this space refers to the most significant of his contributions to ego development, identity formation and psychosocial well-being. The following headlines intended the major construction of Erikson's psychosocial development in this thesis:

4.0 The psychosocial Conceptualization of the ego

4.1 The life cycle model

4.2 Identity formation

4.3 Identity crisis in adolescence

4.4 Psychosocial well-being

4.5 Healthy personality development

4.6 Identity formation and psychosocial well-being

4.0 The Psychosocial Conceptualization of the Ego

Ego is one aspect of the inner psychic: a hypothetical construct according to Freud's model of the three internal agencies: the ego, the id, and the superego (Mitchell & Black, 1995). The ego in psychoanalysis is a selective, integrating, coherent, and persistent agency central to personality formation (Erikson, 1964, p. 147). However, Erikson criticizes the Freudian fundamental view of the ego as the regulated agency among the id impulses. From the psychosocial perspective, the ego is core to the individual's acts. It is an inner synthesis of the individual's experiences, and it guides action (Erikson, 1959, 1963). Erikson (1963, p. 194) understands ego as being an "inner insinuation" – "it is not the individual nor his individuality, although it is not indispensable to it".

Within the broad perspective of psychosocial theory, Erikson adapts the classic psychoanalytical view of the tripartite mind structure: the id, the ego and the superego as the intrapsychic world. However, Erikson rejects Freud's theoretical notion of the id's mighty impulse, the rigidity of the superego, and the confined rule of the ego as it "dwells constantly balancing and warding off the extreme ways of the other two" (Erikson, 1963, p. 193). While psychoanalysis defines the ego in relation to its formal counter-players, the id and the superego, Erikson proposes the environment to be the counter-player of ego. This recognition of social reality evokes the social environment not as a source of frustration and conflict but as a source of social prototypes and ideology. Thus, the ego maturation process, which starts early in human life, is supported by a "stimulating and encouraging environment" (1975, p. 102). This notion underpins the quality of ego identity, "the ego synthesizing power in the light of its central psychosocial function" (Erikson, 1968, p. 211).

Erikson (1963; p. 192) expresses a more flexible view of ego as a psychic organizer. He criticizes the psychoanalytic view of the ego's function as working relatively within the two well-known extremes of the mental structures, the id and the superego. Erikson's emphasizes that "ego is an age-old term which in scholastics stood for the unity of body and soul, and in philosophy in general for the permanency of conscious experience" (Erikson, 1964, p. 147). The ego is a logical, self-preservative, problem solving part of the personality (Erikson, 1963). In the Forward to the first edition of *Childhood and Society*, Erikson (1953, p. 16) tries to shed light on how the "new psychoanalysis view" directly influenced his "conceptual itinerary" of the ego in relation to societal processes. When psychoanalysis shifted its emphasis to the ego as being rooted in social organization, the psychosocial theory legitimated its psychoanalytical roots. However, *Childhood and Society* was oriented practically to the psychoanalytical historical method.

4.01The Ego's Social Origin

The real contribution to psychoanalytic thought is Erikson's imaginative structure of the socio-cultural phenomena within the psychic system and mentality. Just as Freud pioneers abstract mental life, Erikson posits the ego's social order in the life of ego stages over the course of a life. In an early outline of psychosocial theory, Erikson develops his theoretical background by extending psychoanalytic thought into the study of ego development. Erikson's innovation is to consider the role that social and cultural organization plays in relation to the development of the ego. Erikson (1959, 1968) sees that the libido principle is not the only basic limitation of the psychoanalytic model of mental development but so too is the ignorance of the societal process within the ego structure. Erikson (1968, p. 24) assumes that psychoanalysis is sophisticated enough to incorporate the environment as a live part of its basis, rather than as the object world.

Erikson's (1968, p. 24) theory offers a far-reaching insight, that the environment as represented by our surroundings must be acknowledged as a "pervasive actuality", not merely as an "outer world" available only by objective observation. Indeed, Erikson theorizes the internalization process of the environment within the developmental structure of our egos. By this, Erikson sees both psychoanalysis and social psychology as psychoanalytically sophisticated in that each of them provides a precondition strategy for the psychosocial meaning of ego identity.

Erikson intrigues by the psychoanalytic alteration from the Freudian's earlier focus on the condition from which the mental disruption is occurred to stressing the ego roots in social organization. Consequently, he implements some fundamental psychoanalytical principles and methodologies in his approach to the eight phases of ego epigenesis.

One significant psychosocial reformulation of the ego task in relation to the societal process is the psychosocial trial towards re-charting the form of the mother–child relationship. This is observed in the emphasis on social trust in the process of mutual regulation between the mother and the child (Erikson, 1963, p. 247). Additionally, Erickson's refinements acknowledge what the social organization "first grants to the infant" instead of criticizing what the social organization denies to it. Accordingly, the social order in its first form of the mother-infant interactional system should foster the child's first sense of trust. From a clinical insight, the psychosocial theory regards this basic trust as the cornerstone of a "vital personality" (Erikson, 1968, p. 97). As Erikson points out, the psychosocial achievement at this stage means that "you can trust the world in the form of your mother" (1968, p. 15). Developing the ego strength of trust vs. mistrust in infancy has a very important impact on the cultivated process of identification and the establishment of a sense of identity.

Another basic psychosocial alternative to Freudian psychosexual theory is where Erikson highlights the social form as a co-determinant of family structure and social order rather than the redaction band to the Oedipus complex being a source of irrational conduct of the human being. The psychosocial theory offers an advanced social view to the problem of the infantile ego's origin in social life. This view reflects Erikson's tenet of normal growth and the impact of the societal process.

According to psychoanalytic observation, social life begins with each individual's beginnings (Erikson, 1968, p. 47), and our first social experience is created through the psychosocial mechanism of internalization. Thus, gradually we are incorporated into, and identify with, aspects of our surroundings.

Essentially, though, the process of human growth is located within a broadening social milieu, our former experiences continuously remaining within us. As Erikson (1968, p. 24)

says, "from the point of view of development, former environments are forever in us". Nevertheless, accepting the social world as a vital component of the ego structure is to make only a general statement about the psychosocial model of ego development. Erikson negotiates the structure and the process of ego maturation and identity formation within the social order. He shifts the emphasis to the ego, as it has a distinctive human capacity for organizing the experiences.

The ego function of synthesizing experiences is completed only in a social milieu. Erikson (1975, p. 19) states that: "No ego is an island to itself". The breakthrough, though, is Erikson's systematic theoretical effort of reconceptualizing the core of the individual, the "ego", to other "inner institutions" and to the social world. Erikson explicitly links the ego to the social reality and the ideology of the super ego. Psychosocial theory extends social and cultural influences into the process of the ego synthesis style. Erikson described the mutual complementation of group identity and ego identity, of ethos and ego, as these are the frame of ego synthesis and social organization (1964, pp. 50–51).

In the setting of anthropological observations, Erikson tries to verify clinical evidence and speculations of the psychosocial patterning of ego synthesis within the psychic system. An interesting anthropological study of traumata in childhood in tribes (Sioux & Yurok) illuminates the extremely conflicted situation between the id and super ego in psychoanalytic theory.

4.02 Psychosocial Ego Development

The psychosocial approach was developed theoretically and methodologically to relate the study of ego development to the sociocultural context. Therefore, for Erikson the itinerary of ego development joins the uniqueness of ego's synthesized method and the ego's commonality. As base lines of Erikson's view of ego strength, the Freudian tradition and ego

psychology have been advantageous to the formation of the psychosocial trend of ego development. They have played a very important role in Erikson's ideas of the unfolding growth of the ego's capacity and the ego synthesis style and social relativity.

Erikson's (1959, 1968) model of ego development is represented in the principle of a life-span perspective, expanding thought and understanding of human potential development beyond adolescence. Erikson's epigenetic view of the "organism" as process rather than thing influences this theorist's holistic view of the "ego's beginning" and of ego development. While Erikson (1968, p. 82) sees that the "ego's beginning" is difficult to assess, he perceives that the ego in the psychosocial perspective has a developmental evolution. Erikson describes the ego development as an unfolding process of wholeness that emerges and re-emerges over the stage of the human life cycle.

4. 03 The Epigenetic Base: The Origin of its Development

Erikson (1963, p. 65) finds a parallel between embryology and psychoanalysis. Embryology refers to the science and methodology of understanding epigenetic development. This involves the step-by-step growth of fetal organs. Psychoanalysis, on the other hand, outlines the psychobiological determination law of psychosexual stages. Erikson thought Freud's theory of pregenital stages might best be explained within the principle of epigenesis derived originally from embryology. Thus, embryological development is an example of one of the earliest cross disciplinary methods that Erikson had applied. It is within this development of the epigenetic process that the formulation of the ego's psychosocial process is outlined.

By incorporating sexual, psycho, social, and cultural elements into the epigenetic paradigm, Erikson (1968) sees that the "epigenesis is indispensable for the somatic grounding of psychosexual and psychosocial development" (p. 26). Erikson conceives that the pattern of embryology supports the idea of relativity. This idea of relativity governs human phenomena

linked with organismal growth. Erikson describes the origin of the term epigenesis and how it fits his psychosocial diagram; "Epi" means "upon", and "genesis" means "emergence". Erikson pitches the organismic principle of epigenesis as basic to charting the sequential phases of psychosocial development. Therefore, the epigenetic base in this setting has organizing and configurational positions. This can be seen in Erikson illustration of the ego organization process.

4.1 The Life Cycle Model

Erikson (1987, p. 595, 1998, p. 20) refers to the origin of his psycho-social conception of the human life cycle in relation to Freud's psychogenetic view of personality. In Freud's formulation, an individual's past experience in the early childhood stages influences current functioning. Moving beyond that, Erikson structures the epigenetic personality development in a series of eight developmental stages. This model of personality development defines the psychosocial development as a lifelong process; it is the first psychoanalytic view of the configuration of the "cycle of life". Basing his model on clinical evidence, Erikson (1964, p. 114) shifts the focus away from the reconstruction of the infant's beginnings as the base of psychological development, and he focuses on the notion of the life cycle as an integrated psychosocial phenomenon. The core of the dynamic process of the life-cycle configuration is the hierarchical order of the developmental crisis. Erikson (1964, p. 96) gives significant clinical evidence of the uprooting experiences in adolescence or youth. He also gives significant clinical evidence of the partial regression to a basic hope for recognition; this regression occurs at the early developmental stage of infancy. The psychosocial view downplays the biological determination in the successive developmental crisis. However, it explains the schematic of the disturbing effects of uprooting, and the threat of exterior crisis not only to the individual's life cycle but also to the generational life cycle (Erikson, 1964, p. 96).

The epigenetic principle as the nature of the life-cycle stages (Erikson, 1998, p. 59) has been employed in two general epigenetic concepts. These concepts have generated from embryology, and they underpin psychosocial ego maturity: First, "anything that grows has a ground plan and … out of this ground plan the parts arise, each part having its time of special ascendancy, until all parts have arisen to form a functioning whole" (Erikson, 1998). By the same token, Erikson (1968, p. 93) repeatedly refers to this epigenetic principle as a means of understanding "how the maturation organism continues to unfold". In line with the literature of human development, Erikson asserts that after the birth, a newborn style is developed, which consists of a prescribed sequence of physical, mental, and social capacities (1998, p. 28). The eight stages of human life exemplify the idea of "what grows in steps is part of an ensemble in which no part must have missed its original crisis, its further metamorphoses, and its re-integration into each later stage" (Erikson, 1964, p. 140).

The simplest feature of Erikson's epigenetic chart of human growth describes the hierarchy of organs in three major stages: childhood, adolescence, and adulthood. It "signifies the gradual development of component parts" (Erikson, 1968, p. 93). Erikson expands the personality development process beyond the psychosexual stages to incorporate eight successive generational stages, from infancy to old age. All these eight stages are presented at birth, but they come to full strength at their time of ascendance.

The second epigenesis principles asserts that the epigenetic sequence of organismic development accrues as a generation of structure. Every new structure arises on the basis of the existing structure, such as the step-by-step growth of the fetal organs. Erikson extends the scope of this epigenetic law to include what he calls an "epigenetic personality" (Erikson, 1987, p. 550). Therefore, the maturation process is supposed to follow in a predictable fashion and a typical pattern of progression. These ideas are the very core of psychosocial personality development. Erikson formalizes an epigenetic diagram of eight constructional stages of ego

development. These stages are qualitatively different in their potentialities and weaknesses, and they are mediated by developmental inner conflicts or crises. As a theory that is expressed within an "organismic" model of human growth, the development of the ego is regarded as a structural approach. Snarey, Kohlberg, and Noam (1983) claim that Erikson's model of ego development follows a functional phase approach more than it does a structural approach. According to this stance, the maturing ego must re-establish itself at each stage of development through the crisis-resolution. It must also incorporate all sociocultural elements that are associated with this stage of crisis.

Issues of methodology and the nature of clinical evidence have been a principal focus in Erikson's (1968, 1987,1998) chart of the psychosocial life cycle. The idea of the life cycle has been introduced in a large balancing framework that combines a psychosocial theoretical and a clinical approach. This framework encompasses opposites. It moves between the role of the past (in the pathogenic condition) as a means of going "backward" and the role of the future (in the sense of structural growth and development) as a means of going "forward". It moves between a "downward" location to explore the unconscious side of experience and an "upward" location to explore the awareness of social experience. It moves between an "inward" place of diving into one's reality and an "outward" place of applying thought to historical actuality. Erikson's epigenetic diagram of ego stages, therefore, describes the epigenesis as a means of increasing the capacity of the ego through eight phases of psychosocial development over the course of a life.

4.2 Identity Formation

The process of identity formation begins early as the relationship between the mother and her child is established. This process is then consolidated throughout different forms of mutual recognition in the course of the human life-span (Erikson, 1959, 1968). As a cumulated process, identity formation has its last impacts on the adolescent, but it is determined by the

earlier crises and the ego strengths that follow. In a mutual affirmation process that starts in the maternal milieu and gradually develops in the social context, the budding of one's identity is established and evolves over the stage of childhood. Erikson relates the process of identity formation to the process of adolescence. He described the adolescence as "a stage of transition from an alternately invigorating and enslaving sense of an over-defined past to a future yet to be identified with" (Erikson, 1975, p. 195). It seems to serve the function of committing the growing person to the possible achievements and the comprehensible ideals of a viable or developing civilization. This vision summarizes the process of subordinated the adolescent's childhood identification to a new form of identification and the establishment of a new wholeness (Erikson, 1959, 1968).

However, Erikson distinguishes between identification as a mechanism and identification as a process of identity. Identity formation is more than the sum of childhood identifications, and it is not merely a new set of identifications. Rather, identity is a process of ego development that is in mature interplay with available models (parents, friends, and schoolmates) (Erikson, 1963, 1968). The initial sense of identity bridges the stage of childhood when the usefulness of childhood identification ends, and youth begins, in a form that integrates all previous identifications (Erikson, 1968, p. 159). Erikson (1963, p. 261) describes the adolescent's sense of identity as an "accrued experience of ego's ability to integrate all identifications with the vicissitudes of the libido, with the aptitudes developed out of endowment, and with the opportunities offered in social roles". An important feature of the ego integration process in adolescence is the "feeling of progressive continuity", a sense of "sameness and continuity". The adolescence experience must be configured into the form of ego identity (Erikson, 1968).

The early social context of identity formation and the mutual regulation between mother and child becomes an essential part of the individual's need for recognition in adolescence. By

recognition, Erikson (1968) refers to broad societal processes. Given the way in which a society releases their youngest into the heart of the task of ego identity development, adolescents confront the revolution of physiological, psychological, and cognitive changes, as well as various academic, vocational and social demands. Erikson (1968, p. 22) considers identity to be a "part of every individual entity". This is the work of the ego's synthesizing method and the "ego's role in the relationship of individuality and communality" (Erikson, 1998, p. 16).

Erikson conceptualizes the ego identity as being based on the psychosocial vision of the ego's synthesizing habits and the corresponding outcomes of the eight virtues through the developmental process. Individuals who accomplish the eight positive resolutions are qualified to gain a sense of ego identity and overall psychosocial adjustment. The adolescents' resolution of identity crisis depends on the synthesizing strategy of the adolescent's ego, and ego's ability to organize and integrate all the identity elements into a new whole. Adolescents in the middle of their crisis may exhibit primary achievement of their sense of identity, but not until the strong sense of identity replaces the identity confusion.

However, in late adolescence, the "wholeness crisis" must be completely solved with a new identification that subordinates the childhood identifications into new stable level of wholeness. Identity formation in Erikson's (1959, p. 125) genetic stance is a "process of configuration" that starts in the early life experience, between the mother and her child, and is continually synthesized and resynthesized through the four successive of childhood crises.

Erikson (1968, p. 163) gives a comprehensive explanation to the configuration mechanism as it integrates different genetic elements (constitutional givens, idiosyncratic libidinal needs, and favoured capacities) and psychosocial components (a significant identification, effective defences, a successful sublimation, and consistent roles). Although the process of identity formation generally has a positive meaning in relation to the psychosocial

personality development, its dark side is the pathological function of its total state of being and adjustment. Disturbance is one clinical aspect of young individuals who lose their sense of "ego identity" on account of either unsolved inner conflicts or outer ones.

4.3 Psychosocial Ego Strength

Erikson's (1963, p. 16) major attention to the ego's function is on the ego's "capacity to unify man's experiences and his actions in an adaptive manner". This fundamental view is derived from Erikson's foundation of the life cycle of ego development, the process of identity formation, and psychosocial well-being. Ego strengths are the qualities of the ego-synthesis process that guard "the coherence and the individuality of experience" (1963, p. 35). They work alongside the somatic and the societal processes in human life (Erikson, 1968). Ego strengths refer to the effectiveness of the ego to function at eight different hierarchical stages of ego development. This ego's functions are the aspects of ego maturation and psychosocial balancing. The viewpoint of the ego's process of synthesis is the cornerstone of the psychosocial paradigm.

Erikson deliberates the ego's function in the eight stages of the lifecycle similar to the organismic developmental process. Erikson (1959, 1968) negotiates the ego's power of mastering human experiences and actions in relation to the social context. Erikson (1964, p. 111) reformulates the pattern of ego strength within which radical psychoanalysis defines and assesses the ego in its economic energy system. He considers the "inherent strength" in the ego's process to be representative of an increase in the ego's style of synthesizing experience in accordance with the goal of pursuing work, love, and family interests. For Erikson, the term "inherent strength" that he uses to describe the ego's process has a positive quality and value; these operate within and empower of the process of growth of ego.

The major modification of the ego's nature and functions is implicitly connected to Erikson's concept of ego identity and healthy personality development. Ego strength takes a form of resiliency or psychosocial equilibrium as a positive resolution of the normative conflicts of each stage's crisis. The ego's organizational process that is responsible for organizing experiences and maintaining a coherent sense of sameness and continuity are achieved entirely within the unique strength of the individual's ego and his or her actuality for others. Erikson's model of the ego relates each psychosocial stage to the cultural and the historical process of the ego's development. This position clarifies the possible sources of the inner and outer ego's conflicts or crises associated with particular preconditions and demands of each crisis over the stage of life. These conflicts have their own jobs of enhancing the individual's capability to recognize the ontogenetic sources of these conflicts, on one hand, and approaching positive resolutions on the other.

Increasing the level of conflict over the successive stages should consolidate the ego's method of synthesis or talent in achieving the corresponding ego's virtues. Healthy personality development, according to this process, is the outcome of an increase in the ego's capacity to reconcile imposed threats (whether inner or outer) and to attain a state of psychosocial well-being (Erikson, 1950, p. 53). Erikson (1959, 1968) ascribes eight psychosocial ego virtues as certain human qualities of ego strengths to the components of healthy personality development. Each stage is naturally characterized by the source and potential of an inner conflict or crisis as well as a possible resolution.

Additionally, in Erikson's (1998) writing of the *Life Cycle Completed*, the generational cycle of ego strengths has been postulated in the psychosocial perspective to reflect the developmental meanings of each stage. Erikson (1964, p. 135) emphasized that these "emergent virtues are not external ornaments easily added or omitted according to the fancies of esthetic or moral style". Instead, he sees the whole body of virtues anchored in three different

systems, namely the epigenesis in individual development, the sequence of generations, and the growth of the ego. Profoundly, Erikson's charting of the eight psychosocial developmental conflicts or crises displays the ontogenetic source of generational strength and maladjustment in every stage of the life cycle. Virtues are certain human qualities of strengths, obtained only when the stage's crisis is positively resolved. The ascendant virtue that emerges in each stage elaborates the implication of the ego's value at that particular time.

4.3.01 The Ego Strength of Fidelity

Erikson relates the phenomena of adolescence in the fifth stage to identity vs. identity confusion. The successful resolution of the central task of identity crisis in adolescence must provide young people with an initial sense of achieving ego identity. The capacity for fidelity is posited to be a quality of the ego's virtues inherent in the age of adolescence (Erikson,1959). Young individuals experience the full meaning of the virtue "fidelity" when they exhibit an individual capability to maintain observable faithfulness to their final choices and decisions in the areas of ideology, occupation, and interpersonal matters.

However, as Erikson states, ego strengths, specifically the strengths of fidelity, are not an aesthetic decoration of the human essence, and these are developed over time. Fidelity is uniquely developed within the four strengths that precede fidelity (hope, will, purpose and competence). They are embedded in the consolidation of identity as well as in different forms in the other seven ego strengths (Erikson, 1959, 1968).

The successful resolution of the central task of identity crisis in adolescence must provide young people with an initial sense of achieving ego identity and an overall state of psychosocial well-being. The unifying ego function of fidelity underpins the power of ego synthesis in adolescence to "integrate all the childhood identifications, the vicissitudes of the libido, the aptitudes developed out of endowment, and the opportunities offered in social roles"

(Erikson; 1963, p. 261) into a new, coherent ego identity. Nevertheless, the natural quality of the ego synthesis method may fail to gain the strength of fidelity without some role repudiation, which is the antipathy of the ego strength of fidelity. Without the natural quality of the strength of fidelity and without the societal process of identity formation, young individuals may direct their faith or loyalties to others' roles and values and even to deviant groups (Erikson, 1987; Tribe, 1982).

4. 3.02 Measurement of Ego Strengths

Repeatedly, Erikson (1964, p. 93) refers to his model of the epigenesis principles as a means of understanding "how the maturation organism continues to unfold". The psychosocial perspective of ego development is shaped within broad theoretical and clinical insights. Erikson confirms the attribution of his ascending list of the eight ego strengths to be more than simply measures, tools, or scales for a test of adjustment. The nature of the eight ego strengths are fixed in three systems: the epigenesis in individual development, the sequence of generation, and the growth of the ego. Erikson attempts to present the list of the ego's virtues not as a means of modelling, or classification. His aim is not to produce a "schedule in the manufacture of desirable children, citizens and workers" (Erikson, 1964, p. 134), but, rather, to present a way of approaching the evolution of human strengths. Erikson (1964, p. 135) tries to say that those virtues "are not external ornaments easily added or omitted according to the fancies of aesthetic or moral style". Instead, they are states of balance, ascending developmental elements that take on a different quality in each stage of ego development. This quality must be matched to the level and source of the stage of conflict or crisis.

In the established literature of ego development, the measurement of ego strengths has been reviewed through the use of different search drives, websites and the Burros Mental Measurements Yearbook. Consequently, many models have been formulated in the literature. Among the most commonly used model, Barron's (1953) Ego Strengths Scale (Es) (cited in

Schuldberg, 1992) focusing on psychotherapeutic improvement in clinical context, has been validated within, and correlated to, numbers of ego strength scales in different cultures. However, the Eriksonian-based instruments of anticipating the ego strengths as indicative of the eight human ego strengths are even more limited. One verified test commonly used to assess Erikson's ego strengths is Hawley's test (1980) Measures of psychosocial development (MPD) focus on healthy personality development. They provide a measure of the status of conflict resolution at each stage and also overall psychosocial health. In general, the instruments of ego strengths have been well activated within the literature of the social sciences and examined alternatively with the measurement of identity formation and psychosocial well-being.

More recently, Markstrom (1997) and her colleagues Sabino, Turner, and Berman have provided one of the most comprehensive understanding of the compositions of the eight ego strengths and their antipathies. Markstrom et al. (1997) focus on Erikson's theory that psychosocial health is the ego's fulfilling functions, through the successful psychosocial resolution of the eight ego crises over the life cycle. Markstrom et al.'s (1997) measure of Erikson's eight ego strengths is the Psychosocial Inventory of Ego Strengths (PIES). The construction of the psychosocial measurement of the eight ego strengths has been built on Erikson's view of maladjustments and the eight ego strengths that emerge in each life cycle. The PIES describe two definitional themes for each of the ego strengths as illustrated in Table 1. Every stage of ego development has its positive and negative elements, the consolidation of the positive goal of development or the choice of the negative aspects of the ego strength dependent on the total process of the successful resolution of the stage's crisis.

The authors of the PIES have hypothesized and empirically verified, in two basic studies (1997), that the measure is reliable and indicative of the ego strengths and resiliency. The total score of the 64 items reflects the overall state of psychosocial health, whereas the eight subscales are an indicator of the level of ego development and the current ascendance of

the ego virtue (Markstrom et al., 2000). Regarding the theoretical formulation of the PIES, the measurement has been built upon Erikson's view that ego strengths "should provide evidence of successful psychosocial stage resolutions" (Markstrom et al., 1997, p. 706) and aspects of an individual feeling of ultimate psychosocial well-being (Erikson, 1964). However, the PIES take a general approach to Erikson's theory rather than a clinical manifestation of ego's weakness and identity disturbance. Practically, ego strengths have been considered to anticipate aspects of normal healthy psychosocial development. Erikson (1959, p. 29) links the parameters of ego strengths to ego maturity. For him, the appearance of the immature ego is reflected in the shadow, or the remains, of conflicting infantilism in patients' behaviour.

Table 1 Psychosocial stages, ego strengths and their antipathies

Psychosocial Stage	Ego strength and Antipathy	Theme 1	Theme 2
Basic trust vs. basic mistrust	Hope vs. withdrawal	Confidence/optimism (about life/people/oneself/the future, etc.) vs. doubt/faithlessness (about life/people/oneself/the future, etc.)	Renewed hope in the face of disappointment vs. giving up as shown in apathy or despondency
Autonomy vs. shame, doubt	Will vs. compulsion	An awareness of one's own will and a determination to apply it vs. impotence and helplessness	Self-control (includes impulse control, control over drives, self-determination, etc.) vs. impulsivity or compulsivity
Initiative vs. guilt	Purpose vs. inhibition	The ability to formulate realistic goals vs. aimless approach to life	Courage to pursue goals vs. fearful/suppressed/hesitant approach to goals
Industry vs. inferiority	Competence vs. inertia	Awareness that one has certain skills, knowledge, etc. vs. uncertainty or insecurity about skills, etc	Exercising skills, knowledge, etc. vs. inactivity/idleness

Identity vs. identity confusion	Fidelity vs. role Repudiation	Preoccupation with and commitment to being true/ genuine/honest/faithful with oneself and others vs. absence of inner conviction	Demonstrates commitment through disciplined devotion/ loyalty/service to ideological sources vs. role repudiation— two ways: diffidence or defiance (negative identity
Intimacy vs. isolation	Love vs. exclusivity	Chosen/mutual/reciprocal/ committed to one another and to the relationship vs. lack of chosen, mutual, reciprocal commitments	Togetherness with individuality maintained vs. enmeshment/loss of individual identity
Generativity vs. Stagnation	Care vs. rejectivity	Concern for the needs of others vs. lack of concern for the needs of others	Nurturing and teaching others vs. unwillingness to nurture and teach others
Integrity vs. despair	Wisdom vs. disdain	Acceptance of the past vs. regret/remorse	The ability to face an unknown future with courage vs. avoiding facing the future

Reproduced from Markstrom, C.A., Sabino, V.M., Turner, B., & Berman, R.C. (1997). The psychosocial inventory of ego strengths: Development and assessment of a new Eriksonian measure. *Journal of Youth and Adolescence*, 26, 705–732, with permission.

4. 4 Identity Crisis in Adolescence

One inspiring contribution to identity crisis in the young generation is mentioned in Erikson's (1968, p. 28) writing: "Who says we suffer from identity crisis? We are choosing it, having it actively; we are playing at making it happen". This statement is predicated on the voice of youth from the middle of the last century, and quoted in the prologue of Erikson's book *Identity, youth and crisis*. It indicates the younger generation's conscious feeling of having a normative state of inner and outer conflicts within the process of identity development. Hoover et al, (1997) point to the role of society in the process of identity formation as "identity grows and is nurtured or frustrated in a complex bonding of self and society". Erikson(1868 ,p. 23) assures the "psychosocial relativity" of identity formation. Identity crisis, then, may

have different psychosocial relativity. Some authors claims that identity crisis as apparent in adolescence is most common in Western cultures and not present in all cultures.

Identity crisis is a generational issue, and it is appropriate to the adolescent task (Erikson, 1968, 1975). Erikson marks the psychosocial conflict in adolescence with reference to evolutionary changes and the normal process of the ego-synthesized method that integrated adolescent experiences into new wholeness. Erikson (1975, p. 46) notes that the study of identity formation in adolescence is "strategic" because adolescence is the time of revolution in every aspect of human growth. Physiological development, cognitive development, and social expectations all coincide in the transition of adolescence. These factors enable young people to sort through and synthesize their childhood identifications in order to construct a viable pathway towards adulthood (Marcia, 1980).

Identity crisis is a key concept of Erikson's inclusive view of a healthy personality and psychosocial well-being in adolescence. The psychosocial identity crisis implies the period during which the identity issue continues to be explored but may not be fully resolved. Far from ascribing a pathological meaning, Erikson (1959) systematically assigns the normative identity crisis to the aspects of the ego's quality to safely approach the new zone of identity conflict free.

Erikson (1975) reflects on his own biography (his sufferings from identity moratorium) and on his most interesting clinical notes (Erikson, 1964, p. 96), which address the adolescent's endeavour to accomplish a sense of identity as akin to being a "trapeze artist". This image captures the young individual who tries out different roles and values and alternatively examines his or her potential future plan before consolidating a firm sense of identity. Additionally, Erikson (1964, p. 90) uses his clinical insight to describe adolescence as a natural phase of "uprootedness", a period of increasing self-awareness, and an active search for one's self-identity through free role experimentation in many areas of life. The "uprooted" feeling in

adolescence has been verified in relation to the process of searching for wholeness. However, experiencing the natural feeling of uprootedness here is accounted for by the psychological moratorium: a period of active searching for one's self-identity through the activities of identity experimentation in many dimensions.

An engagement with occupational and ideological concerns is the most important aspect of identity development at this time. Marcia (2006) remarks that the institutional moratorium is a transitory state. Therefore, it is a time of postponement, the most genuine and final identity commitment. The psychosocial moratorium, in its positive function, must enable young individuals to freely design their path of life before committing themselves to ultimate choices. Additionally, the successful resolution of this central task of identity crisis in adolescence must provide young people with an initial sense of achieving ego identity and an overall state of psychosocial well-being. The basic feature of a young person having a sense of identity is the feeling of being at home in one's body and having a sense of knowing where one is going (Erikson, 1959). However, in late adolescence, the "wholeness crisis" must be completely resolved with a new identification that subordinates the childhood identifications into a new stable level of wholeness (Erikson, 1959, 1968).

Reflecting on many case histories, Erikson (1968) refers to possible sources that may prolong identity crisis and issues related in adolescence. In contemporary societies, identity crisis has a lasting impact on late adolescence, the time of developing mature interrelationship, and making decisions about identity and career. Erikson (1959,1968) verifies his assumptions about the diversity and intensity of the identity crisis in adolescence by using different theoretical and clinical methods. His famous biographical studies of outstanding individuals have been a source of rich understanding of the extreme aspects of identity problems. Furthermore, these biographic studies delineate the complexity of the phenomena of identity crisis in relation to other personality components. For example, as discussed in the previous

chapter, Erikson's (1959, 1968) biographical studies express the embodiment of the ideological beliefs that inform Luther's core identity and the personality problem at the core of George Bernard Shaw's identity.

4.5 Psychosocial Well-Being

Erikson's contribution of the dynamic process of psychosocial well-being is acquiring scholarly and sophisticated research. Erikson's theory of psychosocial development is laid out in wide-ranging genetic, psychosocial, and cognitive perspectives. These perspectives encompass Erikson's view of what underpins psychosocial well-being, and blends together philosophy, methodology, and clinical experiences.

Nonetheless, Erikson's theoretical framework and the power of his life-cycle presentation of personality development have not been explored in a way that captures the complete picture of the following: the dynamic of how the ego synthesizes power and how this relates to the achievement of overall psychosocial well-being. Erikson's view of psychosocial well-being cannot be described as a model for attempting classification or a quick assessment. According to Erikson's theory, the concept of psychosocial well-being offers insights into how the individual forms a sense of sameness and continuity over time.

Erikson's original view of psychosocial well-being, in line with his notion of normal development, ego strength, and the development of a healthy personality has much to offer. It provides a useful knowledge base for answering the research question about psychosocial well-being and identity formation. The concept of psychosocial well-being is, by its very origin, an integrated phenomenon implicitly developed as an outcome of the ego functions of defence, adaptation, and ingratiation in the process of ego identity formation. The epigenetic development suggests that normal development is embedded in a "proper rate" and "normal sequence" as it impacts the successive manifestation of personality as well as the "intrauterine"

growth (Erikson, 1987, p. 550). Ego strength is ego quality, the "inherent strength" in the ego process that synthesizes the person's experience over the cycle of a generation (Erikson, 1964, p. 111). Healthy personality develops gradually as the ego successfully reconceals the conflict associated with the stage of development and gains a sense of psychosocial equilibrium. In relation to adolescence, Erikson theorizes psychosocial well-being as being central to the positive resolution of the identity crisis. He asserts that identity emphasizes in one stage of life what is true for all stages (Erikson, 1975, p. 100).

Reviving the construction of Erikson's theory in this context enables a focus on the following question raised by Erikson: "how a healthy personality grows or, as it were, accrue from successive stages of increasing capacity to master life's outer and inner dangers with some vital enthusiasm to spare?" (Erikson's, 1959, p. 53) In one sense, Erikson moves the study of human behaviour into a new connotation of healthiness and growth instead of tying it to a tradition of psychopathology that is associated with psychoanalysis. Furthermore, he creates a new vision of unfolding developmental ego mastery from which the associated normative crisis must be positively solved throughout the life-span. Therefore, Erikson situates the life cycle of ego stages within a new expanding perspective of ego psychosocial development that accords with recurrent developmental themes of genetic laws and normality. Healthy personality development is central to this view, and from this development the eight revolutionary virtues of ego strengths successfully emerge. These three themes underpin Erikson's view of the developmental task of identity formation, and how the process of identity relates to the emotional balancing and positive side of the eight conflict resolutions during the cycle of generation.

A tripartite model is suggested here. It provides an organizing framework for the synthesis of Erikson's ideas and the structure of the psychosocial theory of well-being as interrelated phenomena. Theoretically it defines Erikson's worldview of epigenetic ego stages.

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It emphasizes the unity of the unique characteristics and commonality in the process of individual development. In addition, the organismic principle that dynamically governs the ego process in the epigenetic diagram of ego stages is interpreted as a mechanism of personality development in the "tripartite model".

Figure 3: defines the tripartite model of Erikson psychosocial well-being theory.

Epigenetic Pattern
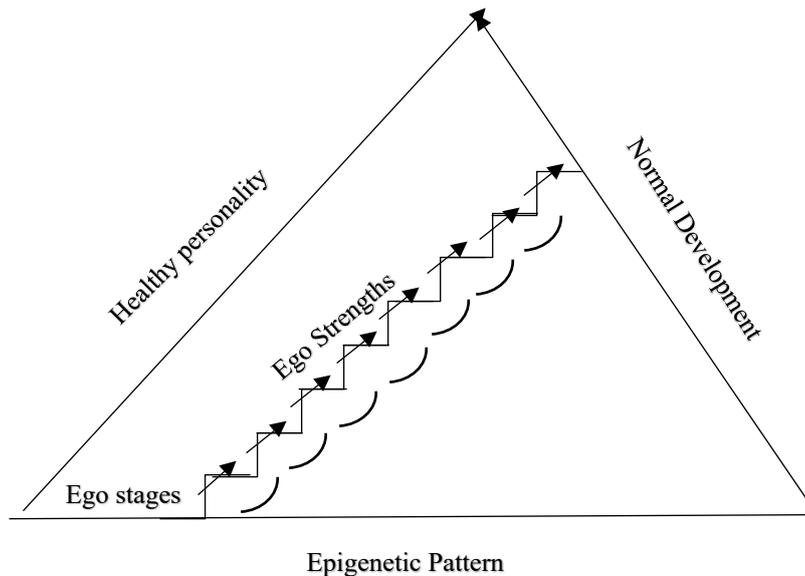
The "tripartite model" represents the three sides of Erikson's view of psychosocial well-being. Within the paradigm of normal development, Erikson utilizes the genetic view as a way to assess how the ego strengths emerge or re-emerge through the expansion of person genitality. Ego strengths evolving over four qualitatively different psychosocial phases (adolescence, young adulthood, adulthood, and old age) are linked epigenetically to the pregenitality (stages infancy, early childhood, play age, and school age) over the life cycle.

The dynamic independent power of the ego is the whole story in Erikson's perspective of psychosocial development. The principle of the dynamic roots of the life-cycle process may feature as a dynamic of the ego's synthesizing habits. Accordingly, the ego develops its one way of integrating the necessary elements in the process of psychosocial adaption (Erikson, 1963). Therefore, the suggested system of evolving and differentiating the strengths is not closed. This notion is very clear in the method of socializing the ego's stages of development.

Erikson's (1968) idea of institutionalizing the eight stages into the context of the social order connotes the natural social source of the psychosocial strengths. It also speaks of the ego's fluid intelligence in adjusting to the changing process of reality.

Current research is more interested in Erikson's focus on the fifth stage of the psychosocial strengths of adolescents. In *Childhood and Society*, Erikson (1963) reintroduces the adolescent phase not only to the literature of human science but also to living cultures and societies. He relates the fifth stage of adolescence to the phenomena of identity versus identity confusion. Regarding identity formation and psychosocial well-being, Erikson's psychosocial developmental approach anticipates ontogenetic sources of ego strengths and weakness that are associated with every stage of ego synthesis. During the different eight psychosocial crises, the ego's quality, in revolutionary fashion, reflects the ego's adaptive strength as a virtue of developmental vitality.

Erikson (1959, 1964) names these eight virtues to reflect the ascendance of the ego's capacity at each stage of development. Hope is the first and the most important virtue that emerges as the ego's quality of basic trust in infancy. Hope is followed by three more virtues representing the ego vitalities that belong to the stages of childhood and school age: will, purpose, and competence. By the same mechanism, the virtue of fidelity is developed as a result of the positive resolution of identity crisis in the late of adolescence. Love, care, and wisdom are the virtues of youth and adulthood. Erikson (1959, 1963, 1964) describes in great depth the interrelated relationships between the eight virtues. The epigenetic base of these virtues suggests that these virtues all exist at birth in different styles or forms, but each comes to its time of full functionality in the hierarchical order. Erikson (1968, p. 50) provides a subjective perspective to the evolution of the ego's synthesizing method and identity formation: "the awareness of self-sameness and continuity" and "the style of one's individuality which must coincide with the sameness and continuity of one's meaning for significant others of the

immediate community". Therefore, by enhancing psychosocial healthy development, the ego must develop its capacity to comprehend ontogenetic changes and capture a new feature of sameness and continuity.

Erikson (1964, 1968) hypothesizes psychosocial maturity as an implicit outcome of the systematic relationship between the ego functions of adaptation, defense, and integration and the process of identity formation. Certain vulnerabilities are associated with each particular stage of ego development. Psychosocial health at any stage of development is the fulfillment of the ego's ability to organize the individual's experience of dealing with the predictable discontinuity caused by these vulnerabilities. Identity, then, protects the developmental stability: it "connotes the resiliency of maintaining essential patterns in the process of change" (Erikson, 1964, p. 96). The psychosocial ladder of ego at the eight remarkable points of development represents the individual's healthy attitude and normal growth versus antipathy that runs counter to this growth and which may impairment the ego's wholeness at this stage. The ego's failure to synthesize all sexual, social, academic, and occupational components of the adolescence stage will result in the role of confusion. Erikson describes the role of confusion as the central source of disturbing moods in adolescents and youth. However, within the formwork of healthy development, Erikson (1968, p. 166) considers identity confusion to be a developmental disturbance different from the clinical diagnosis.

4.6 Healthy Personality Development

Erikson actualizes his attention to healthy personality development through distinctive clinical perspectives. This shines through his psychoanalytic view of pathology and social pathology. In other words, psychosocial theory attains its normality by understanding its counterparts or abnormality. Considering the absence of the pathological elements that impede human growth is one way of anticipating what a healthy personality is. An important outcome

of Erikson's work that results from his interest in cross-disciplinary methodology is his formulation of the characteristic normal personality. Erikson utilized his clinical notes that documented the elements that characterize healthy individuals and the elements that are most absent in neurotic patients. Out of these elements he formed his basic modality of a healthy personality.

The notion of healthy personality development within the frame of psychoanalysis would therefore be considered as a paradigm shift from a clinical approach based on ego-impairment to a new model based on ego strengths. According to Erikson (1959, p. 52), the view of a healthy personality is based on the simple clinical fact that "just to be alive, or not to be sick, means to be healthy". Erikson takes the normal healthy personality to be the foundation for an understanding of the ego process: "I developed some of what I learned, asking: if we know what can go wrong in each stage, can we say what should have gone and can go right" (Erikson, 1985, p. 595).

This motif is embedded in Erikson's large framework and cross-disciplinary method in which the psychosocial paradigm of healthy growth was induced. The psychosocial theory explicitly concludes that the prevention of ego disturbance is of importance to modern psychoanalysis (1959, p. 52). This insight has been built around a positive psychosocial viewpoint that employs available theories and knowledge about the dynamic of personality development and pathology. Accordingly, ego stages are characteristically employed as a means of delineating the ego's normal healthy growth, on one hand, and understanding the possible vulnerability to the deviation or dysfunction of ego on the other. Ego maturation can be seen as a continuum line between normality and pathology.

If the ego succeeds in its task of synthesizing and mastering experiences, ego strengths will be developed. These ego strengths will then meet the psychosocial demand of each

developmental stage but with a different quality and meaning. However, the traditional pathology of psychoanalysis has left a dark shadow when it comes to the psychosocial understanding of the impairment of the ego's mastery. Erikson's original hypothesis about the fragile ego and the weak ego was drawn from both psychoanalysis's view of ego damage and the available data of the ego in social pathology. However, Erikson went on to reinterpret the symptoms of ego failure in relation to the problem of ego identity formation and the fulfillment of psychosocial well-being. He verified this plan of the eight dichotomies of the ego's method of synthesis and antithesis in relation to personal and social experiences.

Erikson's vision of what constitutes healthy ego development reflects his clinical assumptions about the general trend of ego processes and identity formation. Erikson formulated a distinct view of healthy personality development. The themes of growth capacity and the evolving changes within the eight stages of the life cycle offer fresh insight into the contribution of growth and change to animated processes. Erikson's perspective of the mutual regulation of the three processes (the somatic or organismic, the social, and the organization of the ego) has been construed into the form of the developmental stages.

A failure in the ego's organizational process in childhood causes an estrangement of the ego in adolescence. This estrangement takes the form of identity confusion. In other clinical notes Erikson recorded some early and deep-rooted symptoms of mental disturbances and a loss of quality in the ego strengths (the radical loss of the ego strength of hope and the basic weakness in the will are associated with ego disturbances and compulsive-impulsive behaviors) (1968, p. 112).

Erikson's model of the psychosocial ego stages is a structured approach: It assumes that the ego develops gradually according to an epigenetic sequence of increasing ego strengths and vulnerability. Erikson presents the epigenetic diagram of the life cycle from the conflicts that

are inherent or renewed in each stage of personality development. In addition, Erikson negotiates the normative conflicts in each stage of ego growth in relation to the Freudian dynamic system. Erikson's (1959, 1964) pathographic picture of ego disintegration and ego discontinuity that is present in his clinical notes conveys psychic conflicts as a source of ego-disturbing experience. The ego synthesis method works relatively well to resolve the conflict, regardless of whether it is caused by early emotional experiences or traumatic events. However, core to the ego functions are the qualitative habits of the ego-synthesized method. These habits deal creatively with the wishes of the id, the constraints of the superego, and the opportunities that reality make available. According to psychosocial theory, the boundaries between these inner institutions and their relative to personality development is supposedly affected by the sociocultural process.

Delineating the psychosocial view of these conflicts is essential for speculating on the inner and outer conflicts as a starting point for charting the eight stages of the life cycle. Erikson departs from the psychoanalytic view "that neurotic conflict is not different in its content from the conflicts which every child must live through in his childhood, and that every adult carries these conflicts with him in the recesses of his personality" (Erikson, 1968, p. 91). Erikson (1959,1964) assumes that healthy personality at each stage of ego maturity is stimulated by potential ontogenetic crises. Erikson's idea of the ontogenetic structure is important to understanding the connection between the eight ego strengths and the form of maladjustment at every stage of ego development. Erikson describes the diagram of the eight psychosocial crises as epigenetic growth and each stage as being associated with "vulnerability and heightened potential, and therefore, the ontogenetic source of generational strength and maladjustment" (Erikson, 1968, p. 96). Erikson (1964, p. 139) describes the ontogenetic identity crisis in adolescence as a turning point for better or for worse. Accordingly, the

successful resolution of identity crisis in adolescence is significant time for decision-making and building a theory about oneself.

Thus, the process of psychosocial development over the life cycle is linked to ontogenetic sources of adaptation and maladjustment in the course of the cycle generation (Erikson, 1987, p. 600). The eight stages of the life cycle should not be measured as if they are an "achievement scale" (Erikson, 1982, p. 15). Rather, the eight ego strengths of Erikson's life-cycle generation provide an explanation of the ego's quality that is inherited at each stage of development as an essential basis of long-term psychosocial well-being. For Erikson, the idea of normality and pathology corresponds with the changes in sociocultural settings. This is broadly reflected in Erikson's effort to interpret the nature of the ego virtues over the cycle of a generation. In his dialogue with Evans, Erikson (1981, p. 14) explicitly mentioned the overlap route between the pathology–normality term and the culture setting. He sees that the pathology of the psychoanalytic view was accepted within its historical timeframe, the Victorian era. The psychoanalytic perspective of the stability of the individual's psychic and ego equilibrium accounts to economic status and heightened psychological health. Ego psychology accounts more for ego adjustment being basic to a healthy personality. The psychosocial theory of ego development as discussed in this illustration of Erikson's contribution is not independent from radical psychoanalytic thought nor does it place an extreme emphasis on Freud's view of the ego's mediating role. Erikson (1964,1968) highlights the normality and healthy personality development as means of understanding how and in what form the maladjustment takes the turning point into the worse.

4.7 Identity Formation and Psychosocial Well-Being

Erikson's psychosocial developmental approach anticipates ontogenetic sources of ego strengths and weakness that are associated with every stage of ego synthesis. During the

different eight different psychosocial crises, the ego's quality, in revolutionary fashion, reflects the ego's adaptive strength as a virtue of developmental vitality.

Erikson (1959, 1964) names these eight virtues to reflect the ascendance of the ego's capacity at each stage of development. Hope is the first and the most important virtue that emerges as the ego's quality of basic trust in infancy. Hope is followed by three more virtues representing the ego vitalities that belong to the stages of childhood and school age: will, purpose, and competence. By the same mechanism, the virtue of fidelity is developed as a result of the positive resolution of identity crisis in the late of adolescence. Love, care, and wisdom are the virtues of youth and adulthood. Erikson (1959,1963,1964) described in great depth the interrelated relationships between the eight virtues.

The epigenetic base of these virtues suggests that they all exist at birth in different styles or forms, but each comes to its time of full functionality in the hierarchical order. Erikson (1968, p. 50) emphasizes subjective aspects for the evolution of the ego's synthesizing method and identity formation: "the awareness of self-sameness and continuity" and "the style of one's individuality" which must "coincide with the sameness and continuity of one's meaning for significant others of the immediate community". Therefore, it is the ego's capacity to sustain its way to comprehend ontogenetic changes and capture a new feature of sameness and continuity.

Erikson (1964,1968) hypothesizes psychosocial maturity as an implicit outcome of the systematic relationship between the ego functions of adaptation, defense, and integration and the process of identity formation. Psychosocial health at any stage of development is the fulfillment of the ego's ability to organize the individual's experience of dealing with the predictable discontinuity caused by these vulnerabilities that are associated with each particular stage of ego development. Identity, then, protects the developmental stability: It "connotes the

resiliency of maintaining essential patterns in the process of change" (Erikson, 1964, p. 96). The psychosocial presentation of ego strengths at the eight remarkable points of development represents the individual's healthy and normal growth vs antipathy encounter that may impairment the ego's wholeness at this stage. The ego's failure to synthesize all sexual, social, academic, and occupational components of the adolescence stage will result in the role of confusion.

Erikson describes the role of confusion as the central source of disturbing moods in adolescents. However, within the framework of healthy development, Erikson (1968, p. 166) considers identity confusion to be a developmental disturbance different from the clinical diagnosis. Erikson (1975, p. 46) locates the identity of three interrelated orders or processes: the somatic order, the personal order, and the social order. Erikson deliberates the complementary nature of these three orders in relation to identity formation. Furthermore, Erikson (1963,1998) considers the balancing relationships between these three orders as sources of adjustment and distribution, which – regardless of order –will result in the same total process.

CHAPTER 5

SECOND KEY STRENGTH

THE CONSTRUCTIVIST IDENTITY STYLE

This section turns to the constructivist identity style model of Berzonsky (1990,1993). Identity development is the second of the key strengths that are explored in this study. It refers to a social-cognitive identity style whereby individuals construct their own identity style. This style is based on a deliberate process in which individuals are able to access relevant information about themselves. This model has proved its effectiveness by identifying three different aspects of identity development, built on constructivist assumptions and identity commitment. In this section, the benchmarks of the three identity development styles will be explored: first, in relation to their background and origin; and second, within the literature. From his early interest in identity creation, Berzonsky (1990,1993) has followed Erikson's remarkable theory of identity formation and refers to Erikson's theory in the formulation of his modern construction of identity style. The review of Berzonsky's constructivist theory of identity style is presented here as follows:

5.0 Contemporary Constructivist and Epistemology: Background

5.1 Self-theory of self: The origin

5.2 Identity as Self-Theorist: A Process Orientation

5.3 Research on identity style

5.0 Contemporary Constructivist and Epistemology: Background

The general meaning of the term constructivism has been referred to as "the philosophical belief" whereby "people construct their own understanding of reality" (Oxford, 1997). Soffer (1993) defines constructivist principles as being based on four major knowledge positions he has summarized from the work of the most influential writers in constructivism: Mahoney

(1988), and Neimeyer and Feixas (1990). Soffer (1993, p. 59) has stated the four major knowledge positions as: "knowledge is constructed rather than a copy of the world", It is "proactive, goal-directed and purposive" (Neimeyer &Feixas, 1990, p. **7)** rather than simply reactive. A "diversity of possible meanings and alternative interpretations" (Neimeyer & Feixas, 1990 p.7) exist, rather than just one correct truth, and success of construction is measured by viability rather than correspondence with the facts of an objective world".

Mahoney (1991) answers the question about what constructivism is. He highlights five basic themes that are present in theories expressing constructivism: (1) active agency, (2) order, (3) self, (4) social-symbolic relatedness, and (5) life-span development. Raskin and Bridges (2008) point to the constructivist philosophy built on epistemological arguments about truth and reality. More specific contemporary definitions of constructivism emphasize the active role of the human mind in creating, not discovering, the meaning of reality (Berzonsky 1990). Glasersfeld (1990) believes constructivism is better able to be understood in consideration of both ontology and epistemology. Epistemology has been associated with the process of self and identity research in variety of forms; Grotevant (1987) devised the process model of identity formation and Berzonsky (1988, 1993) devised the model of identity style.

Berzonsky (1990, 1993) addresses the distinct representation of the self-constructed theory of self in the constructivist mode and articulates its structure in modern scientific procedural. Following the tradition of modernist constructivist psychology (Piaget, 1958; Kelly, 1955 and more recently Mahoney, 1991), Berzonsky, within the postpositivist philosophy of science, has constructed the model of the self-theory of identity development, which supposes that individuals "actively play a role in constructing both who they think they are and the 'reality' within which they live and adapt" (Berzonsky, 1993, p. 170). Berzonsky's self-theorist model emphasizes three features; the metaphors of the constructivist

epistemological theoretical assumption, the postpositivist philosophy of science, and the process of self-orientations.

Kelly's (1955) "man the scientist" metaphor has been implanted in Berzonsky's self-constructed theory of self. Kelly coined this metaphoric statement to summarize the theorizing method of the human constructed knowledge system. He simply meant that everyone acts in a scientist-like aspect in his or her own way (Kelly, 1991, p. 4). The man scientist describes the way we think about our own nature, the nature of others, and universal nature (Fransella, 2003, p. 34). Theoretically, Kelly's "man as scientist" metaphor has been deployed in Berzonsky's identity model to characterize the identity development over the life-span (Berzonsky, 1990, p. 173). People reflect their intuitive self-theories about themselves, wherein the self-experience or content is obtained and structured to constitute their view of self. This constructivist view places the reality as part of the process of the self-constructed theory, and the reality never exists independent from the construct system (Kelly, 1955). Therefore, the phenomena of knowing reality is mediated by the cognitive structures (or personal constructs) that people impose on the sense of reality.

5.1 A Self-Theory of Self: The Origin

In an early publication, and in response to Waterman's work (1984, 1986) on identity, self-discovery, and personal responsibility, Berzonsky criticizes the pre-existing "true" self-approach or identity discovery theory. Berzonsky believes identity formation to be "a process in which individuals need to invest personal effort and for which they are personally responsible" (Berzonsky, 1986b, p. 123). According to the constructivist view, people are not passive creatures in the process of integrating their identity; rather, they hold accountability about their identity construction: "you are what you construct or fail to construct" (Berzonsky, 1986b, p. 124).

Berzonsky (1986a, p. 114) highlights the differences between the constructivist and the discovery perspectives in two major aspects of identity: (1) the process of identity formation, and (2) the criteria that individuals use to test and evaluate the validity of their choice and consequences. These two aspects of identity theory are represented in a less active personal effort in the process of identity formation and in the belief that there is no need to search for the correct answer since there is one fixed, correct answer. In contrast, adolescents who operate from the constructivist method take the responsibility to create their self-theory of self by developing deliberate paths of decision-making and personal commitment; therefore, they can consciously justify their choices. Adolescents need to act, choose, and decide before being able to create their identity.

Erikson (1968) makes a distinction between the following two notions: the psychosocial view of self-aspect of identity formation as it emerges, and the individual experience of successfully reintegrating the previous various selves and roles into a new unified sense of identity. Berzonsky (1988,1990) extends Erikson's perspective of self-identity within the constructivist assumptions as he emphasizes the role of self-activation in the integration process as a semblance of self-identity. Therefore, Berzonsky maintains Kuhn's (1962) paradigm of the structure of scientific revolution in formulating the self-theory of self or self-identity.

Kuhn's (1962) postpositivist values are considered as an interpretive framework within which scientists construct the reality they are investigating (Berzonsky, 1990, p. 175). Berzonsky (1990, 1992a) argues that the individual presents different social cognitive strategies for personal decision-making and problem solving in order to pursue and maintain their self-identity. These processes (or identity processing orientations) are assumed to operate at three levels. The most basic level involves the actual cognitive and behavioral responses used when dealing with identity issues. The intermediate level comprises the organized sets of

these basic units (these sets are called social cognitive strategies). The most general level involves the identity styles (Berzonsky, 1990, p. 270).

Identity styles refer to the social cognitive strategies that individuals typically use or prefer to use when managing identity conflicts (Berzonsky, 1992a; Berzonsky, Nurmi, Kinney, & Tammy, 1999). Thus, identity styles and the social cognitive strategies should be considered as distinct, although related, constructs. In parallel to Lakatos' (1970) research program, Berzonsky (1990) refers the three identity social cognitive styles to the strategy that individuals prefer to use. These styles characterize individuals' observable behaviour as a method of resolving an identity-related issue. However, as has been asserted in the profound theory of Kelly's (1955) personal construct theory and in Berzonsky's (1993) view, the way of dealing with knowledge about self, others, and reality is not a consciously purposed process.

However, Berzonsky (1989a, p. 270) stresses the emotional, motivational nature of the self-theory process. This reflects a stylistic orientation influenced by environmental demands, incentives and consequences. The constructivist tradition assumes that when individuals seek to answer the basic question of who they think they are, they are not doing so in an absolute sense. The epistemic style can be thought of as an individual's prevailing set of hypotheses about the way in which knowledge is acquired, organized, and developed. Another way to conceptualize the term epistemology here is to utilize the philosophical premise that underlies how people construe identity. Berzonsky (1997) develops the self-theory of self as an interpreted model of approaching or avoiding the task of identity-crisis resolution. This model is formulated into three predictable types, showing how individuals differ in their epistemological assumptions in handling their normative identity crisis making decisions about their personal identity.

The process of being a self-theorist is oriented in a dynamic vision of identity formation. Therefore, the social cognitive base of the constructivist identity explains the individual differences in the way that the individual approaches the preferred processing style. Being like a scientist is to be informationally oriented. It is characterized by processing personal knowledge; it dedicates, manipulates, and judges the information that has been obtained in the social interaction process, whether the information is about interrelationships with one's surroundings, or about school or study, or whether it is more complicated, concerned with one's being in relation to ideological issues. According to the models of social cognitive identity styles, to have a normative style means having no privileged self-story about one's self. People who adopt this style accept the social norms and values and a handmade sense of who they think they are. In the third constructivist identity style, Berzonsky approaches the identity confusion in Erikson's (1959) theory and Marcia's (1966) identity status model in a smaller fashion. Diffuse/avoidant individuals prolong the moratorium period by avoiding procedural action of any identity problem solving or decision-making.

Berzonsky (1990, 993) deliberately relates the constructivist identity style to Erikson's psychosocial identity formation theory. The process of integrating and reintegrating self-images and identification has been conceptualized as self-theory, by which individuals process information about themselves.

The identity status paradigm developed by Marcia (1966) has produced the most significant outcome of identity research. The four identity statuses are based on the cross-tabulation of the dimensions of exploration and commitment (Cote & Levine, 2002). This model has been extensively used to assess the presence or absence of self-exploratory or identity crisis and identity commitment. The three identity styles modelled as social cognitive underpin identity statuses and are conceptualized as different orientations of dealing with identity crisis (Berzonsky, 1999).

Therefore, there are four identity statuses associated with the identity styles of personal decision-making and problem solving (Berzonsky, 1990). Self-exploration, moratorium, and achievement are informational oriented, characterized by the active endeavors of searching for identity. The major differences between them revolve around whether the decision-making has been formed (achievers) or ongoing (moratorium). Normative identity orientation is associated with foreclosures; it is characterized by the absence of self-exploration, and early committed to the available model of significant others. The third identity style, the diffuse/avoidant orientation tends to avoid identity questions or confronting problems related to identity formation. Diffuse/avoidant is associated with Erikson's role-confusion, the antipathy of identity achievement (Berzonsky, 1989b).

5.2 Identity as Self-Theorists: A Process Orientation

Berzonsky's constructivist approach identifies three processing orientations or styles that individuals use to construct a sense of who they think they are. Style is an "orientation instrumental in exploring individual differences in strength, clarity and stability of self-conceptions" (Berzonsky, 1995, p. 738). The three styles of self-theorists can be distinguished in light of a constructivist philosophy-of science: (a) information-oriented, scientific self-theorists; (b) normative-oriented, dogmatic self-theorists; and (c) diffuse/avoidant-oriented, ad hoc self-theorists (Berzonsky, 1990, 1993). An informational style represents a mode of active searching and evaluating alternatives, opportunities, and a range of option in all identity aspects. Individuals with an informational style orientation build a self-theory that is based on rational choice and self-insight.

Adolescents who engage actively in a process of self-exploration, seeking information related to their identity context from family and friends and their academic setting before making committed decisions, follow the scientific self-theorist style of dealing with identity crises and answering identity questions (Berzonsky, 1993). Individuals with a normative

orientation style deal with identity issues differently. They do not turn to self-exploration activities but adopt an automatically adaptive model of identity that they feel comfortable with. They are conscientious, goal-oriented individuals (Berzonsky & Kuk, 2005; Dollinger, 1995). Adolescents who avoid personal issues and procrastinate over decision-making demonstrate a diffuse/avoidant style. This identity style results in a fragmented and loosely integrated identity element (Berzonsky, 1990). Diffuse/avoidant people are characterized by a lower level of active information processing and problem solving.

5.3 Research on Identity Style

5.3.01 Identity Style and Ego Identity Status

Research findings on identity styles significantly support the corresponding relationships between Berzonsky's (1993) three identity styles and Marcia's (1966,1980) model of identity status, in addition to self-exploration and identity commitment. Marcia's identity statuses have been applied in most of the examinations of Erikson's work concerning identity formation for over four decades (Berzonsky & Adams; 1999). Marcia's model, which is grounded on Erikson's theory, describes four statuses of identity based on the levels of self-exploration and commitment. Marcia's statuses identify identity development as identity achievement (high commitment after a period of self-exploration); moratorium (low commitment, evolving self-exploration), foreclosure (high commitment adopted consequently from others with limited self-exploration; this is a less mature identity), and identity diffusion (low commitment, where self-exploration is limited) (Berzonsky & Adams, 1999; Marina, 2010). As social cognitive identity styles have been mapped onto Marcia's identity statuses, previous research has shown that information-oriented individuals have been described as uncommitted moratoriums (Moratorium is the Marcia's identity status characterised by the absence of commitment to any decision about self-identity) or achievers, while normative

oriented individuals have been identified with the statues of foreclosure, and diffuse/avoidant individuals with diffusion (Berzonsky, 1990).

Identity commitment has been linked to a variety of psychosocial aspects of self-theory. Berzonsky (2004b) examined the connections between identity styles, parental authority, and commitment. The results indicated that parental authority and discipline may be influential in the formation of identity style commitments. Berzonsky explained that these were expressed according to the social cognitive styles that the adolescents utilized. For example, adolescents with diffuse/avoidant identity exhibited characteristics of procrastination and decreased self-control as result of the absence of personal commitments. He further explained that authoritative parenting was connected to informational and normative identity styles that exhibited combined goals and commitment (Berzonsky, 2004b).

Marcia's perspective of identity formation is concerned with responses and choices that an individual makes about one's own circumstance rather than the socio-cultural aspects of identity formation. Berzonsky's (1990) model of identity formation focuses on differences in the social cognitive development of individuals and how they employ the functions of establishing, maintaining, and/or re-establishing a sense of identity.

5.3.02 Identity Style and Cognitive Processes

Berzonsky (1990,1993) applied the foundation of Personal Construct Psychology (Kelly, 1955) to self-theory, as its "cognitive structure composed of a loosely organized system of personal constructs, assumptions, hypotheses, beliefs, schemas, and postulates" were "relevant to the self-interacting in the world" (Berzonsky, 1993). These assumptions delineate the cognitive structure of self-theory. Researchers successfully link the three identity styles to the need for cognition, reasoning, decision-making, and problem solving. One earlier study investigated identity styles and social cognitive inclinations and the need for cognition,

openness to experience, and introspection. The results indicated that when dealing with decisions, problems, and issues of identity that are personal, the informational style was connected with the commitment to employ cognitive activities and the eagerness to acknowledge alternative ideas (Berzonsky & Sullivan, 1992). Individuals that engage in the normative identity style reveal information that is rigid and shut down, which may be seen as a defence mechanism to protect the individuals. In addition, the authors of this study explained that the individual utilizes this defense to protect one from experiences and information that induce dissonance that could endanger important self-views. The private self, self-definition, individual achievement, and self-evaluation with the emphasis on a social identity perspective were also examined. The normative identity style may be connected to internal social guidelines and the diffuse/avoidance identity style is the creation of short-term feelings for a pertinent audience or external social sources. Personal identity connected with information-oriented identity style involved the collective self-accomplishing goals of achievement that are socially accountable (Berzonsky & Sullivan, 1992).

5.3.03 Age, and Gender

According to Berzonsky's (1988, 1990) social cognitive model of identity, the utilization of all three identity styles is attained by late adolescence. Prior to late adolescence, mainly during childhood, sufficient cognitive abilities are limited in identity style development (Berzonsky, 1990). Phillips (2008) conducted a study to examine identity style development and the cognitive changes and differences that occur over time. The participants of the study included middle school, high school, and college students. The results indicated that identity style development changes with age and maturity with progression away from a diffuse/avoidant identity style orientation. It was determined that informational identity style development increases with age when there is brain maturation and high cognitive

development. As a result, the younger adolescents would exhibit more diffuse/avoidant behavior due to neurological and cognitive immaturity (Phillips, 2008).

Thorbecke and Grotevant's (1982) study investigated the commitment of 41 male and 42 female high school juniors and seniors. The results indicated that females mature at a faster rate than males. Subsequently females may exhibit a higher level of exploration and commitment regarding social interpersonal relationships than their male counterparts. The formation of identity may be developmental in nature, with rotating intervals of exploration/instability and commitment/stability. The authors suggested that to help understand this developmental process, longitudinal studies be implemented to examine the sequence of different identity styles.

5.3.04 Identity Style and Psychosocial Well-Being in Adolescence

According to Berzonsky's (1999) study among university students, there is a connection between cognitive biases and illusions in regard to one's mental well-being. Berzonsky and Kinney's (1994) study proposed that normative identity style individuals could utilize a defense mechanism to distort reality in order to maintain structure of cognitive closure. This closure prevents any the possibility of conflicting information that may be different from one's own personal values and goals (Berzonsky & Sullivan, 1992; Clancy Dollinger, 1995). The opposite is true of information-style individuals who are open to other ideas, experiences, and goals along with the need for higher cognition (Berzonsky & Sullivan, 1992). These mechanisms can help maintain balance to preserve one's well-being. The study's results indicated that normative individuals utilize an avoidance strategy that differs from their personal information, and informational individuals also showed bias when confirming information (Berzonsky, 1999). The literature discusses these strategies and biases and shows that informational individuals participated in vocational hypothetical testing more than non-

informational individuals when the occupations pertained to their own interests (Neimeyer, Prichard, Berzonsky, & Metzler, 1991).

Adaptive strategies and subsequent feelings of well-being have received attention in the literature. The setting of realistic goals is an adaptive strategy that can be utilized in order to attain success, when accompanied by low task avoidance and a high effort level (Cantor, 1990). Another adaptive strategy is one that seeks social support, which may be relied upon by individuals who use the normative orientation to resolve issues of identity (Aspinwall & Taylor, 1992).

Self-relevancy, behavior, and personal well-being have been studied, Nurmi, Berzonsky, Tammi, and Kinney (1997) conducted a study of American and Finnish college students to examine identity styles and strategies of behavior that the students used in the maintenance of their well-being. The researchers examined how the adolescents utilized adaptive and maladaptive strategies of behavior to deal with conflict issues. Nurmi et al. (1997) investigated different strategies of behavior that were effective against problems that affected adolescents' well-being; these included expectations of success versus failure (Cantor, 1990), goal planning versus irrelevant behavior (Nurmi, Salmela-Aro, & Ruotsalainen, 1994), and the search for social support (Nurmi, Salmela-Aro, & Haavisto, 1995b). Nurmi et al.'s (1997) study revealed that relationships between identity styles and well-being were found to be reconciled by the adaptive or maladaptive cognitive strategies that the individuals participated in stated that maladaptive cognitive strategies, such as expectations of failure and participation in irrelevant behavior were connected to low self-esteem, unstable conceptions of self, and symptoms of depression. The results indicated that individuals manage identity matters and information that are self-relevant, which connects with the concept of self and personal well-being (Nurmi et al., 1997).

Nurmi et al.'s (1997) study revealed that informational-style participants had the highest levels of self-esteem; normative style participants had a stable concept of self-esteem, and diffuse/avoidant participants had the highest depression levels. The study offered some explanations for these results. Nurmi et al. (1997) stated that society values academic success and as a result this increases one's self-esteem. Past studies in the literature support this concept. According to Hoge, Smit, and Hanson (1990), longitudinal research studies show that academic achievement influences self-esteem and self-concept. The stable self-concept of the normative participants parallels with the perspective of this identity style, which tends towards not questioning the beliefs of influential others because these have been internalized and conformed to already (Nurmi et al., 1997). The preservation of the normative identity style values may be seen as a form of self-protection. The diffuse/avoidant participants had the highest depression levels due to procrastination in regard to identity activities and life decisions, resulting in identity problems with subsequent depression (Nurmi et al., 1997).

The literature describes expectation failures and unrelated task behaviors as characteristics of self-handicapped plans (Jones & Berglas, 1978, as cited in Nurmi et al., 1997). Explanations for self-handicapping behaviors are explored in the literature. Jones and Berglas (1978) explained that self-handicapped individuals already have low self-esteem and possess a non-stable concept of self and are anxious about their competency. The strategy of self-handicapping is more likely to produce failure (Nurmi, Onatsu, & Haavisto, 1995a), resulting in decreased levels of well-being and self-esteem (as cited in Nurmi et al., 1997).

The literature discusses the identity styles and cognitive strategies that are utilized by individuals to maintain well-being. In the study conducted by Numi et al. (1997), individuals with information identity style orientation utilized adaptive strategies to bring about self-esteem. These strategies related to expectations of success, social support, and the practice of relevant behavior. The opposite was found in those with a diffuse/avoidance identity style

orientation. These individuals utilized maladaptive strategies to bring about identity through their expectations of failure, their failure to seek social support, and their engagement in behavior that was impertinent or irrelevant (Nurmi et al., 1997). The importance of these results is explained in the literature. Nurmi et al. (1997) explains that individuals reflect their different identity styles in the way they try to cope with identity issues in their developmental environments. The influence of identity styles upon well-being is only shown through their use of strategies of cognition and behavior (Nurmi et al., 1997). For example, participants with an information identity style orientation who engage in maladaptive behavior may experience low self-esteem. Nurmi et al. (1997) notes that the conception of self and personal well-being is connected to one's identity styles in terms of how one handles identity issues. Identity is an important factor in adaptive behavior (Lerner, Freund, De Stefanis, & Habermas, 2001; Scales, Benson, Leffert, & Blyth, 2000).

5.3.05 Identity Styles, Cognition, Intelligence, & Academic Achievement in Adolescence

The literature discusses cognition, identity styles, and identity issues. In a study undertaken by Berzonsky and Sullivan (1992) noted that individuals with an information orientation identity style participated in alternative open cognitive activities when dealing with personal identity issues. The individuals utilized coping strategies that were problem-focused due to an increased need for cognition (Berzonsky & Sulllivan, 1992). Those individuals with a normative orientation identity style did not engage in alternative open cognitive activities but utilized closed and rigid behavior to protect themselves from differing values (Berzonsky & Sullivan, 1992). Berzonsky (1992) explained that this was due to individuals using a defense mechanism to maintain structure and cognitive closure (Berzonsky & Kinney, 1994). The individual with a diffuse/avoidant orientation identity style utilized a self-satisfying, situation-specific, cognitive approach to solving problems and making decisions on a short-term basis (Berzonsky & Sullivan, 1992). Situations and individual tendencies may influence identity

styles. A specific identity style used within a particular environment and personal consequences may all overrule identity style biases subsequently affecting the utilization of a social cognitive strategy (Berzonsky, 1989).

Identity styles and academic achievement are discussed in the literature. Hejazi, Shahraray, Farsinejad, and Asgary (2009) conducted a study to investigate the influence of academic self-efficacy on the relationship between identity styles and academic achievement. The results indicated that participants with different identity styles attained different academic achievement compared with participants with a diffuse/avoidant style who presented with low achievement and academic self-efficacy. This concurs with Berzonsky's (2004b) results showing that those with diffuse/avoidant styles have low and inconsistent self-efficacy, which leads to low academic purpose and achievement (as cited in Hejazi, et al., 2009). This inconsistency may affect one's confidence in oneself to accomplish, leading to lowered self-esteem. Decreased academic achievement in individuals with diffuse/avoidant styles could result from feelings of inconsistency due to their ineffective use of cognitive strategies in setting goals, and their lowered educational purpose (Nurmi et al., 1997; Berzonsky & Kuk 2005, as cited in Hejazi et al., 2009).

The results of Hejazi et al.'s (2009) study concur with prior research that has argued that one cannot predict academic achievement in those with normative identity styles due to lower amounts of flexibility/openness (Dollinger, 1995; Berzonsky & Sullivan. 1992). Berzonsky (2005) stated that individuals with normative identity style orientation face challenges in processing information pertaining to new decision-making. This is due to their internalization of goals and expectations of influential others (as cited in Hejazi et al., 2009). This factor may explain their insignificant association with academic achievement that is evident in the study's results. Berzonsky (2005) stated that individuals with normative identity style orientation do have the ability to choose the right self-regulating strategies to attain a

predetermined goal.

Participants with an informational identity style orientation had a consistent theory of self, which could lead to increased academic achievement (Hejazi et al, 2009). The results concurred with previous study findings (Berzonsky & Kuk, 2000; Boyd, Hunt, Kandell, & Lucas, 2003) that high exploration and commitment of informational style orientation along with high self-efficacy affected individuals' academic achievement positively (Hejazi et al., 2009). Streitmatter (1989) examined sixth, seventh and eighth graders' exploration/commitment through identity formation, school attendance, and academic achievement. The results indicated that identity and academic achievement of foreclosed students were lower than that of the other students even though the foreclosed students were attending school on a regular basis. Relationships between exploration, commitment, and psychosocial environments were explored in the study. The students' level of self-exploration and self-questioning within the psychosocial environment were lower and the students were also achieving lower academic achievement in basic math and language skills (Streitmatter, 1989). These students may have felt that their choices were limited. Streitmatter (1989) explained in the study that these students could have accepted what life had prescribed for them as told by others. As a result, traditional school education may not have held any meaning for them. The results of the study indicated that middle school students' identity formation could have a significant effect on their academic achievement, especially among foreclosed students (Streitmatter, 1989). The findings of this study concur with Marcia's (1966) model of the four statuses of identity based on the levels of self-exploration and commitment with foreclosure, which is high commitment adopted consequently from others with limited self-exploration.

Schick and Phillipson (2009) conducted a study to investigate the relationship between identity, intelligence, learning motivation, school environment, and self-efficacy in German students with high intelligence. The learning motivations of students with an informative

orientation identity style were investigated. These students were divided into two groups of achievers and underachievers. It was found that the learning environment was more important to the underachievers than it was to the achievers. Schick and Phillipson (2009) stated that the learning environment may be more important to underachievers due their sensitivity to self-criticism. The results showed that personality and identity development are related in the prediction of learning motivation (Schick & Phillipson, 2009). The results indicated that the development of personal identity is most important in the motivation for learning (Schick & Phillipson, 2009). Personal identity was found to be more important than general intelligence in the scores of learning motivation for informative identity style results when compared to other achievers' groups (Schick & Phillipson, 2009). The greatest influence on the motivation of learning were the variables of personal identity and not intelligence. These variables included an informative identity style, self-awareness, self-criticism, and emotional control (Schick & Phillipson, 2009). According to Schick and Phillipson (2009), personal identity, in both groups, was found to be the most significant factor in the motivation of learning, more influential than intelligence in intellectually gifted students regardless of their academic achievement. The results of this study suggested that factors other than general intelligence, such as personality, could be more important in the motivation of learning. Schick and Phillipson (2009) stated that as high intelligence increases, it becomes even less important as a factor in the motivation of learning, which supports the idea that learning motivation is a stabilizer in academic achievement (Feldhusen, 2005; Gagne, 1993; Heller, 1990; Heller, Perleth, & Lim, 2005; Robinson, 2005; Ziegler, 2005).

Previous research highlights the relationships between self-esteem, the motivation for learning, and academic achievement. According to Villatte and Hugonand de Léonardis (2011), there are complicated connections between self-esteem, the motivation for learning, and academic achievement. Highly intelligent adolescents may have a negative academic self-

esteem and not view themselves as talented. This parallels the results of Davis and Connell (1985) and Pajares (1996) who posited that highly intelligent adolescents should base their knowledge of intelligence on their I.Q. score rather than on their academic achievements. Difficulties may then be associated with an inadequate educational system that does not meet their cognitive, intellectual, and/or socio-emotional needs, which could affect their academic achievement (Villatte & Hugonand de Léonardis, 2011).

CHAPTER 6

THIRD KEY STRENGTH

CONSTRUCTIVE-DEVELOPMENTAL THEORY

In this section, Kegan's constructive-developmental theory is presented as the foundation of the third key strength, the complexity of mind. The orientation of Kegan's contemporary thought in ego, self, mind, and development is deliberated to illustrate how the complexity of mind has been understood and assessed within the framework of the meaning-making theory. This section commences with the most important part of Kegan's understanding of self-development. The constructive-developmental theory has developed in three phases from its first appearance in 1982, to becoming a source of how we defined ourselves in the complex world of 1994, and finally arriving at its benchmark of mindsets and complexity of mind in 2009. The three features of this theory have been approached in this review, but it is important to note here that Kegan's work has been extracted from his original writing despite the complexity of Kegan's thought that we find there. The review of Kegan's theory in this chapter unfolds as follows:

6.0 The nature of self and ego as a meaning-making context

6.1 Identity as meaning-making.

6.2 Making-meaning: a process of constructing self-identity

6.3 Mental development as complexity of mind

6. 0 The Nature of Self and Ego as a Meaning-Making Context

Addressing the key conceptualization of ego and self is vital for any psychological study that addresses the following issue: understanding the process of making sense of one's own self. The neo-Piagetian perspective has a very distinctive view of the nature of self as a meaning-making context. In this section I review the construct of the nature of selfhood from

the constructive developmental viewpoint, and how it is implicated in Kegan's theory of meaning-making and way of knowing.

The systematic theory-based vision of how the ego, self, and mind contribute to the process of personality development has been shown in the neo-Piagetian outline. In the theory of the evolving self, Kegan (1982) introduces the logic of reforming the relationship of what is self and what is other in the structure of building the core self. One's conscious quest for self-autonomy and self-identity is explained according to the transformational approach of the subject–object relationship and meaning-making. Kegan describes the richness of his meaning-making framework as it "arises out of different soil" (1982, p. 7). This assertion may define the fact that Kegan's writing is like an octopus with eight arms because Kegan draws his interest in the development of the ego and the evolution of meaning from his own and from others' life experience, from his own and others' clinical experience, and from his own and others' research (Kegan, 1982, p. viii).

The well-established theoretical framework of Kegan's meaning-making theory has been built mainly on the philosophies of constructivism and developmentalism. Kegan also raises the values of neo-psychoanalytic thought, including both ego psychology and object relations theories and Piaget's structural schemes of cognitive adaptation. These are all the most effective theories attached to meaning-making perceptions. However, constructive-developmental theory does not simply restore psychodynamic thought or the Piagetian schemata; it is a contemporary vision of theory-making in adult development. This approach largely attends to the developmental activity of meaning-construction. Kegan (1982) calls the methodological assumption of his constructive approach: a researchable program, a consistent theoretical paradigm of meaning-constitutive activity. In this theory, the notion of self is an overarching deliberated structure of understanding self as theory-making.

Kegan relates this idea to the order of consciousness, and he construes the evolving of self as a developmental process of mental complexity. Within the philosophy of adult development, Kegan readdresses the form of meaning-regulation by according three defined mental principles of organizing the experiences. This new tradition adheres to linking thought and feeling in exploring the self in the matrix of a self–otherness relationship. Consistent with this vision, the constructive development assigns affect and cognition as the context of the development of self (Kegan, 1982, p. 81). Kegan (1982, p. 7) expands the object relation and ego psychologists' view of the development as an interaction between the organism and the environment; this theme is central to Kegan's evolving self, and it is the core of the holding culture concept in every stage of evolving the self.

6.01 Self as Subject–Object Structure

Fundamentally, Kegan built the theory of self as making meaning in relation to the process of differentiation and integration of what is taken as self and what is taken as other. Kegan explicitly theorizes about growing the sense of self not only in relation to others but in relation to the self's relationship with itself. The epistemological position of the self–other construction is known as the subject–object relationship; this structural construct underlies the ego-differences in the Kegan's six structured hierarchy development stages. Accordingly, the negotiation activity of meaning-making demonstrates the variances of the complexity of the self–other structure at each stage of development, and it creates a different balance of self–others.

This is the very basic idea of creating the ego's subject–object boundary and giving the self-other relationship its structures. Nonetheless, although this process has been in the literature of object relation theory, Kegan delineates this activity as evolution in the meaning-making sense. For example, in infancy at the starting point of the structure of the subject–object, the meaning-making activity changes the infant's relationship to the life surrounding

him or her. In this context, the infant can distinguish between me and what is not me (this relationship later becomes what is subject and what is other or object). *Subject* refers to the basic principle of organization (Kegan & Lahey, 1983, p. 13). It is the experience that is been organized in the space where the subject is located; therefore, we cannot separate ourselves from it, and we are not able to see it because we are not aware of its existence. In other words, we are subject to it. Object is the experience that gets organized; thus, we can take a perspective on, reflect on, and control it. In Kegan's (1982, p. 83) metapsychology stance, all objects are simultaneously cognitive and affective. Thus, the activity of meaning-making as a major of development of self encompasses all aspects of the emotional experience.

Constructive development assumes that the deep structure of the subject–object itself evolves over the life-span. Moving the structure from the subject side of the experience to the object realm engenders qualitative changes of the interpersonal and intrapsychic construction of the self. Self, then, in the context of the subject–object structure, takes on a different psychological quality in recognizing the distances between the self and the not-self. Self, by this meaning, mediates the states of meaning-making. However, the capacity of self that identifies what is subject and what is object is evolutionary development. The qualitative transformation of the epistemological subject–object structure signifies the gradual developmental activity of self-joining the world.

6.02 Self as Meaning-Making System

In light of this constructivism, Kegan presents the nature of self as being tied to the constructivist view of reality; therefore, it is argued that self is equipped with the ability to construe its experiences and generate meaning. With increased understanding of the subjective and objective edges, the self-strengthens its capacity to organize the meaning around this structure. The value of the person as "activity" more than as thing is the major theme of this assumption. Kegan (1982, p. 7) sees the person as "an ever-progressive motion engaged in

giving itself a new form". The process of meaning-making, then, creates these forms, and the self – coming to its being as the activity of meaning-making – constantly develops from infancy to adulthood (Kegan, 1982, p. 8–9).

This expanding vision of self as motion refers more to what Kegan calls dialectical perspective than it does to dichotomous thinking; Kegan believe that what constitutes self cannot be reduced to an absolute distinction between self's entity and process. Kegan (1982, p. 8) understands the human being to ben an activity, not in terms of what a human does but in term of what a human is. Individuals differentially construe their experience in relation to the way they construct their reality and make sense of it. Therefore, testing, defining, and creating our life experiences all contribute to the activity of our being. Self is not merely the creator of its meaning but also the organizer of that meaning. As Kegan elaborates, the psychological development of self can be described as an evolution of the activity of organizing that meaning. Meaning is a holistic, integrated epistemological and ontological activity (Kegan, 1982, p. 44). The evolution of the activity of meaning is the fundamental motion in personality (Kegan, 1982, p.15) and the source of our "unifying context for thought and feeling." (p. 44).

Within certain patterns of sense-making, self is raised in each stage of development, out of the limitation and contradiction of the previous state of being and develops a new structure of making meaning. Understanding our self and the world of otherness is influenced by the way that we create and organize our meaning within our mental principal category. To elaborate on this, Kegan (1982, p. 11) uses the philosopher William Perry's (1970) idea of the human as an active organism and that what the organism does is organize meaning. Self, then, is the act of the meaning being made by mediating the self's epistemological relationships to otherness in different phases of making meaning process. Seeing self as a "zone of mediation" (Kegan, 1982, p. 3) is a constructive assumption; self or ego, then, is perceived as the place where the meanings of our experiences were epistemologically developed. Therefore, the

theory of self-evolution posits a different capacity of self in mediating between itself and others, between a diverse set of values, assumptions, and ideas. Meaning, thus, is the product of self-mediating activity.

Kegan outlines the psychological mediating activity in the six transition eras of ego development; with every new rebalancing, self mediates the old structure to move out from the embedded experiences and create the possibility for emerging objectivity. On this basis, the ability of the meaning-evolution to create a new subject–object structure leads to a new meaning-making equilibrium. From a developmentalist vantage point, the nature of the development of this structure is seen as dynamic movement. Self is not a "thing" or fixation, instead, self is dynamically developed within different eras or truces of stability and change. The evolutionary truce, nevertheless, is temporally constructed in the relationship between the organism and the environment. The essence of evolving self is the notion of increasing the capacity of ego to define itself in the context of self–other structures within different stages of development.

Making-meaning is a significant aspect of ego's ability to transform the meaning of the experience from being a subjective construct to being an objective emotion. Ego development is the process of change and growth towards a more differentiated characteristic of self; Kegan describes the outcome of this process as a qualitative alteration of one's subject–object structure towards a more complex structure. By this means, self becomes more and more capable of differentiating itself from its subjective experience, and it reintegrates a new objective context. Kegan describes self as a region or space between our experiences of events and our emotional response to them. It is a place where the meaning of these events becomes our own meaning (Kegan, 1982, p. 2). Kegan said: "There is no feeling, no experience, no thought, no perception, independent of a meaning-making context in which it *becomes* a feeling, an experience, a thought, a perception, because we are the meaning-making context"

(Kegan, 1982, p. 11). This theme speaks of Kegan's (1982, p. 14) meta-theoretical view of the self–other construction, which considers that thought and feeling underlie the human making-meaning activity. Kegan invokes the Piagetian (1970) view of the epistemic self by emphasizing the alignment of the inner world, the inner experience, or the life of emotions to the physical or the outside world. Kegan deliberates as metapsychology is the striking work of Piaget of the cognition development and psychoanalysis's attention of affect.

Kegan (1982) asserts the comprehensive explanation of his developmental metapsychological criteria in taking the affect and cognition as mastering the development of the meaning-making context. These two sides of the activity are essentially our beings (Kegan, 1982, p. 8) and the epistemological and ontological aspects of this activity form its meaning (p. 44). Kegan was clear about his metapsychology approach of addressing what the underlying process of self is; he enlarges the Piagetian vision of "genetic epistemology" by bringing the biological reality and the epistemological philosophy of meaning-making into his model of psychological ego development (Kegan, 1982, pp. 14-15). Again, Kegan (1982, p. 7) criticizes the "outdated approaches to our biological reality as they focus more upon the energy system in us than the energy system in which we are". This understanding is in opposition to the psychoanalytical view that is limited to seeing biological reality as an "energy system in us". The precise nature of self according to Kegan's reworking of the psychoanalytic understanding of this concept is represented in the reconstruction or the transformation process of our energy's equilibrative structure. By this means, self composites energy with definite ability to seek normal epistemological balancing, development or self growth to entail the rebalancing of this structure and its entity and activity.

In an interview with Elizabeth Debold in 2002, Kegan revisited the idea proposed by the philosopher Alfred North Whitehead (1861–1947) about the two thermodynamic laws of entropy and negentropy. "The entropy encompasses the loss of focus and dissipation of energy

whereas the negentropy essentially means becoming more complex, having more focus and operating at a higher harmonic" (Debold, 2002, pp. 148-149). As Whitehead believed that living and nonliving systems are universally captured by the essence of these two laws, Kegan restated in this speech the analogy of these universal phenomena to self-development in the human process. Kegan (Debold, 2002, p. 149) points that "the study of development, is an attending to both a reverencing and seeking to support -the negentropic process of increasingly concentrated energy or increasing focus". By stressing Whitehead's universal view of the two laws, Kegan sees the dynamic of these two processes (the entropy and negentropy) and assumes the effect of these opposite tendency is a balance or a tendency for things to stay as they are. Kegan calls this process "dynamic equilibrium", which is the third law that has countervailing direction against the work of the entropy (loss of focus) and the negentropy (increase of focus), and it creates a balancing state.

Thus, Kegan may see that the dynamic equilibrium is conceivable in the dynamic propriety of self transformation; the process of the evolutionary truce evokes equilibrium between the old theory of the self–otherness construction and the potentiality of emerging a more complex self-system. In fact, the equilibrium in the human meaning-making system tends to have a sort of stability but it is loaded by energy and movement.

Life-span developmental psychology emphasizes the transformation process as a form of development and growth. Kegan (2009, p.6) believes that the true development is about transforming the "operating system" itself. Self or ego is the operating system in the transformation process in the meaning-making context. Therefore, the psychological growth, or the expansion of the operating system (the self), involves an alteration of some of its aspect. This alteration must involve a qualitative growth of the subject–object structure. The virtue of this dynamic process is that we are encouraged in our meaning-making to consider alternative adaptive activities in constructing our relationships.

As a developmentalist, Kegan interprets the term "evolution" in relation to the adaptation processes. This captures the ways in which the qualitative changes in the subject–object structure changes the relationship between the person and the environment. Kegan's theory of adaption emphasizes the meaning of the organism's experience. The adaptive process is aligned to the epistemological construct of this meaning but not in terms of coping with or accepting the experience as it is. This is simply because we transform our meaning-making context as we adapt a new subject–object construction. However, the idea of the adaptation to the environment is an old topic and basic to the theories of personality development in general. It provides a building block in the psychosocial theories of Piaget and Erikson. For Kegan (1982, p. 113), the theme of increasing the pattern of "organizing the relationship" is at the heart of the adaption activity. Kegan highlights the importance of the adaptation as a psychological change in the subject–object relations; the implication of this assumption is seen in Kegan's model of "holding culture".

Kegan refers to Winnicott's (1965) statement, "there is never just an infant" (as cited in Kegan, 1982, p. 114). This statement captures the idea that the caretaker provides the psychosocial context and by which the caretaker becomes an essential part of the self. This psychodynamic view refers to the total environment that the caregiver creates and provides for the child, and it considers the role of the "social" and the "psycho" environments of child personality development. The same attention to one's surroundings and physical environment is fundamental in various theories of selfhood development and identity formation, particularly those of Erikson (1968) and Piaget (1970).

The original view of the "holding environment" of the British psychologist Winnicott (1982, p. 116) assumes "there is not one holding environment early in life, but a life history of a succession of holding environments - cultures of embeddedness". Winnicott (1953) argues that the primary holding environment in the symbiotic phase has a major impact on the child's

psychosocial development. Kegan expands this concept to the ego developmental stages, where he posits the influence of the holding environment on the psychological balancing of the individual's lifelong process of evolution. Kegan sees the psychosocial environment as a particular form of the world in which, at any giving moment in our evolution, we are embedded (p. 116).

The physical atmosphere for the developmental stages or the evolutionary truces Kegan has conceived are important as markers of the lifelong process of evolution in the constructive-meaning theory. Thus, the role of the psychosocial environment is central to the adaptation process in which the evolutionary activity of meaning-making develops a new sense of self at each era. Initially, Kegan views the idea of the total environment as intrinsic to evolution and he describes precisely the effects of the psychosocial environment as "holding us" (in which we are fused to the environment) and letting go of us (in which we are differentiated from the environment). Kegan (1982, p. 116) identifies the holding cultures as real relations and interactions between the person and the world in the development process, so it is never "just an individual" that is involved.

Three functions of the culture of embeddedness assign significant development in personality: confirmation (support and recognition), contradiction (opportunity to explore and differentiate), and continuity (personal coherence and consistency). In Kegan's culture of embeddedness, an extended vision of concept is presented that encompasses the process of the development of the self. This concept concurs with the two sides of the person: the individuated and embedded. The emergence of the self in each developmental stage is influenced by the essentials of the psychosocial environment in this area. Kegan allots for different aspects of the essential holding cultures to the evolving self. This model describes the dynamics of the functions and fortunes of the developing person's cultures of embeddedness (Kegan, 1982, p. 116).

The first emergences of self suggested by Kegan begin with the first stage of meaning-making, the incorporative stage. This is in the infancy stage, where no structure of what is me and what is other exists. The sense of self is yet to develop. Kegan highlights the growth of the self–otherness structure, following the incorporative balancing by more complex and significant social roles in which oneself creates the distinctive subject–object experience. Evolving the sense of self within the stages of meaning-making is a progression of the structural motion of thought and feeling. In the natural emergences of self, the successive holding culture in each stage of meaning-making takes the "living form" of three functions: the confirmation (holding on), the contradiction (letting go), and the continuity (staying put for reintegration). Kegan believes that each structure of the evolution of meaning is reflective not only of how the person creates the world but of how the world creates the person. The developmental ear of ego has been represented in relation to the functions of "holding culture". The distinguishing nature of the self, accordingly, is its efforts to build balancing relationships with the environment. Although, Kegan ascribes the holding environment of infancy to be play, a significant implication in the adult relationship construction is that each holding culture also plays the same role in self and personality development.

Constructive-developmental perceives the first appearance of the sense of self as being located within the first eighteen months after birth. Before that, the neo-Piagetian believed the newborn lived in an undifferentiated world where no experience took place in the object world. In this word, the other could not be seen as "not me". Put simply, the object world does not even exist for the baby (Kegan, 1982, p. 30). In Kegan's description (Lahey, Souvaine, Kegan, Goodman, & Felix, 1990, p. 109) "the infant is 'all self or 'all subject' and no object or other". The central psychological achievement of the first eighteen months, then, is the end of the objectless world and the dawning of the object relation (Kegan, 1982, p. 78). Therefore, the development of the ego or self is defined more as "the relation to others" than as the

internalization of others as object. This process is basically the differentiation between what "is not me" "and what is the integration of a new objectivity".

The very beginning of the object world is created within the first two years when the child becomes able to make meaning of objects other than simply of him or herself. Kegan refers to Piaget's study of the development of object permanence in infancy as significant to the establishment of the first truce. In this new structure of object relations, the infant has advanced from being subject to its reflexes, movements, and sensations in the *impulsive* or first order, to having reflexes, movement, and sensation (Kegan, 1982, p. 30). When the child becomes no longer embedded in his or her reflexes they are integrated into a new psychological structure that regulates the child–object experiences. The infant now is ready to reflect on sensations and actions rather than being embedded in them.

Kegan uses the term 'perceptions' to refer to the process of differentiation between what is me and what is not me. Perceptions are the "first psychological organization of reflexes, sensation, and actions of the *imperial* stage; their coordination or their mediation" (Kegan, 1982, p. 31). Self at this stage of the psychological development is characterized by the basic evolutionary balancing in which the child's perceptions are mediated in order to constitute a new object. The sensorimotoric has "moved over" from subject to object, and the perceptions have gained a new subject.

To state the conclusion concisely, the self-portrayed in the constructive-developmental metatheory is active in the meaning-maker context, constantly engaging in an evolving process of increased complexity in coming to know the world. Kegan's perspective of self-development is an evolutionary process of object relations. The self develops as the mental structure moves from "subject" to "object" (p. xii, 2009).

6.1 Identity as Meaning-Making

Kegan's (1982, 1994) model of identity development is congruent with the notion of self as part of a system and a meaning-making context. The unfolding process of the evolving self or the life course activity of meaning-making is transformative in its nature; the mechanism of constructing the relationships between self and other is inclined towards individuation and difference from other. Kegan (1982) ascribes the function of organizing the experience to the person's meaning-constructive or meaning-organizational capacities (1994, p. 29). Kegan's view of "people as active organizers of their experience" is an assumption that distinguishes between self as the act of meaning-making and self that epistemologically, psychologically, and cognitively organizes meaning.

Kegan (1982, p. 3) takes a broad vision, from different perspectives, when he outlines the position zone of mediation in a meaning-making process. Here, Kegan attributes making sense of our experience in any circumstances to multiple perspectives, in which self or ego may operate partly as meaning-maker. The person as a coherent aspect of the meaning-making system is also linked to the activity of meaning-making in some psychological traditions. Kegan seems to avoid specification of any mechanism in depicting the underlying process of the evolution of meaning. However, in the stages of meaning-balancing, Kegan (1982, p. 96) sees the differences in the capacity of the meaning-making system to move aspects of our meaning-making from subject to object as a qualitatively – not a quantitatively – different ego.

Kegan (1994) introduces the principles of mental organization as a framework for understanding our capacity for making-meaning and organizing the experience. Within this epistemological and cognitive theory, Kegan denotes that what he means by "mind" or "mental" or "knowing" is the specific capacity that is associated with ego or the self. Therefore, the three adult meaning systems: the socialized mind, self-authoring mind, and self-

transforming mind make sense of the world within qualitatively different subject–object structures.

Kegan negotiates the three integrated dimensions of the transformation process: epistemological, interpersonal and interpersonal. Identity as meaning-making balances the relationships as internal capacity of authoring the self–other construction. Identity as a meaning-making, has been defined as the structure of the subject–object relationship (see the assessment of SOI). Kegan has not specified his theory to the identity formation exclusively. He asserts self-growth, the transformation of self, and the moving of the subject–object structure from one stage to another. Additionally, increasing the complexity of the meaning-making system is not related to age, and it is not correlated to biological maturation. Therefore, unlike other developmental theories of identity that are age-specific (Erikson, Kohlberg), identity in the constructive development perspective is accomplished only by altering the capacity of consciousness into a higher order within the principle of the mental structure.

Kegan believes many adults may never experiences the sense of identity and that they simply may not reach the mental capacity to move within the structure of the subject–object relation to form a complete sense of identity. As his contemporary constructive view of identity as meaning-making was constructed over three decades, Kegan has evolved his vision about the essence of the epistemological dynamic of identity as meaning-making (1982) to identity a way of knowing (1994, 2009). Basic to his life-span meaning-making regulation is the meaning-making context (self or ego), the activity of the meaning-making (motion or the transformation), and the structure of meaning-making (subject–object relations). Within this view identity making is the constructive activity of the meaning-making context.

6.2 Making-Meaning: A Process of Constructing Self-Identity

The orienting principle in Kegan's (1982) tradition of meaning-making is that meaning is the primary human motion in which the activity of being human is the activity of making meaning. This notion has been systematically viewed, clinically tested, and made empirically evident in the transformation process of the consciousness of meaning-making. In developmentalism, transformation is the basic tendency in the organism, and it primarily undermines the growth's plan. Kegan's (2002) main attention was on the following questions: What "forms" are transformative? And what "form" that is enduring poses the foremost dramatic challenges for development? These questions have raised empirical issues about how we can distinguish between what would be considered as transitions, milestones, and aspects of growth and what would be recognized as only change. The true transformation is the dynamic reconstructing process of the basic forms of what have been subject to the transition mechanism. The meaning-making system is the transformative "form" of human consciousness in which the evolutionary truce (subject–object balance) re-establishes what is subject and what is object into new balancing or meaning. The neo-Piagetian considers the object relations theory in understanding what part of our experience is object. This psychodynamic thesis defines *object* in term of our relation to that part of our experience that has been made distance from us. Therefore, object is an element of our constructed experiences, but it has been "thrown from" us, so we can stand away from it, (Kegan, 1982, p. 76). In this sense, we are "subject" and we have "object" (Kegan, 1994, p. 32).

In other words, subject experience is that part of our meaning-construction that we cannot be separated from it because officially we have taken by it. We are embedded in it, and we have subjected our world to it. Object is the part of our meaning experience that has moved from our unconscious. We can reflect on it, and we can see where our responsibility about it lies. Meaning evolution is the generator context of the subject–object relationship, and self is

the dynamic organizer of what must be taking "now" as subject and what might be seen as object (Kegan, p. 77). The evolutionary activity involves the process of differentiation (object) and the integration process (subject). Kegan presents the orders of consciousness as "stage indicators" in an ongoing process of psychological evolution of the subject–object relationship (1982, p. 114). The shift in the evolutionary truces creates the stages of development through the process of balancing and rebalancing of subject–object relations. The transformation between the stages is always on the way to the next higher order of consciousness or epistemology because, accordingly, the personal history of meaning-making is a history of one's own transformation of consciousness.

The constructive–development theory emphasizes the motion of underlying the meaning-making construction: this is the subject–object relationship. Therefore, the successive qualitative reconstruction of our subject–object experiences is associated with all kinds of emotion. The source of the phenomenological experiences of the evolution at any stage of subject–object relations is essentially cognitive but no less affective (Kegan, 1982, p. 81). An increased differentiation of self from objects or others creates a rebalancing of the subject–object relationship and evokes a kind of emotion. Identity evolves within these transformational motions: the order of consciousness and its ways of knowing. Therefore, identity does not subscribe to the work of a single evolutionary truce nor to one stage of development. It is developed and continued within the transformation process. Identity begins with the first transformation in the first eighteen months of life that gives birth to the object world (1982, p. 79). From infancy to adulthood our identity development is governed by the evolutionary activity of creating our world of objectivity. Each new adoptive balance of the subject–object structure is attributed to the establishment of the sense of self in relation to otherness. Thus, our identity is constantly constructed and reconstructed in the context of the psychological of meaning evolutions and subject–object relations.

On basic synthesized forms of object relation theory and constructivist assumptions, Kegan was concerned to address the question: "to what extent does the organism differentiate itself from (and so relate itself to) the world?" (1982, p. 44). Kegan tacked the neo-Piagetian perspective of understanding "growth" as a process of emergences from embeddedness, which was to be fundamental for addressing such questions. Piaget's term "genetic epistemology" refers to the equilibration activity of emergence from embeddedness by which the biological (differentiation and reintegration or assimilation and accommodation) and philosophical (epistemology) are balanced.

Kegan's (1982, p. 15) metapsychology paradigm suggests three processes that underpin the equilibrium mechanism of emergence from embeddedness. These three processes are biological, psychological (the developmental way of knowing), and philosophical. However, Kegan's thought and structure of what the ultimate process of emergences from embeddedness is may be better understood within his inclusive approach to meaning evolution. Kegan (1982, p. ix) admits a dialectical context of the evolution of meaning-making to be the constitutive framework of study for this psychological phenomenon in nature. What underlies the structure of self-development: cognition or affect? What is more important: the individual or social? Which should be prioritized for exploration: the intrapsychic or the interpersonal? Kegan reconstructed these questions in his study of personality as a context of meaning-making. Kegan (1982, p. ix), therefore, elected a metapsychology theory to study the phenomena of meaning-making. So, what Kegan's theory attempted to address is a holistic understanding of three dichotomous: cognition or affect, individual or social, and intrapsychic or interpersonal in relation to the process of the transformation of the meaning-making system.

To return to Kegan's question mentioned earlier, "to what extent does the organism differentiate itself from (and so relate itself to) the world?". Kegan (1982) describes the process of replacing our prior experience that has been part of our subjective experience and creating

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more object experiences as life-span motion. This process is the core of the subject–object structure. Kegan (1994) extended this assumption in his developmental theory of knowing or by what is known as the "mental principles categories". Kegan (1994) explained the "ways of knowing" model to address the question of "to what extent does the organism differentiate itself from (and so relate itself to) the world? (1982, p. 44), but did this in relation to the way of knowing that has an inner logic or an "epistemologic" of the subject–object structure. Additionally, "our way of knowing can be described with respect to that which it can *look at* (object) and that which it looks through (the "filter" or "lens" to which it is subject)" (Kegan, 2008, p. 51). Still, the root of both approaches to this model of "mind growth" is principally the subject–object relationship.

6.3 Mental Development as Complexity of Mind

The building block of personality development in the constructive-developmental theory is the constructing and organizing of the elements of our knowing (subject–object structure). Whatever our experience, the process of meaning-making across the three principles of knowing is aligned to the subject–object structure but not to what the experience is. Therefore, identity develops as an increased sense of individuality, constructing the subject–object elements into different meaning-making categories. As the meaning-making organism advances into a more objective way of knowing, he or she will enter a new level of identity making. That is because the ability of the mind to distinguish the subject–object components is enhancing the transformation process in three dimensions: epistemology, interpersonal, and intrapersonal development.

Within the mindsets that correspond to youth and adult ways of knowing, (the Traditional mind in adolescence, the Modernism and Postmodernism minds in adults), identity formation takes substantial form with relation to an epistemological way of knowing with

respect to the three dimensions. However, as Kegan (1994, 2009) asserts, the mindset of fulfilling identity success is the cross-categorical meaning -making. The self-authoring mental complexity is the cultural frame of mind (Kegan, 1994). Structurally, this enables the socialized mind to develop the new and more complex epistemology required for knowing the world. Furthermore, Kegan (2009) highlights the mismatch between the complexity of modern culture and the complexity of the traditional mind of adolescents. This gap means that the psychology of the adolescents' mind is less sophisticated than the adolescents' ability for cross categorical meaning- making; the principle of identity making. However, the sense-making of who one is and what relationships he or she has with the inner world (self) and outside world (others) is a process and structure of the differentiation activity (subject-object relationships). So, for the adolescents who are still in the "durable category" level of knowing and who have yet to develop an epistemological identity, their sense of identity meaning-making is tied to the most common objects elements in their state of consciousness.

In summary: this chapter presents the literature review of the three perspectives that form my view about the conceptual model of psychosocial well-being: the psychosocial perspective, the constructivist identity style, and the constructive-developmental theory. The three key strengths: ego strengths, identity style, and complexity of mind have been introduced within their affiliation, philosophy, background, and assessments. In this chapter, the origins and constructs of the three perspectives have been presented in a way that declares the philosophy behind the integral framework of the conceptual model. This thesis studies ego, self, and mind from three mainstreams that have different understandings about identity development and psychosocial well-being.

The construct of the three key strengths of mental health developed in this thesis was discussed in the first three chapters. In Chapter 1, the construct of the key strengths was introduced as the original line of investigation in this thesis for psychosocial health. These keys

of strengths comprise ego strengths, identity style, and complexity of mind. In the second chapter, the theoretical background that contributed to these keys was discussed in terms of the keys' contingencies and differences. Following that, the conceptual model of mental health, based on the three key strengths and designed within this study, was presented.

The literature review in Part 2 addressed existing theory and research related to the nature of intellectual giftedness. Secondly, the theoretical foundation of the three keys of Erikson's psychosocial theory of ego stages were outlined. Next Berzonsky's model of identity style was presented, followed by discussion of Kegan's theory about complexity of mind. These three theoretical perspectives (Erikson, Berzonsky, and Kegan) provided the skeletal structure for the conceptual model developed by and employed in this study.

CHAPTER 7

METHODOLOGY

In the following sections, the methodological decisions made throughout this study have been explained and contextualized. The decision to use mixed methods to address the aims of this study, together with the justification for these methodological decisions, is provided. In the next chapter, the qualitative aspect of the study is also detailed. The key argument proposed in the next chapter is that the mixed method approach was deliberately and purposefully chosen as the most appropriate way of investigating the nature of the key strengths and the overall aims and research questions of this thesis.

7.0 Mixed Methods

This study employs a mixed method design with the major aspect being quantitative. The purpose of the mixed method design, as Johnson and Onwuegbuzie (2004, p.14) point out, is not an attempt to replace either quantitative or qualitative approaches, but "rather to draw from the strengths and minimize the weaknesses of both in single research studies and across studies". The main point to be made here is that employing mixed methods can allow complex investigations to proceed and to contribute new knowledge. As Morse and Niehaus (2009, p. 15) acknowledge, "there are occasions when a phenomenon cannot be described in its entirety using a single method," and in order to comprehensively address the research, employment of both quantitative and qualitative approaches is required. One of the main reasons a mixed method design has been employed is to allow for the possibility of new insights and in-depth understandings of the phenomena under investigation.

As Creswell (2015, p. 2) observes, the core assumption of this approach is that "when an investigator combines statistical trends with stories and personal experiences, this collective strength provides a better understanding of the research problem than form of data alone".

Clear differentiation has been made between mixed methods and multiple methods design (Morse & Niehaus, 2009), but universal agreement is not found about this. Mixed methods design is usually incorporated into a single study, while multiple methods often refers to separate or parallel studies. Importantly, mixed method design,

> …if conducted with deliberate care, is a stronger design than one that uses a single method because the supplemental component enhances validity of the project per se by enriching or expanding our understanding or by verifying our results from another perspective (Morse & Niehaus, 2009, p. 14).

This thesis focuses on addressing psychosocial well-being as a constructed model of three key strengths: ego strengths, identity style, and complexity of mind. this study, psychosocial health and the complexity of the mind emerge from quite different worldviews and traditions. Using mixed methods has allowed both elements to contribute to addressing the research question. Both traditions and orientations have been accommodated successfully and were able to inform the overall research design which allowed the complex aims of this study to be addressed. In the first phase, the quantitative data were sufficient for the empirical study. The empirical base of this study has established the viability of identity style as functional aspect of optimal psychosocial function of ego strengths. For crossing the tradition understanding of identity crisis in Saudi gifted adolescents, the Subject-Object Interview has been conducted and the qualitative dated has been embedded on larger quantitative design.

The design of this study has not departed from empirical objectivity but has sought to enhance the intellectual and theoretical work by incorporating the qualitative aspect. This is detailed in the next chapter. Guided by Morse and Niehaus (2009), in this study the qualitative element is supplementary to the core component, the quantitative part of the study. To briefly

explain this further, for the purposes of clarity and justification, Morse and Niehaus's (2009) definitions are cited here verbatim.

1. Core component of the project: The primary (main) study in which the primary or core method is used to address the research question. This phase of the research is complete or scientifically rigorous and can therefore stand alone.

2. Supplementary component of the project: In this phase of the research, one or more supplementary methodological strategies are used to obtain an enhanced description, understanding or explanation of the phenomenon under investigation. The component of the project can either be conducted at the same time as the core component (simultaneous) or it could follow the core component (sequential). The supplementary component is incomplete in itself or lacks some aspect of scientific rigor, cannot stand alone, and is regarded as complementary to the core component (pp. 157–158).

7.1 Research Design

The purpose of this study was to address the complex constructs of the three key strengths in order to explore the psychosocial health of intellectually gifted adolescents. The integration of the ego strengths, identity style, and complexity of the mind is the new aspect of this study that has the potential to contribute new knowledge to what is known about this key part of development in adolescence. Specifically, in this chapter, ego strengths and identity style have been assessed using quantitative assessments. And how this has been undertaken is the focus of this chapter. The qualitative aspect of the study, the 'supplementary component' detailed in the next chapter, assesses complexity of mind by employing semi-structured interviews and a systematic analytical procedure. Together, these two elements (quantitative and qualitative) provide the study with the means of addressing the research questions and making conclusions. The interface between the core and supplementary components usually

occurs in the results narrative (Morse & Niehaus, 2009, p. 120) and this is the way in which the two elements of this study connect. The core component of this study is the quantitative element which is detailed below.

The quantitative data collection provides evidence of an established sense of identity and overall psychosocial adjustment in the large sample of 266 Saudi intellectually gifted students who attended high school. In conjunction with this numerical data, the supplementary component involving semi-structured interviews enhances the understanding of the qualitative subject–object structure of two subset groups derived from the large sample of the 266 gifted adolescents. The mixed method design of this thesis assesses the three key strengths of interest in this study, with two of these – the ego strengths and identity styles – being investigated in this quantitative aspect. The qualitative supplementary element, detailed in chapter 9, examines the third key strength, complexity of mind. The remainder of this chapter outlines the quantitative core component.

7.2 The Quantitative Element of this Study

The conception of the quantitative element of this study was developed from the theoretical framework expounded in Chapter 2. Erikson's (1964, 1968) theory that identity development is a functional aspect of psychosocial well-being is examined. The empirical study was designed to measure and assess the relationship between these two constructs:

1. The psychosocial ego strengths as assessed by the Psychosocial Inventory of the Ego Strengths (PIES) of Markstrom et al. (1997) and

2. The identity style as assessed by Berzonsky's (1992) Identity Style revised (ISI-3).

The next sections provide details about the participants and how they were sampled, further details of the two measures (the PIES and ISI-3) including their translation into Arabic,

and a pilot study to assess the reliability of the measures. The survey procedures for the main study and the methods of analysis are then described.

7. 3 Participants

7.301 Context of Saudi Gifted Education

In the Kingdom of Saudi Arabia (SA), the Ministry of Education (MoE) is the official provider of alternatives education in public schools. ~~While~~ The legislation of gifted education has been approved within the Saudi Educational Policy ~~since~~ in 1970 (Al Qarni, 2010). The headlines for the process of promoting students achievements and fostering their educational excellence have been made in1989(Ministry of Education, 2008). The "Saudi Project of Talent Search" has been the first national project in the Kingdom of Saudi Arabia. It has been established in 1999 (Al Nafie, 2001), has designated to develop a procedure for identifying gifted students and developing enrichment programs in mathematics and science (Aljughaiman &Grigorenko, 2013). In addition to the King Abdul Aziz City for Science and Technology, the Ministry of Education (MOE), and General Headquarters for Girls' Education have supported the project that announced its educational goals based on the adaption of the Marland's (1972) definition of gifts and talent. Aljughaiman, (2005, p. 76) declares the Saudi adapted definition of the gifted student as:

a male or female student possessed of special aptitude, unusual capabilities, or distinguished performance; these merits together make him/her unique among his/her peers in one or more domains appreciated by the community and bear special relevance to fields such as mental superiority, educational attainment, creativity, innovation, and special talents and capabilities.

Hence, the major shift in gifted education in Saudi Arabia demonstrated within the last two decades. The psychological assessment of potential intellectual abilities is conducted regularly

within the education act since 2002. The Saudi National Program for Gifted Students Identification has been cooperating with King Abdul-Aziz and his Companion Foundation for Giftedness and Creativity (Mawhiba), and Saudi National Center for Assessment called "Qiyas" for identifying intellectually and academically gifted students. Saudi intellectually gifted students are classified according to their early predicted potential of intellectual giftedness and actual achievements in a general and specific domain of giftedness.

7.302 Identifications Criteria

The identification process for all nominated school children and adolescents is based on the following criteria:

1- Scored above-average (achieve 90% or more) on the academic achievements regarding the standard annual assessment.

2- Represents up to (1-2%) on Standardized general intelligence test.

3- Represents up to (1-3%) on Standardized Notional Cognitive Assessment for Gifted (This test comprises four components that are: fluency, flexibility, originality, and elaboration).

4- Represents up to (1-2%) on Figural Torrance Tests of Creative Thinking (TTCT).

5- Special Abilities and Skills: Those students who scored well on the cognitive abilities scale, which comprises four abilities; linguistic, numerical, spatial, and deductive, interests scale, and teachers' nominations (Al Nafie, 2001).

The Saudi National Center for Assessment "Qiyas" annually conducts under the authority of the Ministry of Education the identification process among schools (3-9 grads). Based on the results, students are classified as higher ability, intellectually, and academically gifted. "Noor Student Dataset" is the Saudi Ministry of Education Dataset where all academic information of Saudi students is documented. Saudi gifted students are classified in the "Noor

Student Dataset" for one type of enrichment program: Schools for Excellence, Classroom Gifted Program, and supplementary summer enrichment programs.

Additional referent for defining gifted individual in Saudi Arabia has been the domain-specific giftedness. The Ministry of Education (MoE) with its partnerships with Mawhiba have fostered special talents among students who exhibit higher intellectual ability and interest in area of science, mathematics, or technology. One important facilitated program for the promotion of gifted student in science and mathematics is STEM, Mawhiba, is an engine of STEM skill development in the Kingdom (Harvard Kennedy School,2018). Throughout many prominent schools with an advanced STEM curriculum, and more than 14 STEM centers, Mawhiba fosters high skills and innovation among gifted students. STEM is an international program, creates opportunities for gifted students to integrate their knowledge in science and mathematics to deliver new ideas and products. Also, Mawhiba is the chive facilitator of summer campaigns in partnership with schools, universities, hospitals, and research centers, with a focus on the fields of chemistry, energy and the environment, biological and medical sciences, mathematics and information technology, and physics and engineering (Harvard Kennedy School,2018).

7.4 Statement of Research Interest

High performance in life may inspiring individuals to locate and pursuing more transformation. After several years teaching physics in high school, I have been worked as supervisor of science and physics in the Department of Science in the Ministry of Education (MoE),city of Makkah. This work was one important turning point in my career. I was able to attend different lessons, classes in sciences along all public and private schools . This new position come with the achievement of my master in counselling psychology and new Millennium of 21st. The New Millennium was shifting paradigm for that, the Saudi Ministry

of Education(MoE) have permitted the gifted program. I was already working on my project for identified intellectually and academically gifted students based on psychometric tools in city of Makkah. I was one of earliest psychologists with scientific background ahead of gifted education in Saudi Arabia.

Under many scrutiny procedures including (GAT), I was nominated from the King Abdul-Aziz and his Companion Foundation for Giftedness and Creativity (Mawhiba) to study abroad. In Australia, I have been engaged with new academic environment doing my doctor of Philosophy. As a psychologist, I focused on study the psychosocial well-being in gifted students from Erikson's perspective. The academic environment in Victoria University, and the sophisticated supervisions were lighting up my emotions.

7. 5 Sampling

The 266 intellectually gifted students were randomly chosen from the top (1–2 %) of the Saudi gifted high school student population. As it has been declared in the previous section, the context of gifted education in Saudi Arabia, gifted students are classified based on hierarchy psychometric standard. Highest achievement scores on the standrazed intelligence test creates the prevalence of upper (1-2%) of Saudi intellectually gifted students. The large sample of 266 participants were drawn from the original population of Saudi gifted and talented students documented in "Noor Students Database". The sample size (S) has been determined based on the total Saudi Gifted population (N) that has been recorded in Noor Students Database.

Saudi Noor Students Database provides comprehensive information about gifted students (N= 406) participants in Saudi National Gifted Program over 13 educational offices. The random sample (S) has been drawn from the "Noor". Using Krejcie and Morgan (1970) tables for determining sample size from a given population, the sample size has been determined. Therefore, Saudi gifted female (N=200) and (S= 132) whereas Saudi gifted males

(*N*=206) and (*S*= 134). The total participants of 266 gifted students made up 100% participation in this study. Table 1 displays the distribution of the total sample of 266 Saudi gifted students over major cities in Saudi Arabia.

Table 1 displays the distribution of the total sample over cities of SA.

Gender	Males				Females				Total			
Age	15	16	17	T	15	16	17	T	15	16	17	T
Cities												
Makkah	-	3	11	14	1	9	9	20	1	12	16	43
Jeddah	-	2	25	27	3	267	23	25	3	33	52	88
Taif	-	1	1	2	-	3	1	5	-	3	2	5
Yanbu	-	-	-	-	-	-	1	2	-	-	1	1
Madinah	-	1	4	5	-	3	2	5	-	4	6	10
Al-Qasim	-	1	2	3	-	1	-	2	-	-	2	2
Riyadh	-	3	30	33	3	3	21	30	3	9	51	63
Zulfi	-	-	1	1	-	-	-	-	-	-	1	1
Wadi-Al Dawasir	-	-	2	2	-	-	-	-	-	-	2	2
Dammam	-	2	5	7	-	1	8	7	-	1	13	14
Al Khobar	-	1	2	3	-	1	1	2	-	1	2	3
Kafji	-	-	1	1	-	-	-	-	-	-	1	1
All Ahsay	-	-	2	2	-	-	1	5	-	-	2	2
Tabuk	-	1	4	5	-	1	2	5	-	-	4	4
Arar	-	-	1	1	-	-	-	-	-	-	1	1
Al-Jawf	-	-	3	3	-	-	-	-	-	-	3	3
Quryat	-	-	1	1	-	-	-	-	-	-	1	1
Abha	-	1	3	4	-	1	2	9	-	-	3	3
Kamysmshat	-	-	2	2	-	-	-	3	-	-	2	2
Asir	-	1	11	12	-	1	1	7	-	1	11	12
Najran	-	-	2	2	-	-	-	3	-	-	2	2
Jazan	-	1	3	4	-	1	2	2	-	-	3	3
Total	-	18	116	134	7	51	74	132	7	69	190	266

The sample comprised 134 males and 132 females. The sample was aged 15, 16, and 17 years of age: male = 16.87 and *SD* = 16.69, and female =16.51 and *SD*= 0.599. Table 1, below, shows the three age groups for the total sample:

Table 2 displays aged groups by gender.

Gender	Age 15	Age 16	Age 17	Total	Mean	SD
Males	-	18	116	134	16.87	0.342
Females	7	51	74	132	16.51	0.599

7. 6 Measures

The quantitative study includes two instruments: The Psychosocial Inventory of Ego Strengths (PIES) devised by Markstrom et al. (1997), and the revised Identity Style Inventory (ISI-3) designed by Berzonsky (1992). The demographic information (age and gender) were obtained from students by the time of surveys. The two measurements translated to Arabic and standardized before the administration among the Saudi gifted adolescents.

7.6.01 Identity Style Inventory (ISI-3)

The revised ISI3 revised is a 40-item inventory designed by Berzonsky (1992 b) to measure three styles of identity processing orientations. The inventory consists of three self-reported identity construction subscales. The informational style (11 items, e.g., ''I've spent a lot of time and talked to a lot of people trying to develop a set of values that makes sense to me''); normative (9 items; e.g., ''I've more-or less always operated according to the values with which I was brought up''); and, diffuse-avoidant (10 items; e.g., ''It doesn't pay to worry about values in advance; I decide things as they happen''). The ISI-3 includes the scale of level of identity commitment (10 items, e.g., ''I know what I want to do with my future''). The commitment scale contains 10 items measuring strength of values and goals. Respondents indicate the degree to which each item is characteristic of them using a 5-point Likert-type scale ranging from 1 (not at all like me) to 5 (very much like me). After reverse scoring

negatively worded items, total scores are based on summed responses for items composing each of subscale.

Reliability was obtained for the three-identity styles and commitment for the sample of Saudi high school gifted students using test-retest reliability process. Thus, all participants administrated the same ISI-3 measure again after a two weeks period. Cronbach's alphas and the calculated Stability Coefficient of Test -Retest reliability for the Saudi sample is shown in the following Table 3.

Table 3: Test -Retest Reliability of ISI-3 and commitment

Variables	N of Items	Alpha	Person Coefficient
Informational	11	0.9279	0.885**
Normative	9	0.8472	0.787**
Diffuse/Avoidant	10	0.7884	0.765**
Commitment	10	0.7349	0.767**

As shown in the table, all reliability values are statistically very good and reflect the ISI-3 values n previous studies. Smits (2009), for example used the Identity Style Inventory-Version 4 with U.S. and Dutch samples, reported alphas of .71 (informational), .78 (normative), and .82 (diffuse-avoidant) for her U.S. sample, and alphas of .76 (informational), .69 (normative), and .77 (diffuse-avoidant) for her Dutch sample (Cited in Cadely, Pittman, Kerpelman, & Adler-Baeder, 2011)

7.6.02 Psychosocial Inventory of Ego Strengths (PIES)

The PIES consist of 64 items devised by Markstrom et al. (1997) to measure the eight ego strengths (hope, will, purpose, competence, fidelity, love, care, and wisdom) delineated by Erikson (1964, 1985). Eight items comprise each subscale, and a total ego strength score of 64 items also is derived. Respondents answered each item on a five-point scale ranging from 1

''does not describe me well'' to 5 ''describes me very well''. Negatively phrased items were reversed scored and items totaled for each subscale. The PIES has been validated against various psychosocial measures with university students (see Markstrom et al., 1997).

Markstrom, and Marshall (2007) examined the psychometric properties of the PIES among high school students. Cronbach's alpha for the subscales and total scores also were acceptable to very good: hope, .81; will, .69; purpose, .71; competence, .77; fidelity, .62; love, .60; care, .83; wisdom, .72; and total ego strength, .94. Reliability was obtained for the sample of Saudi high school gifted students using test-retest reliability process. Thus, all participants administrated the same PIES measure again after a two weeks period. Cronbach's alpha showed that the internal consistency for subscales and total scores ranged from acceptable to "very good. Alphas for three subscales of ego strength, will, love, and wisdom were acceptable. Alphas for the subscales of hope, purpose, competence, fidelity, were good whereas Alpha for the total score was very good. Table 4 displays the Alpha for the eight subscales and the total score for the Saudi sample.

Table 4 Displays the Alpha for the PIES

Variables	N of Items	Alphas N = 266
Hope	8	0.7094
Will	8	0.6991
Purpose	8	0.7200
Competence	8	0.7323
Fidelity	8	0.7069
Love	8	0.6563
Care	8	0.7117
Wisdom	8	0.6738
Total Score	64	0.9176

7.6.03 Summary of the Instrumentation

The quantitative study has been designed to measure two aspects of the conceptual model: the first key strength is the ego strength, and second key strength is the social cognitive identity style. As, illustrated previously, the psychometric properties of the ISI-3 and PIES were acceptable and may have been very good. The two measures have been used in this study to infer the relationships between the two key strengths. Table 4, below, summarizes the ISI-3 and PIES variables and their abbreviations.

Table 5   Variables and Measures

Variables	Measures	abbreviations
Informational identity style	ISI-3	INFOST
Normative identity style	ISI-3	NORMST
Diffuse/ avoidant style	ISI-3	DIFFST
Identity commitment	ISI-3	COMM
Ego strength of Hope	PIES	Subscale 1/ Stage 1 ego development
Ego strength of Will	PIES	Subscale 2/ Stage 2
Ego strength of Purpose	PIES	Subscale 3/ Stage 3
Ego strength of Competence	PIES	Subscale 4/ Stage 4
Ego strength of Fidelity	PIES	Subscale 5/ Stage 5
Ego strength of Love	PIES	Subscale 6/ Stage 6
Ego strength of Care	PIES	Subscale 7/ Stage 7
Ego strength of Wisdom	PIES	Subscale 8/ Stage8
Total score	PIES	Total score of the eight subscales
Highest Ego Strengths Total score	PIES	The fourth quartile Q 4 Total score of PIES $\geq$ 268
Lowest Ego Strengths Total score	PIES	The first quartile Q1, Total score of PIES $\geq$ 217

7.6.04 Translation and Transadaptation

This study committed to several procedures whereby the two measurements met the criteria of the translation and adaption of psychological tests administered in any language other than the language of its origin. The initial guideline of the test transadaptation used in this study was the International Test Commission (ITC) Guidelines for Test Translation and Adaptation (Hambleton, Merenda, & Spielberger, 2005). In addition, after selecting the two instruments, a number of the steps suggested by Gudmundsson (2009, p. 31) were adopted for the translation and adaptation of psychological tests. Specifically, these comprised:

1. selecting qualified translators,

2. selecting qualified experts in the subject matter of the instrument,

3. selecting the method of translation,

4. applying a proper method of adaptation,

5. applying proper methods for investigating bias in the translated and adapted instrument,

6. applying proper procedures in piloting items, administration instructions and scoring rules.

7. 6.05 Performing Appropriate Validity of ISI-3 and PIES

Consistent with this view, the translation process was arranged six months prior to the timeline of the administration of the two surveys in the pilot study. The translation of the two measurements was completely separately, and the stages of adaptation are shown below:

1. The two instruments were given to expert translators in Australia who translated them into Arabic.

2. The Arabic versions were sent to experts in back translation to verify the translations and refine the first translations of the PIES and ISI-3 (Arabic).

3. These two instruments were assessed for cultural differences which resulted in modification in some items. These items related to direct questions about religion and

interpersonal relationships in the PIES and to questions about religion and academic circumstances in the ISI-3.

4. Consultation about this modification of the culturally problematic items was obtained from seven academic experts in departments of psychology in seven universities in Saudi Arabia. The content and face validity of the two measurements was considered in the process of modifying of the problematic items.

5. The Arabic PIES and ISI-3 were sent to original translators to check the interpretation of both the Saudi back translators and the Saudi academics.

6. The agreement between the original and modified translation was almost 97%. The Arabic copy of the PIES and ISI-3 was prepared for the pilot study. As Gudmundsson (2009, p. 32) outlined, by processing the instruments using these transadaptation steps, it is "ethically and professionally justifiable" for the test to be used "in a clinical or another applied context".

7.6.06 Thesis Ethics

Ethics application for this thesis submitted to the Research and Graduate Studies Committee (Human Research Ethics), before six months to data collection actual day. The HEC application has been reviewed regarding the ethical principles and regulations available to students in higher education. The HEC, has outlined with full details the following points:

1- The use of ethical principles and regulations

2- Rational for the study

3- Fair participants selection

4- Design of the research

5- Data collection

6- Information and informed consent

7- Confidentiality

8- Data analysis

9- Discussion

Ethics approval have been performed in accordance with a research ethics declaring.

7.6.07. Pilot study

The pilot study was conducted to examine the psychometric properties of the two measures, the ISI-3 and PIES. The two measures were administrated among a sample of 36 Saudi gifted adolescents in the selected high schools. All 36 participants in the study were previously identified as intellectually gifted and were selected randomly from the population of Saudi gifted students in Makkah. The psychometric properties for the ISI-3 and PIES were encouraging for conducting the two measures among the large sample. The next two tables show the results of the pilot study.

Table 6 Displays Cronbach's alpha of ISI-3 N=36

Variables	N of Items	Alpha
Informational Identity style	11	0.7873
Normative Identity style	9	0.7697
Diffusive avoidant Identity style	10	0.7777
Commitment	10	0.7973

As Table 5 shows, Alphas for the three identity styles and commitment were good and the result encouraged the application of the measure in the present study.

Table 7 Displays Cronbach's alpha, and Person Coefficient of PIES N=36

Variables	N of Items	Alpha	Correlation Validity
Hope	8	0.7713	0.996**
Will	8	0.7472	0.971**
Purpose	8	0.7350	0.980**
Competence	8	0.7086	0.979**
Fidelity	8	0.7642	0.984**
Love	8	0.7744	0.995**
Care	8	0.8392	0.953**
Wisdom	8	0.7827	0.997**
Total Score	64	0.9727	-

As Table 6 shows, Alphas for the eight subscales of the PIES and the total score were good to very good. The correlation validity is the correlation between total score of PIES and the individual subscale score of PIES.

7.7 Procedure

The approved documentation from Victoria's University Human Research Ethics Committee was sent to the Ministry of Education in Saudi Arabia seeking male and female samples for the study. The Department of Applied Research in the Ministry of Education authorized the administration of the psychological tests among this group of students. All consent forms were signed by both parents and authorities from the Ministry of Education and returned.

The Summer Gifted Program of Saudi Arabia was selected for the surveys. This program is conducted annually in the three major cities of that country: Mecca, Jeddah and Riyadh. Given the strict gender practices in Saudi Arabia in all aspects of public life, the students were supported within single gender 'companies' of smaller cohorts. As a woman, it was not appropriate for me to administer the instruments with the male companies. Therefore,

the instruments were prepared and securely delivered to the male research assistants who administered the surveys in the three cities. To support the assistants, I discussed the process with them on closed circuit television with the support of the Summer Gifted Program authorities. I administered the surveys within the female companies in the three cities. All surveys with the male companies were administered on the same day. The surveys were administered in the female companies on three different days, due to the significant distance between the three cities in which the survey took place.

7.8 Methods of Analysis

The statistical analyses involved preliminary analyses of descriptive statistics, and also a bivariate and multivariate analysis to address specific research hypotheses. The preliminary analysis involved calculating means and standard deviations for the ISI-3 subscales, the identity commitment subscale, the PIES Inventory total score and the eight subscales. The demographic variables of gender (males and females) and age (15, 16, & 17) were considered as keys variables within the descriptive and multivariate statistics.

7.8.01 Categorizing the ISI-3

To make the ISI-3 scores comparable, the scores were converted to z-scores (Mean of 0, *SD* of 1). The following process was used to determine the preferred Identity Style in each individual Identity Styles score:

IF (z-INFOST > z- NOMST & z- INFOST > z- DIFFST) Style = 1. Execute (INFOST)

IF (z- NOMST > z- INFOST & z- NOMST > z- DIFFST) Style= 2. Execute (NOMST)

IF (*z-DIFFST > z- INFOST & z- DIFFST > z- NOMST) Style = 3. Execute* (DIFFST)

Following this process, participants were categorized as having a preferred Identity Style based on his or her highest z-score on the identity scales. For example, participants whose highest z-

score was for informational style were categorised as preferentially using this style." (Berzonsky and Sullivan, 1992; Berzonsky and Ferrari, 1996).

The classification process was obtained to determine which identity style was the preferred style for each participant. As all participants scored on the three-identity styles differentially, the process of identifying which identity style was the dominant or preferred style for every student was authorized by the ISI-3 producer (Berzonsky, 1992b). The z-score was used for processing the classification; therefore, all identity styles scores were converted into a z-score using an SPSS computer program. The determination was based on the highest z-score for every participant (see the statistical model in this chapter).

7.8.02 Descriptive Statistics

Means and standard deviations for the two measures, the ISI-3 and the PIES, were calculated. Distributions of all variables of the ISI-3 and the PIES regarding gender differences were also obtained. In addition, following the purpose of the conceptual model (see Chapter 2), the total score of the PIES has been used to anticipate the participants' psychosocial well-being. (Markstrom et al., 1997, Markstrom & Marshall, 2007). The highest ego strengths and lowest ego strengths of the PIES were represented by the Q4 andQ1 quartiles respectively (see Table 4 this chapter). The highest ego strengths Q4 reflect the psychosocial health and adjustment whereas the lowest Q1 reflects the risk for maladjustment among the participants.

All participants have been statistically classified based on the total score of the PIES whether they identified as the highest Q4 or the lowest Q1 quartiles. This classification provides two subgroups statistically and theoretically different in the psychosocial well-being. The participants in the second study, the qualitative approach was randomly chosen from these two subgroups (see Chapter 6).

7.8.03 Bivariate Analysis

1. T-tests were used to compare the scores by males and females on the ISI-3 including the Identity Commitment Scale and the PIES total score and the eight ego strength subscales of the PIES.

2. The Chi-Square test was used to examine the association between gender and the three preferred Identity Styles.

3. One-way ANOVAs were used to assess whether there were differences between age groups (15-years old, 16 years old, & 17 years old) for the ISI-3, the identity commitment scale, the PIES total score and the eight ego strengths subscales. Pearson's r was used to examine the correlations between the three identity styles, identity commitment, the ego strength of fidelity, and the total of ego strengths.

7.8.04 Multivariate Analyses

Multiple Regression Analysis was performed to predict the total score of ego strengths, and the subscale ego strength of fidelity (see the conceptual model in Chapter 2) in two separate analyses by three identity informational, normative, and diffuse/avoidant styles.

In summary, this study was undertaken using a mixed method design. The core component was the quantitative elements while the supplementary component, the qualitative approach, is detailed in Chapter 9. The quantitative component created the subgroups for the sample in the supplementary qualitative study. In this chapter, the process of developing and standardizing the measures and implementing the statistical analysis have been outlined. The following chapter displays the results of the statistical analysis and discusses the qualitative supplementary component.

CHAPTER 8

QUANTITATIVE RESULT

This chapter presents the results of the statistical analyses undertaken in this study. First, the descriptive statistics of the Identity Style Inventory (ISI-3) and Psychosocial Inventory of Ego Strengths (PIES) are presented, followed by simple bivariate statistics examining the relationship between these two measures, gender, and age groups of the participants.

8.0 Descriptive Statistics

The three identity styles of ISI-3 including the identity commitment variable, the eight subscales and total score of the PIES are shown in Table 1.

Table 1: Descriptive Statistics for ISI-3, Commitment and PIES

Inventory	Variables	N	Mean	Standard Deviation
ISI-3	Informational	266	37.98	9.33
	Normative	266	34.64	6.19
	Diffusive-avoidant	266	28.93	7.07
	Identity Commitment	266	42.17	4.76
PIES	Hope	266	31.59	5.02
	Will	266	30.58	4.71
	Purpose	266	30.62	5.41
	Competence	266	29.79	5.20
	Fidelity	266	32.41	4.72
	Love	266	31.68	4.79
	Care	266	33.14	4.65
	Wisdom	266	28.09	5.32
	Total Score	266	247.89	28.18

Table 1 shows the mean score for each identity style subscale. As shown, the informational identity style was identified as the highest among the gifted participants, followed by normative and diffusive-avoidant styles respectively. Analysis of the psychosocial inventory of ego strengths PIES was indicated that, on average, the total score ego strengths in the total sample of gifted adolescents (N=266) was 247.89 points with a variation of 28.18 points. On the other hand, the total sample of gifted adolescents scored lowest on the wisdom subscale (M=28.09, SD =5.32) and scored highest on the care subscale (M=33.14, SD=4.65).

8.1 Bivariate Analysis Examining the Relationship Between ISI, PIES and Gender and Age Groups

A series of t-tests were conducted separately for the three independent variables ISI-3, the dependent variables of identity commitment, and the PIES among males and females.

8.1.01 Identity Styles, ISI-3, Identity Commitment, and Gender. T-tests were used to assess the first and second null hypotheses:

- $H_0$1: There would be no gender differences for the three identity styles (informational, normative and diffuse/avoidant).
- $H_0$2: There would be no gender differences in the strength of Identity Commitment.

Table 2 shows the mean scores of the identity styles and identity commitment in males and females.

Table 2: T-test comparing the scores of the two gender groups on ISI-3

Style	Gender	M	SD	t	Sig. (2-tailed)
Informational	M	39.55	9.34	2.789	0.006
	F	36.39	9.09		
Normative	M	35.74	5.57	2.949	0.003
	F	33.53	6.59		
Diffusive	M	26.91	6.61	- 4.900	0.000
	F	30.99	6.95		
Commitment	M	41.90	5.14	- 0.931	0.353
	F	42.44	4.35		

The t-tests show that males scored significantly higher on the informational and normative style subscales. Females scored significantly higher on the diffuse/avoidant style subscale than that of the males. This suggests that gender is related to the choice of identity styles. There was no significant difference between the males and females for Identity Commitment thus the second null hypothesis was supported. (t *[df =264] = -.931, p = .353*).

8.1.02 Relationship Between Identity Styles ISI-3 and Gender. In section 8.1.1 a significant relationship was found between Identity Style scores and gender. To show the preferred identity styles in Saudi gifted adolescent males and females, the ISI-3 raw scores were converted to z-scores for categorizing the participant into one style based on their highest z-score (see Chapter 7). The cross-tabulation, Table 3, shows the number and percent of males and females categorized in the informational, normative and diffuse/avoidant identity styles.

Table 3: Cross Tabulation showing distribution of identity style and gender.

| Style | Gender | | Total |
	Male N(%)	Female N(%)	N(%)
Informational Oriented	57 (42.5)	42(31.8)	99(37.2)
Normative Oriented	50(37.3)	38(28.8)	88(33.1)
Diffusive Oriented	27(20.1)	52(39.4)	79(29.7)
Total	134	132	266

As would be expected from the analysis in 8.1.1, more males were categorized in the informational and normative identity styles than females. More females were categorized in the diffuse/avoidant oriented style. The Pearson's Chi-Square analysis used to test the association between gender and identity style showed this association was statistically significant.

Table 4: Chi- Square indicate the differences within identity styles and gender

Pearson Chi-Square Value		Df		Asymp.Sig.(2-tailed)	
11.806		2		0,003**b**	
Pearson's R	Value	Asymp.Std. Error		Approx. T	Approx. Sig
	0.184	0.060		3.040	0.003 **b**
Spearman Correlation	0.180	0.06		2.982	0.003 **b**

The results indicated that this difference within the style group and the gender group is statistically significant, χ^2 (df=2) = 11.806, p<0.05.

8.1.03 Relationship Between the Total Score and the Eight Subscales of the PIES with Gender. Differences between males and females on the eight ego strength subscales and the total score of the PIES were also addressed. The t-tests were utilized to examine the third null hypothesis.

H03: There would be no gender differences in the scores of the eight ego strength subscales and the total score of the PIES.

Table 5: T-test comparing the scores of the two gender groups on PIES

Ego Strengths	Gender	N	M	SD	t	Sig.(2-tailed)
Hope	M	134	31.37	5.03	- 0.698	0.486
	F	132	31.80	5.02		
Will	M	134	30.56	4.87	- 0.054	0.957
	F	132	30.59	4.57		
Purpose	M	134	30.37	5.59	- 0.739	0.461
	F	132	30.86	5.23		
Competence	M	134	30.10	5.02	0.960	0.338
	F	132	29.48	5.38		
Fidelity	M	134	31.86	4.99	- 1.916	0.056
	F	132	32.96	4.38		
Love	M	134	30.69	4.87	- 3.493	0.001
	F	132	32.70	4.51		
Care	M	134	32.19	4.75	- 3.431	0.001
	F	132	34.11	4.37		
Wisdom	M	134	28.09	5.07	- 0.014	0.989
	F	132	28.10	5.59		
Total Score	M	134	245.22	29.37	- 1.562	0.120
	F	132	250.61	26.74		

There were no significant differences on most of the PIES subscales between males and females. Significant differences were found for the subscales love and care. Females scored higher than males on these two subscales. They also scored higher on fidelity, but this was marginal (p=.057).

8.2. Bivariate Analyses Examining the Relationship Between ISI-3, Identity Commitment, and PIES with Age.

The second demagogic variable examined was age. Participants' ages ranged from 15 to 17 (see Table 1, Chapter 7). ANOVA was used to examine whether identity styles, identity commitment and the PIES were related to age.

8.2.01 Relationship Between Age and Identity Styles and Commitment. A one-way ANOVA was conducted to test the fourth null hypothesis:

H04: There are no significant differences in the scores of the identity styles and commitment for the three age groups.

Table 6 shows the mean scores for the three identity Styles and identity commitment for each of the three age groups.

Table 6: One-way ANOVA for Age and Identity Styles and Commitment

Style	Age	M	SD	Source	df	F	Sig.	η^2
Informational Oriented	15	33.71	8.301	Between Groups	2			
	16	38.64	9.942	Within Groups	263	0.909	0.404	0.01
	17	37.9	9.137	Total	265			
Normative Oriented	15	32.86	8.688	Between Groups	2			
	16	33.55	6.197	Within Groups	263	1.91	0.15	0.02
	17	35.11	6.058	Total	265			
Diffusive-avoidant Oriented	15	29.29	8.958	Between Groups	2			
	16	29.04	6.827	Within Groups	263	0.023	0.978	0.001
	17	28.88	7.123	Total	265			
Identity Commitment	15	42.29	5.407	Between Groups	2			
	16	42.39	4.857	Within Groups	263	0.11	0.895	0.001
	17	42.08	4.727	Total	265			

Table 6 shows that there are small differences in mean scores for the age groups. However, the *F*-test results indicate these differences were not statistically significant, $F_{(2,265)} = 0.909$, p=.404(informational), $F_{(2,265)} = 1.91$, p=.15 (normative), and $F_{(2,265)} = 0.023$, p= .978 (diffuse/ avoidant). There was no significant difference between the age groups

for the identity commitment $F(2,265) = 0.11$, p=.895. Values of the effect size, the Partial eta squared (η^2) were small and not significant for the three identity style and commitment.

The fourth null hypothesis was supported in respect to the effect of age group on identity styles and identity commitment.

8.2.02 The Relationship Between the PIES and Age. One-way ANOVA was conducted to examine the fifth null hypothesis:

H05: There are no significant differences in scores of the eight subscales and the total score of ego strengths for the three age groups.

The mean score of the three age groups on the eight subscales of the PIES and total PIES score are shown in Table 7.

Table 7: One-way analysis of variance for the effect of age on the PIES

Ego Strengths	Age	M	SD	Source	Df	F	Sig.	η^2
Hope	15	32.14	4.634	Between Groups	2			
	16	32.62	5.261	Within Groups	263	2.13	0.12	0.02
	17	31.19	4.907	Total	265			
Will	15	30.14	6.203	Between Groups	2			
	16	31.41	4.4	Within Groups	263	1.46	0.24	0.01
	17	30.29	4.755	Total	265			
Purpose	15	30.71	6.945	Between Groups	2			
	16	31.65	5.385	Within Groups	263	1.74	0.18	0.13
	17	30.24	5.341	Total	265			
Competence	15	26.00	4.546	Between Groups	2			
	16	30.55	4.969	Within Groups	263	2.69	0.07	0.02
	17	29.66	5.255	Total	265			
Fidelity	15	32.43	4.237	Between Groups	2			
	16	32.35	4.859	Within Groups	263	0.01	0.99	0.00
	17	32.43	4.712	Total	265			
Love	15	34.57	2.82	Between Groups	2			
	16	31.93	5.312	Within Groups	263	1.52	0.22	0.01
	17	31.49	4.628	Total	265			
Care	15	36.14	3.024	Between Groups	2			
	16	33.36	4.768	Within Groups	263	1.71	0.18	0.01
	17	32.95	4.638	Total	265			
Wisdom	15	28.71	5.155	Between Groups	2			
	16	28.8	5.54	Within Groups	263	0.91	0.40	0.01
	17	27.82	5.247	Total	265			
Total Score	15	250.9	29.74	Between Groups	2			
	16	252.7	29.52	Within Groups	263	1.44	0.24	0.01
	17	246.1	27.56	Total	265			

Although, there are small differences in the mean scores between the age groups for the eight subscales and total score. The *f*-tests showed these were not statistically significantly different. Partial eta squared (η^2) indicates the effect size of the age group were small on all PIES but not Purpose $\eta^2 = 0.13$. Some 13% variance in purpose explained by age group. The result supports the uniqueness of the fifth null hypothesis.

8.3 Bivariate Analyses Examining the Effect of Identity Styles on the PIES and Identity Commitment.

Identity style as an ongoing process of constructing self-identity throughout the life cycle reflects an effect on the ego developmental stages, as outlined by Erikson's theory of ego development. One-way ANOVA was conducted to examine the six-null hypothesis:

H06: Identity styles have no effect on the eight subscales, the total score of ego strengths and identity commitment.

Table 8 displays the ANOVA in identity styles along all the PIES and identity commitment.

Table 8: One-way ANOVA for the effect of Identity Styles on the PIES and Commitment

Variables	Style	Mean	SD	Source	df	F	Sig.	η^2
Hope	INFOST	33.19	4.67	Between Groups	2			
	NORMST	31.47	5.00	Within Groups	263	11.469	0.000	0.01
	DIFFST	29.71	4.83	Total	265			
Will	INFOST	32.17	3.99	Between Groups	2			
	NORMST	30.68	4.95	Within Groups	263	15.157	0.000	0.10
	DIFFST	28.46	4.52	Total	265			
Purpose	INFOST	32.34	5.19	Between Groups	2			
	NORMST	31.02	4.97	Within Groups	263	16.201	0.000	0.11
	DIFFST	28.00	5.21	Total	265			
Competence	INFOST	32.29	4.46	Between Groups	2			
	NORMST	29.63	4.91	Within Groups	263	29.318	0.000	0.18
	DIFFST	26.85	4.82	Total	265			
Fidelity	INFOST	33.89	4.04	Between Groups	2			
	NORMST	32.69	4.51	Within Groups	263	14.852	0.000	0.10
	DIFFST	30.23	4.99	Total	265			
Love	INFOST	32.70	4.46	Between Groups	2			
	NORMST	31.80	4.76	Within Groups	263	5.775	0.004	0.04
	DIFFST	30.29	4.95	Total	265			
Care	INFOST	33.75	4.43	Between Groups	2			
	NORMST	33.19	4.90	Within Groups	263	2.103	0.124	0.02
	DIFFST	32.32	4.59	Total	265			
Wisdom	INFOST	28.45	4.99	Between Groups	2			
	NORMST	29.41	5.23	Within Groups	263	8.498	0.000	0.06
	DIFFST	26.18	5.35	Total	265			
Total Score	INFOST	258.79	24.25	Between Groups	2			
	NORMST	249.89	27.75	Within Groups	263	23.583	0.000	0.15
	DIFFST	232.03	26.25	Total	265			
Commitment	INFOST	43.70	3.99	Between Groups	2			
	NORMST	43.09	4.12	Within Groups	263	26.103	0.000	0.16
	DIFFST	39.22	5.04	Total	265			

The analysis shows significant differences between the identity styles and the total score and the subscales of the PIES except for the care subscale. Gifted adolescents with an informational identity style tended to score higher on seven subscales of ego strengths, on total score of ego strengths, and on identity commitment. For the wisdom subscale, the score of gifted respondents in the normative identity style was higher than the mean score of gifted individuals in the two other identity style groups. As expected, the effect of identity informational style was significant for the identity commitment F (2,265) = 26.103, $p < 000$. The analysis shows that scores on most of the PIES subscales were related to identity styles. Partial eta squared (η^2) indicates the large effect size of the informational identity style on the subscale of competence, $\eta^2 = 0.18$, the identity commitment $\eta^2 = 0.16$, the total score of PIES $\eta^2 = 0.15$, fidelity $\eta^2 = 0.10$, and will $\eta^2 = 0.10$. Accordingly, the six-null hypothesis were rejected.

8.4 Correlation Matrix and Bivariate Correlation of ISI-3 and the PIES

The relationships between the three identity styles, identity commitment, the eight subscales of ego strengths, and the total score of the PIES were tested through the H7 and H8:

H7: There are positive significant correlations between the informational identity style and normative identity style with all variables of ego strengths and identity examined within the correlation matrix.

H8: Identity diffuse/avoidant negatively correlated with the total score and all ego strengths subscales of the PIES, as well as another two identity styles and identity commitment, was confirmed.

The correlation matrix shows the relationships between the ISI-3and the PIES variables in Table 9

Table 9: Correlation of all ISI-3 and PIES Variables

Variable	Hope	Will	Purpose	Competence	Fidelity	Love	care	Wisdom	Total PIES	INFO	NOR	DIFF	Comm
Hope													
Will	0.607**												
Purpose	0.582**	0.627**											
Competence	0.519**	0.644**	0.559**										
Fidelity	0.554**	0.656**	0.578**	0.521**									
Love	0.338**	0.325**	0.293**	0.209**	0.325**								
Care	0.356**	0.255**	0.266**	0.261**	0.375**	0.309**							
Wisdom	0.514**	0.592**	0.457**	0.455**	0.470**	0.216**	0.072						
Total Score	0.793**	0.834**	0.780**	0.744**	0.789**	0.526**	0.499**	0.678**					
INFO	0.252**	0.327**	0.301**	0.445**	0.321**	0.157*	0.156*	0.139*	0.372**				
NORM	0.170*	0.176**	0.164**	0.212**	0.241**	0.132*	0.071	0.227**	0.237**	0.372**			
DIFF	- 0.247**	- 0.282**	- 0.348**	- 0.360**	- 0.268**	- 0.141*	- 0.125*	- 0.214**	-0.354**	- 0.478**	- 0.357**		
COMM	0.515**	0.607**	0.585**	0.547**	0.641**	0.256**	0.337**	0.406**	0.689**	0.388**	0.327**	- 0.348**	

*p< .01. **p< .001. ***p<.0001

As was expected most of the correlations between variables were significant and in the same predicted directions. The seventh hypothesis H7 was confirmed. Only hope and care as subscales of the ego strengths showed positive but insignificant relationships with the normative identity style. Thus, hypothesis H8 was confirmed.

The roles of identity styles, and identity commitment upon the ego strength of fidelity (which is the virtue of identity formation in adolescence), and upon the psychosocial development of ego strength (as measured by the total score of the PIES) showed in the bivariate correlation. The bivariate correlation illustrates in Table 10 the roles of identity styles in fidelity and the psychosocial ego strengths (PIES).

Table 10: Bivariate correlation of identity styles, commitment with fidelity and total score of ego strengths

Identity Styles	Gender	Fidelity		Total score PIES	
		R	R^{2**}	r	R^{2**}
Informational	M	0.399**	0.16	0.439**	0.19
	F	0.289**	0.08	0.346**	0.12
	All	0.321**	0.10	0.372**	0.14
Normative	M	0.289**	0.08	0285**	0.08
	F	0.253**	0.06	0.241**	0.06
	All	0.241**	0.06	0.237**	0.06
Diffuse -Avoidant	M	-0.264**	0.07	-0.347**	0.12
	F	-0.378**	0.14	-0.459**	0.21
	All	-0.268**	0.07	-0.354	0.13
Identity Commitment	M	0.666**	0.44	0.739**	.55
	F	0.604**	0.37	0.622**	.39
	All	0.641**	0.41	0.689**	.48

**Correlation is significant at the .01 level (2-tailed)

As expected, fidelity was associated with social cognitive identity styles by which gifted adolescents process self-relevant information and resolve their identity crises. Fidelity shared 16% of the variation in the informational identity style for males and 8% for females, while fidelity shared 8% and 6% of the variation in the normative identity style for males and females respectively. The relationship between the diffuse/avoidance identity style and fidelity was negative for both males and females, explaining 7% of the variation in the scores for the males and 14 % for females. This result confirms the direction of the predicted correlation between identity development and the psychosocial ego strengths (see Chapter 2, which focuses on the conceptual model).

Pearson's correlation coefficient of the informational identity styles is positively related to the psychosocial ego strengths ($r= .439$, $p < .01$) in males, and ($r=.346$, $p < .01$) for females. The role the normative identity style played in achieving psychosocial ego strengths was significant but less significant than the informational identity style for both genders ($r=.285$, $p < .01$) in the male participant group, ($r=.241$, $p < .01$). A diffuse/avoidant identity style was negatively associated with the total score of the ego strengths, ($r= -.347$, $p < .01$) in gifted male students and for gifted female students: ($r= -459$, $p < .01$).

In summary, the two Identity Styles – informational and normative – were strongly positively related to the participants' positive psychosocial development; the diffuse/avoidant identity style was negatively related to psychosocial development. A strong positive correlation between identity commitment and fidelity for both male and female genders ($r = .666$, $p < .01$, $r = .604$, $p < .01$) was evident, with fidelity sharing 44% of the variability in identity commitment for Saudi gifted boys and 37% for girls. Very close to this result was the correlation coefficient of identity commitment with the total score of ego Strengths in male and female participants ($r = .739$, $p < .01$, $r = .622$, $p < .01$), with the total scores of ego strengths

sharing 55% and 39% of the variability in identity commitment in male and female gifted adolescents respectively.

8.5. Stepwise Multiple Linear Regression for Predicting the Total Score of PIES and PIES Subscale Fidelity

To further examine the relationships described above, stepwise multiple linear regression analyses were performed to examine the relative contribution of the three identity styles (informational, normative and diffuse/avoidant) in relation to the psychosocial ego strengths as indicative of psychosocial healthy personality development. The researcher chose the stepwise statistical method of analysing the prediction relationships as most sophisticated method to select the independent variables in order of their importance in leaner hierarchical multiple regression. The method of stepwise multiple linear regression was chosen to select the independent variables in order of their importance in predicting the psychosocial ego strengths. The independent variables were regressed in two stepwise analyses 1) predicating the total score of the psychosocial ego strengths and 2) predicting fidelity as the virtue of identity development in adolescence. The demographic variables (age and gender) were also included as potential independent predictors.

8.5.01 Regression on the Total Score of Ego Strengths

In the first stepwise linear multiple regression, the identity styles regressed on the total score of ego strengths. This regression analysis aimed to investigate which identity processing styles would contribute independently to the prediction of the total score of PIES. The hypothesis built upon the initial assumption that processing self-relevant informational identity styles was uniquely associated with the psychosocial ego strengths, which is the measured aspects of the psychosocial adjustment (see in Chapter 1, my discussion of Erikson's (1968, p. 165) statement that the optimal sense of identity is experienced merely as sense of psychosocial well-being).

Table 11: Summary of identity styles scores regressed on total score of PIES

	B	R	R^2	R^2 change	SEB	Beta	t
Step 1		.327	.138***	.138***			
INFO	1.123				.173	.372***	6.511
Step 2		.423	.179***	.040***			
INFO	.793				.192	.263***	4.129
DIFF	-.911				.254	-.228***	-3.590
Step 3		.474	.225***	.046***			
INFO	.821				.187	.272***	4.386
DIFF	- 1.153				.254	-.289-***	-4.532
Gender	12.664				3.197	.225***	3.961

***$p < .001$

Table 11 shows the result of the first stepwise regression analysis. Variables were added in three steps. In Step 1, the identity styles variable was the first predictor variable entered. This measure accounted for 14% of the variation in the PIES score ($R^2 =.138$, F (264.265) $=42.393$, $p <.001$ adjusted $R^2 =.135$, $p < .001$). The predictor variable of diffuse/avoidant was entered at Step 2. This was negatively associated with the PIES scores and added 4% to the explained variation. In Step 3, gender was added increasing the explained variance (R^2 by % 5, $p < .001$. The three variables accounted for 23% of the variance in the psychosocial well-being of Saudi gifted adolescents.

Hypothesis H10 asserted that identity styles as the function of psychosocial mental health would predict the total score of the ego strengths; this was supported. From the findings of the stepwise regressions; identity style was found to uniquely contribute to the psychosocial

ego strengths. No other variables were entered in the analysis after Step 3, indicating that neither the normative identity style nor age significantly contributed to the explained variance.

8.5.02 Regression on Fidelity

As the ego strength of fidelity is associated with the positive resolution of identity crisis in adolescence, the relationships between fidelity and the three identity styles were examined in a second stepwise regression analysis.

Table 12: Identity styles scores regressed on total score of fidelity

	B	R	R^2	R^2 change	SEB	Beta	t
Step1							
		.321	.103**	.103**			
INFO	.163				.029	.321**	5.511
Step2		.117	.133**	.030**			
INFO	.178				.029	.351**	6.028
Gender	1.664				.549	.176**	3.030
Step 3		-.286	.165**	.013**			
INFO	.131				.033	.259**	4.033
Gender	2.082				.556	.221**	3.741
DIFF	-.138				.044	-.207**	-3.129
Step 4		.241	.179*	.015*			
INFO	.114				.033	.225	3.412
Gender	2.176				.554	.231	3.926
DIFF	-.119				.045	-.179	-2.662
NORM	.103				.047	.135	2.172

***p < .001, **p < .05*

This analysis required 4 steps. At Step 1, the informational identity style was entered, and it accounted for 10% of the variance (R^2 =.103, p <.01). In the second step, gender was entered, and this added 3% to the explained variation (R^2 change = 0.30, p < .01). In Step 3,

the diffuse/avoidant variable was entered, and it was negatively associated with fidelity and explained a further 13 % of the variance (R^2 change = 0.013, $p < .01$). In Step 4, the normative identity style was added accounting for an additional 1.5% of the variance of the fidelity score (R^2 change = 0.015, $p < .05$). The total amount of variation explained of the fidelity score was 17.9%.

The hypothesis H11, which stated that identity styles would predict the psychosocial ego strength of fidelity as a function of the identity development, was supported by the findings of the stepwise regressions.

The three identity styles uniquely contributed to the psychosocial ego strength of fidelity, and gender had a strong predictive power of fidelity. Age group did not significantly contribute to the prediction of the fidelity score.

CHAPTER 9

QUALITATIVE APPROACH

"……stories are a way of knowing" Seidman, (2006, p. 7)

In Chapter 7, which discussed the methodology of this thesis, I discussed the meaning of the qualitative data in relation to the methodological view of the constructed model of psychosocial-well-being. The results in Chapter 5 showed the quantitative data by which the Psychosocial Inventory of Ego Strengths (PIES) and the Identity Style Inventory (ISI-3) contributed to the psychosocial well-being in a sample of Saudi gifted adolescents. In this chapter, I discuss my approach to the qualitative data in the second study of my current project. Therefore, I have taken the role inherent in the Subject–Object Interview (SOI) to assess the qualitative structure of the complexity of mind among subgroups of Saudi gifted adolescents. This chapter describes the qualitative approach in this thesis based on the following ideas:

9.0 Description of the Qualitative approach

9.1 Method

9.0 Description of the Qualitative approach

9.01 Subject–Object Approach to Complexity of Mind

When considering the qualitative data of the SOI, the epistemological assumptions that underlie the complex ways of knowing and constructing reality become valuable for assessing the complexity of mind, which is the third key strength in this thesis. The convergence between the level of subject–object structure and the complexity of mind is theatrical apprehension (see the literature review, Chapter 3). In this context, I refer to the statement made by the authors of the SOI (Lahey, Souvaine, Kegan, Goodman, & Felix, 1990) that everyone conducts the SOI for a reason, and Kegan's (1982, p. 113) assertion that "if you want to understand another person in some fundamental way you must know where the person is in his or her evolution or

adaption in the master motion in personality". The subject–object approach assesses the evolution of self (see Chapter 3 for a discussion of self as motion) in epistemological structures. Accordingly, any giving subject–object relationship is an ongoing process of self-evolution (Kegan, 1994). Therefore, my chief reason for conducting the SOI is to distinguish the complexity of mind through the lens of Kegan's theory of evolving self (Kegan, 1982), the constructive-developmental theory, which interprets self-evolution not on content but on complexity.

The SOI, described in this chapter, identifies the participant's level of subject–object evolution. Thus, it measures the process of the structure of the subject–object relationship, not the content of the structure. Kegan (1994, 2009) maps the structure of what the person's taken by (the experience taking place in the realm of the subject) and what the person's perspective on taking is (experience that takes place in the realm of the subject) as forms of mind. Our subjective experiences are those that we are run by, and we are *subject to*, them. Our objective experiences, in contrast, are those on which we can reflect, look at, or take *as object* (see the literature review). The SOI distinguishes five central forms of mind: These are qualitatively different ways of knowing and making meaning with four transitional structures in between each form of mind.

As this is the first study to date to conduct an SOI among a sample of intellectually gifted students in high school, and within an Arabic culture, many constraints have influenced the process of the SOI. Conducting the SOI within males adolescents was one significant restriction impact the timeline of the interview. SOI with males has been conducted using virtual secure website. However, this project may suggest the way forward for a universal use of the SOI, especially with regard to the developmental issue related to adolescents' capacity to make meaning of their experiences.

In this thesis, the qualitative approach of complexity of mind complements the quantitative approach of the two key strengths: ego strengths and identity style. Thus, the qualitative approach has established the degree to which the structures of the subject–object balance was parallel to psychosocial development (the total score of the ego strengths) and the constructivist nature of the three identity styles. By parallel, I mean that I have not made a direct assumption that the stages of evolution of self or subject-object balances (Kegan, 1994) are equal to the psychosocial development of ego strengths (Erikson, 1964, 1968) and to the tenets of the self-theorist (Berzonsky, 1993). Rather, I asked a basic question:

Which subject–object balances are the participants primarily operating out of?

To answer this question, the data of the Subject- Object Interview (SOI) were generated from 18 participants in two subgroups:

1. The first subgroup comprised the participants who had been identified as having the highest ego strengths based on the total score of the PIES. Statistically the participants in this subgroup were in the fourth quartile Q4 of the PIES (they represented the individuals who had psychosocial well-being)

2. The second subgroup were the participants who had been identified as having the lowest ego strengths based on the total score of the PIES. Statistically', the participants in this subgroup were in the first quartile Q1 of the PIES (they represented the individuals who showed less psychosocial adjustment).

Thus, the leading research question explicitly asked in this approach was:

Which subject–object balances are the participants in the highest Q4 and lowest Q1 ego strengths primarily operating out of?

The significant differences between levels of the subject–object structures for all participants were assessed by the SOI administered to the 18 Saudi gifted adolescents randomly chosen from the highest quartile Q4 and lowest quartile Q1of the total score of the PIES.

9.02 Context of Complexity of Mind

Complexity of mind among Saudi gifted adolescents in the context of this research elaborates on Kegan's (1982, 1994) theory of principles of mental organization as a framework for understanding our capacity of making-meaning and organizing experiences. The subject–object relationship is the deep structure of any principle of mental organization (Kegan, 1994, p. 32). Therefore, the capacity of the ego to distinguish what is subject and what is object is associated with the level of mental developmental. It is a cognitive process at its base but no less affective. Kegan's theory of the five orders of mind or consciousness represents the set of common organizing principles that individuals use as way of constructing experiences (see the literature review).

In the context of this thesis, complexity of mind among the subset of 18 Saudi gifted adolescents was assessed as a key strength of Saudi gifted adolescents' mind capacity to organize their interpersonal world and deal with interpersonal demands. The adolescents' complexity of mind was assessed from their way of knowing how their mind distinguished what is subject and what is object. Kegan (1982, 1994) described the notion of the subject–object relationship as psychological change in five epistemological levels of increased complexity of the differentiation process of what is self and what is other. Increasing the level of subject–object balancing takes a form of transformation in the meaning system and the complexity that is inherent in three mindsets associated with youth and adults: The Traditional mind in adolescence, and the Modern and Postmodern minds in adults. The three-adult meaning system makes sense of the world within a qualitatively different level of complexity of mind known as:

1. The socialized mind: Usually adolescents who operate from the socialized mind. Individuals who characterized with the socialized mind identified in the third stage of subject-object structure, which is the interpersonal stage (see the conceptual model) or in the transition from Stage 2 to 3. Adolescents' complexity of mind is theatrically linked to this stage of mental capacity because most adolescents are influenced by their environment, expectations of family, and school and friends (Kegan, 1994,2009).

2. The self-authoring mind: The characteristic of this level of mental capacity is identified from the structure of Stage 4 or in transition to a higher stage, the institutional mind. Individuals in this stage of complexity of mind demonstrate personal authority independent of external expectations. Usually, this stage is associated with confirmed identity development. (Kegan, 1994,2009).

3. Self-transforming mind: This is the highest order of mind in Kegan's theory of adults' mental capacity. Individuals who operate from the fifth stage of subject-object structure, which is the inter-individual stage, may be identified as having the complexity of the self-transforming mind. The most significant aspect about the mental capacity in this stage is the individual's increase in objectivity (Kegan, 1994,2009).

In applying Kegan's constructive-developmental theory, the SOI has been used effectively to identify which level of the subject–object structure reveals the participant's complexity of mind.

9.03 Subject–Object Interview (SOI)

The Subject–Object Interview (SOI) is a psychological technique that assesses the subject–object structures of self-growth. The semi-structure SOI is a ninety-minute interview, so named because the complexity of a mindset is a function of the way it distinguishes the

thoughts and feelings we have (i.e., can look at, can take *as object*) from the thoughts and feelings that "have us" (i.e., we are run by them, we are *subject to* them). Each different level of mindset complexity draws the line differently between what is subject and what is object. Greater complexity means being able to *look at* more (take more *as object*). The blind spot (what is *subject*) becomes smaller and smaller. The assessment of the SOI has proven to be quite subtle: It can identify, with high degrees of inter-rater reliability, five different transitional places between any two mindsets. Goodman(1983) established the inter-rater reliability in first study conducted SOI (Goodman,1983, cited in Lahey, Souvaine, Kegan, Goodman, & Felix, 1990,p.356). The inter-rater reliability is rating the subject-object interviews by two raters.

The interview began with the subject being handed ten index cards, upon which were written cues such as: (1) Angry, (2) Anxious / nervous, (3) Success, (4) Strong stand / conviction, (5) Moved, touched, (6) Change, (7) Important to me, (8) Torn / conflict, (9) Sad, (10) Lost something. In the first fifteen minutes, we asked the interviewee to make notes on each card in response to questions of the following form: "Think of a time, over the last few days or weeks, when you found yourself feeling mad or angry about something (or moved, etc.), and jot down what comes to mind." The interview then proceeded as a systematic exploration: the interviewee telling us the *whats* (what made him or her feel angry, successful, etc.) and we probing to learn the *whys* (why would that make him or her feel angry or successful; just what is at stake?). The interviews were transcribed and analyzed according to uniform process (Kegan & Lahey, 2009, pp. 22–23).

9.04 Approaches to Using SOI Data

The SOI is semi-structured interview focused on the structure of the qualitatively different five stages of transformation of self or ego. *The Guide to the Subject–Object Interview: Its Administration and Interpretation* (Lahey, Souvaine, Kegan, Goodman, & Felix, 1990) teaches the interviewer how to take the subject–object approach to data. The structure

of the subject-object balance was identified in six qualitative transformations of subject-object balance to anther which they designated as: X, X(Y), X/Y, Y/X, Y(X), and Y. Stage 1 is prior to the ability of speaking, while Stage 5 is beyond the possibility of recognizing the structure of subject-object. Thus, there are twenty-one possible distinctions in the on-going evolution of subject–object relations that are available for generating hypotheses about the structure of the interview material. These stages are known as:

1, 1(2), 1/2, 2/1, 2(1)

2, 2(3), 2/3, 3/2, 3(2)

3, 3(4), 3/4, 4/3, 4(3)

4, 4(5), 4/5, 5/4, 5(4), 5

These stages have different transitions possibility by which the Subject-Object structure can be identified. The interviewers must be trained and actualize their experiences with professionals in the SOI to be qualified in conducting the SOI and scouring the participant's self-evolution from one stage to another. There are two ways of scoring the SOI:

1. The first way, which is commonly used, is to identify the level of the subject–object balance associated with the five central forms of mind as described by Kegan (1982, 1994). In this approach, the interviewer must focus on the evidence revealed by any level of the subject-object structures. For example, the interviewer must find evidence of the structure of Stage X, or X(Y), or X/Y, or Y/X, or Y(X), or Y, and score it regarding to the SOI manual (Lahey et al., 1990).

2. The second way of using the SOI data is by encoding the SOI materials for more in in-depth qualitative analysis.

In the context of the mixed method design, I scored the 18 participants in the SOI following the first way of conducting and analysing the SOI.

9.05 Purpose of the Subject–Object Approach

The straight aims of conducting the SOI in the present study were:

1. To explore whether the SOI was an effective assessment of the complexity of mind in Saudi gifted adolescents.

2. To explore the stage of subject–object structure among Saudi gifted adolescents who were in the highest quartile Q4 and lowest quartile Q1 of the total score of ego strengths as measured by the PIES (Q4 and Q1 of the PIES are indicative of the psychosocial health in the highest and lowest ego strengths as measured by the PIES).

3. To explore the stage of the subject–object structure embedded in accordance with three identity styles: the informational, normative, and diffuse/avoidant identity styles in each quartile of the total score ego strengths Q4 and Q1.

9.1 Method

9.1.01 Participants

Based on the result of the quantitative data of the PIES, two subsets were randomly selected – nine from the upper and the lower total score of the PIES which anticipated the psychosocial growth and mental health. The two subgroups consisted nine male and female participants who represented the upper quartile Q4 of the total score of the ego strengths PIES and nine male and female who represented the lower quartile Q1 of the total score of the ego strengths as measured by the PIES. Additionally, the identity preferred styles for the two subgroups were identified based on the original classification process of the identity styles(ISI-3) in the quantitative study (see Chapter 7 and 8).

Thus, the final classification for all participants in the SOI were based on:

1. Whether the participants in the highest ego strengths group Q4 were psychosocially healthy adolescents.

2. Whether the participants in the lowest ego strengths group Q1were adolescents psychosocially at risk of maladjustment.

3. Whether the participants classified as having an informational, normative, or diffuse/avoidant identity style.

4. Whether the participants were male or female.

Accordingly, the following cross-tabulation table illustrates the classification of the 18 participants in the SOI.

Table 1 Cross-tabulation of participants based on the PIES and ISI-3.

Identity Styles	PIES Highest Q4			PIES Lowest Q1			Sum
	M	F	Sum	M	F	Sum	
Informational Style	2	1	3	2	1	3	6
Normative Style	1	2	3	1	2	3	6
Diffuse Style	1	1	2	2	2	4	6
							18

As can be seen from Table 1, participants in the SOI were equipped differently in the three identity styles. The number of the participants from Q4 and Q1 were control-based on the total number of the participants in the two quartiles whereas the identity styles were identified for every participant from the data analysis of the ISI-3.

9.1.02 Procedure

As the qualitative approach of SOI entails a face-to-face, ninety-minute interview, the procedure for conducting the interview was influenced by several roles:

1. The cultural roles and the school environment constrain the face-to-face interview between the interviewer (female) and the male interviewees.

2. The student participants were identified in four territories in Saudi Arabia.

The consent forms were officially approved by the Ministry of Education in Saudi Arabia that oversees the administration of surveys and interviews with students in public schools. Parents of all student participants in the interview signed the consent forms and were informed about the time and details, and the purpose, of the interview. Consent forms about the right to withdraw at any stage from the interview were delivered to all participants at the same time.

Considering the ethics and privacy for conducting face-to-face interviews, the Ministry of Education in Saudi Arabia provides consulting room for conducting the SOI with females inside the Centre of Gifted Students. These rooms were made available in the four territories where the interviewer travelled to conduct the interview. For the interviewing of male participants, the Saudi Ministry of Education established a virtual, secured interactive website for conducting the SOI with all male participants in this study. In addition, digital tape-records were used to record all interviews for the analyses.

9.1.03 Predictions

1. Participants (male and female) who are in the highest ego strengths Q4 and develop healthy choices of informational identity style will operate from the full stages (3), the interpersonal or higher ((3), or (3 (4), or 3/4).

2. Participants (male and female) who are in the highest ego strengths Q4 and develop healthy choices of normative identity style will operate from the full stages (3) interpersonal only.

3. Participants (male and female) who are in the highest ego strengths Q4 and who develop an unhealthy identity style that is diffuse/avoidant will operate from a transitional stage (3(2), or 3/2).

4. Participants who are in the lowest ego strengths Q1 with informational and normative identity will operate from the full stage of Stages 2 or higher ((2), or 2 (3), or 2/3).

5. Participants who are in the lowest ego strengths who have developed an unhealthy identity style that was diffuse/avoidant will operate from the full stage (2) only.

9.1.04 Data Analysis: Contingency Table Approach

The data of SOI were gathered for the third key strength of psychosocial well-being in this thesis. Thus, scores of all 18 participants in the SOI were taken as an indication of their level of the complexity of mind. By employing the contingency table approach in the present qualitative study, the above outlined predications between the three key strengths can be assessed. Therefore, the contingencies between the complexity of mind, the ego strengths, and identity styles were analyzed. The analysis procedure was based on identifying the participants' stages of SOI in the highest Q4 and lowest Q1 groups of ego strengths, followed by the identification of the preferred identity style. This simple process has been used to test the contingencies between the three key strengths in general and to answer the leading research question in this qualitative approach. The following contingency table 2 for 18 participants illustrates the classification of the 18 participants in the SOI based on PIES and ISI-3.

Table 2 Contingency Table of SOI for 18 participants

ISI-3	SOI	The Highest Q4 PIES			The lowest Q1 PIES			
Informational	3							
	3(2)	2	1		2	1		6
	3/2							
	2/3							
	2(3)							
	2							
Normative	3	1	1		1	2		
	3(2)							5
	3/2							
	2/3							
	2(3)							
	2							
Diffuse/ Avoidant	3							
	3(2)	1	2		2			
	3/2							7
	2/3							
	2(3)							
	2					2		

9.1.05 Assessment of the Predictions

To assess the four predictions of the stage of Kegan's self-development and complexity of mind (mentioned above) for all 18 participants in the SOI, the contingency table was used to provide the primary data of the 18 participants in this study.

9.1.06 Result

1. 2 males and 1 female who were found in the highest Q4 ego strengths subset group and who were identified as developing an informational identity style operated from the full stage of interpersonal self-development which is Stage (3). Thus, there was no evidence of a higher structure of subject-object balancing. This means that the full structure of identity- making among Saudi gifted adolescents has not been demonstrated yet. In addition, most people and young adults operate from this interpersonal stage of subject–

object structure (Kegan, 2009). For these groups of participants, as they initially process self-relevant information and choose a self-construction style, they may employ an epistemological understanding for themselves and others that creates more possibility for success through the adolescence identity crisis.

2. 1 male and 2 females were found in the highest Q4 ego strengths subset group who were identified as developing a normative identity style. This style operated from the full stage of interpersonal self-development, which is Stage (3). As the predication about the normative identity style (see Chapters 1 and 2) may not be permeated by an active exploration of a sense of identity, people who classified as having a normative identity style adjusted to the identity crisis issues by adapting others' values and ideology. So, being normative orientation adolescents, the epistemological structure of the subject–object may be fixed or rigid. For this reason, people in normative identity styles are less likely to be meaning-makers, they do not show an openness to experience and exploration, and they are essentially embodied in the socialized mindset. Accordingly, this group of adolescents function well (they were in the highest of the PIES scores) but not as active meaning-makers.

3. 1 male and 2 females were found in the highest Q4 ego strengths subset group who were identified as developing a diffuse/avoidant identity style that operated from the transition of Stage 3, (3(2) and 3 /2). The possibility for the participants in this group to process self-relevant information is limited to the epistemological way that support their diffusive identity. The balance of the psychosocial functions of these adolescents needs a higher structure of subject–object relationships.

4. 2 males and 1 female in the lowest Q1 ego strengths subset group who were identified as informational identity style operated from the transition of Stage 3, (3(2) 3/2). However, processing self-relevant information as way of constructing self-theory can enable the

adolescents in this category to fit into the world and respond to the social demands quite positively.

5. 1 male and 2 females in the lowest Q1 ego strengths subset group who were identified as developing a normative identity style operated from the transition of Stage 3 (3(2) 3/2).

6. 1 male and 2 females in the lowest Q1 ego strengths subset group who were identified as developing a diffuse/avoidant identity style operated from the transition of Stage 2, (2(3) 2/3).

There was evidence for differences between the adolescents in the lowest ego strengths Q1 according to their preferred identity styles. Adolescents with diffuse/avoidant showed elements from the structure of stage 2 more than the other groups. This result shows that the predications were either supported fully or partly.

CHAPTER 10

DISCUSSION

In this thesis, I have integrated psychodynamic thought with constructivist assumptions in the conceptual model of three key strengths that I have proposed: ego strengths: ego strengths, identity style, and complexity of mind as a construct of psychosocial well-being. This thesis project has tested the complex relationships between these three key strengths as a construct of understanding the psychosocial well-being in mixed method design and in the socio-cultural context of Saudi Arabia. Therefore, this thesis has aimed to examine the usefulness of the conceptual construct of the three key strengths as a model for understanding psychosocial well-being in Saudi gifted adolescents.

Thus, the complex relationships between the three key strengths have been assessed within mixed method design. The quantitative analyses and the qualitative data have been used to establish the significant conceptual differences between the psychosocial profiles of gifted adolescents who demonstrated the highest ego strengths and who demonstrated the lowest ego strengths, as illustrated by the identity styles, fidelity, and the order of mind. The usefulness of the conceptual model of psychosocial well-being, using a sample of Saudi identified gifted adolescents, has been examined in two approaches. The quantitative approach provides the data of the Psychosocial Inventory of Ego Strengths (PIES) and Identity Style Inventory (ISI-3) for 266 Saudi gifted adolescents (M=134, F=132). The qualitative approach provides the data of the Subject–Object Interview (SOI) of 18 participants randomly selected from the original sample as subgroups Q4 &Q1.

In the following sections I provide first an overview based on the result of the descriptive statistic of the two measures: the identity style as measured by the ISI-3 and ego strengths as measured by the PIES. Second, I scope out the results of the bivariate and multivariate analyses

that examined the hypothetical or the conceptual construct of the two key strengths: identity style and ego strengths. The qualitative data that follows gives an overview of the predictions related to the complexity of mind among the subgroup of Saudi gifted adolescents. In the last section, based on the data analyses, I provide an explanation of how the profiles of psychosocial well-being among Saudi gifted adolescents vary.

10. 0 The Quantitative Study

10.01 Distribution of the Three-Identity Styles and Commitment

I utilized Berzonsky's (1992b) revised social cognitive identity style ISI-3 model to explore what was significant in the processing of the self-relevant information provided by participants and the strength of identity commitment in the original sample of 266 (M=134, F=132) Saudi gifted adolescents. The descriptive statistics and preliminary analyses showed that Saudi gifted adolescents in general scored highest on informational identity style followed by the normative identity style, and the lowest score was on the diffuse/avoidant identity style. Initially, this result was expected and more justifiable when I scoped out the rest of the analysis of the ISI-3 in this study. Possible interpretation for this finding, is that comparing the Mean and Stander deviation of the three-identity style for all participants in the survey ensures that Saudi gifted adolescents were motivated to actively process self-relevant information about themselves and show interest by actively engaging in the process of identity exploration as positively associated with the informational identity style. Also, the role of the social roles and norms influenced the Saudi gifted adolescents to adhere to more normative values and attitudes as way of constructing who they think they are. To be lowest on the diffuse/avoidant identity style suggests that the conflicting adolescence process and unclear self-definition could make the Saudi gifted adolescents more prone to either prolonging the period of exploration or being at risk of role-confusion, which is the negative aspect of identity development.

In addition, when identity commitment was examined in the sample of Saudi gifted adolescents within the ISI-3 scales, the result showed comparable strength of commitment in males and females.

10.02 Gender and Age Differences

When examining the gender differences in the distributions of the three identity styles, and the role of gender in the preferred identity style, the H01 null hypothesis was rejected. Saudi males scored higher on the two healthy choices of identity achievement: informational and normative identity styles, whereas Saudi females scored higher in the diffuse/avoidant style. When the relationships between gender and identity styles were examined using a common process to identify the preferred identity style for all participants, based on their highest z-score, the result showed that more males than females (42.5%) preferred the informational style. Conversely, normative as the preferred identity style was identified in (37.3%) males and (28.8%) females. Diffuse/avoidant identity style seemed to be preferred in females (39.4%) and males (20.1%). The Chi-Square confirms the significant between the two genders in the three-identity style is significant χ^2 (df=2) = 11.806, p<0.05

Previous findings have shown that female adolescents tend to prefer the informational identity style whereas boys prefer a diffuse/avoidant identity style (Berzonsky, 1992a). One possible explanation of how Saudi gifted males and females developed identity styles opposite to the identity styles of adolescents in different cultures is the role of the sociocultural context of Saudi Arabia. As Erikson states (1959, 1968), given that identity formation is an unfolding process that starts early in infancy and is completed by latent adolescents, it is influenced by the societal process, where males may have more freedom to experiment in solving their identity crisis. Saudi adolescent females may have a silent identity conflict, and an extended period of exploration may have led to the unsolved identity problem and the construction of an uncommitted identity that is diffuse/avoidant. Another interpretation about the dominance of

the diffuse/avoidant style among young Saudi gifted females is that the process of identification in Saudi females may take longer than males. Erikson (1968, p. 159) asserts that "identity formation … begins where the usefulness of identification ends. It arises from the selective repudiation and assimilation of childhood identifications and their absorption in a new configuration". Relatively, the socio-cultural context of Saudi Arabia may impose protective behavior upon young females but support interpersonal activities before girls attend university. This context may influence the period of time in which girls can successfully integrate their childhood identification with the elements of identity formation in adolescence to form one self-identity.

Additionally, Saudi gifted females have great opportunities related to their academic interests and future career. The Saudi Gifted Program supports alternative scholarships and international exchange programs. These opportunities have the potential to impact the female's decision-making about what majors and academic specialists are the better choice for her. The diffuse/avoidant orientation could be anticipated among joiner high school gifted students as a result of the ambiguity and lack of goal direction which is associated with those of a diffuse orientation. Erikson (1964, p. 128) asserts that "identity proves itself strongest where it can take chances with itself". This idea links the process of identity formation to the vital components of the ego strengths in which the identity crisis is resolved and a final sense of identity is established in adolescence.

Nonetheless, the demographic variables of age and gender have complex relationships in the process of identity formation. When the relationship between age and the preferred identity style was examined, the bivariate analysis of one-way analysis of variance (ANOVA) demonstrated insignificant differences between the three age groups (15, 16, & 17) among the full sample of Saudi gifted adolescents. Though the influence of age on the identity style have been reported in previous research, the three age groups were oriented in the same way among

the Saudi gifted adolescents in this study. I argue that this is accounted for the impacts of the cognitive skills that all Saudi gifted students learn within the Enrichment Gifted Programs. Gifted students in Saudi Arabia learn and practice analytical, creative, and critical thinking; decision-making; problem solving; and scientific research. Gifted adolescents may employ these cognitive skills as a way of thinking and processing self-relevant information.

As Berzonsky (1990, p. 173) points out, "by late adolescence individuals will normally be capable of utilizing all three strategies". However, research findings strongly confirm Erikson's and Marica's idea of identity development during late adolescence. When identity styles among the middle and high school sample are compared with the college sample in prior research, the diffuse/avoidant participants had the lowest mean age (15.4 years), while the informational identity style had the highest mean age (17.20 years) (Phillips, 2008).

10.03 Distribution of the PIES

I utilized Markstrom et al.'s 1997 PIES scale as a measure of the key strengths of the ego strengths built on Erikson's theory of psychosocial ego development. The preliminary descriptive statistics indicated that the average total score of the ego strengths was 247.89 points with a variation of 28.18 points for the full sample. Saudi gifted adolescents scored highest in the ego strengths of care, and lowest in wisdom. In light of Erikson's view of the eight ego strengths of the life cycle, care emerged from the positive resolution of crisis of the seven stages of generativity. Erikson relates the mental health on Stage 7 to the genital problem, parenthood and the establishment of the next generation. However, having a high score on the ego strengths of care may indicate the responsibility that the young Saudi generation held for leading in their field of academic intellect. Having a low score on wisdom may mean that the adolescent is unable to evaluate certain cultural roles and social demands.

10.04 Gender and Age Differences

The t-test analysis of gender differences on the psychosocial ego strengths PIES indicated that gifted males scored more than gifted females on the competence subscale. However, this difference was not statistically significant, $t(df=264) = 0.960$, $p<0.05$. Comparatively, the average score of hope, will, purpose, fidelity, and wisdom subscales were higher for gifted females than males; only love and care was significantly higher for Saudi gifted females ($p=0.001$). Thus, the H03 was rejected and the gender differences in love and care were confirmed to a smaller result in prior studies (Markstrom et, al',1997).

The effect of age on the PIES was examined by the one-way ANOVA for the three age groups (15, 16, & 17). The H04 was supported as the F-tests showed that the differences among the three age groups were not statistically significant.

10.05 Summary

At this stage, the statistical analyses of the two measures of the identity style ISI-3 and ego strengths PIES have shown some gender but not age differences among Saudi gifted adolescents on the two measurements. Significantly, gifted males operated from the informational and normative identity styles, which are the two healthy choices of constructing self-theory, whereas gifted females operated from the diffuse/avoidant style, which is characterized by an absence of both identity exploration and commitment. Therefore, fidelity, which is the ego strength representing the positive resolution of identity crisis in adolescence, has positive form with the informational and normative identity styles and negative form with the diffuse/avoidant identity style. The three age groups were not related to identity styles nor to the ego strengths. Identity commitment as a dependent variable with a direct effect on identity style and ego strengths was not related to gender or age in this study. Gender differences were shown to have different virtues or ego strengths ascending in the male and

female participants. Love and care were the two virtues that significantly differed among males and females, and this result was close to findings from prior studies. Fidelity, though, was not significantly different in terms of gender, although it was the most prominent virtue among Saudi females (Mean= 32.96, *SD*=4.383). Age was not related to any analyses on the two measurements; thus, age was removed from further analyses in this study.

Next, I will scope out the results of the specific and multivariate analyses. As illustrated in Chapter 1, in the current study, psychosocial well-being has been seen as a conceptual construct of the three key strengths: the ego strengths, identity style, and complexity of mind. The specific and multivariate analyses aimed to examine the hypothetical nature of this conceptual construct of the psychosocial well-being among Saudi gifted adolescents.

10.06 The Effects of Identity Styles on PIES and Commitment

Bearing on the nature of the constructed relationships between the two key strengths of identity, self-theories. and ego strengths, commitment and the eight subscales and the total score of the PIES were analyzed by the three identity styles. The one-way analyses showed the variance of the effects of identity styles on the ego strengths, PIES, and identity commitment. It was understood that each stage of ego development corresponded to the process of identity formation (Erikson, 1968; Markstrom, 2001). In regard to the identity style model, the estimation of these corresponding relationships was seen from the social-cognitive perspective and the epistemology of self-construction (identity style). As Saudi gifted adolescents varied in their preferred identity styles, they needed to use different self-strategies to tune into the positive goal of each ego stage. Thus, the participant's most effective aspects of identity construction or style would be observed in the way that the individual dealt with conflicts inherent in each stage of the life cycle. In other words, in this research, not all Saudi gifted adolescents approach the strengths of the eight psychosocial stages of the life cycle from the

same self-construction. However, the result of the one-way analyses indicates that the informational identity style is a dominant way of constructing oneself or one's self-theory in seven stages of ego development, where the ego strengths of hope, will, purpose, competence, fidelity, love, and care were emerging. Normative identity style, inversely, is the dominant way of constructing the ego strength of wisdom, and the virtue of integrity versus despair (see Figure 2, Chapter 4) at the last stage of ego development. At this point, I could predict the role of epistemology and the cognitive operation in my sample as the participants utilized the informational identity style to construct the positive ego strengths from the first stage (trust versus mistrust) and accommodate all the next of the upcoming developmental crises. Informational identity style is dominant in the outcome of the eight ego strengths as well (the total score). It reflects the positive correlation between the psychosocial growth (well-being) and the social cognitive base of informational orientation. Identity commitment is influenced positively by the same identity style, informational processing. Thus, given that the null hypothesis H06 was rejected, and that the informational and normative identity orientations had been significantly operating along the PIES scale and identity commitment, the diffuse/avoidant had no impact upon the total process of healthy psychosocial development.

10.07 Correlation Matrix of the ISI-3, and the PIES

The Pearson correlation of each variable of the ISI-3 and the PIES was obtained to examine the significance of positive and negative relationships between all variables. Most of the predicted association between the PIES and ISI-3 was significant. The total score and eight subscales of the PIES were positively associated with the informational and normative identity styles and negatively associated with the diffuse/avoidant identity styles and commitment. Thus, initially the results of the Pearson correlation supported the hypotheses H7 and H8 about positive and negative correlation between the PIES and identity styles ISI-3.

Therefore, inference from this result supported the conceptual model of the construct of psychosocial well-being in which the total score of ego strengths as calculation of the psychosocial well-being was associated with the three identity styles in two forms: (1) the healthy form of the psychosocial well-being by which the total score of the psychosocial ego strengths correlated positively with the informational and normative identity styles, (2) and the unhealthy form of the psychosocial well-being by which the total score of the psychosocial ego strengths correlated negatively with the diffuse/avoidant.

Further, the direct relationships between the three identity styles with fidelity and commitment as two personality traits associated with the identity development and identity crisis resolution were also confirmed in light of the result of the correlation matrix.

10.08 The Bivariate Correlation of Identity Styles, Commitment, Fidelity, and the Total Score of the PIES

Results from the above analyses have confirmed the positive and negative patterns of psychosocial well-being in relation to the three-identity styles. In this analysis, the focus was on the correlation between the three identity styles and fidelity as the ego strength of the identity crisis, commitment in terms of its direct effect on identity styles, and the total score of ego strengths as the anticipation of psychosocial well-being with respect to gender differences.

As stated previously, there were positive relationships between fidelity and the informational and normative identity styles as two healthy patterns of identity construction, while the diffuse/avoidant as the immature identity construction was negatively associated with fidelity (see Chapter 1).

Regarding the conceptual model of psychosocial well-being, informational identity style was characterized by the active period of identity exploration shared with fidelity as the positive form of identity achievement, with 16% for males and 8% for females. These gender

differences can be interpreted in light of the role of gender and the effect of the societal process. Saudi gifted males may have more opportunities to try on different hats, alternative specialists, and ideological rules than do Saudi gifted females. On the other hand, the normative identity style was characterized by the absence of self-exploration but with the positive form of fidelity shared 8% and 6 % variability in the Saudi male and female respectively. This finding may explain that in relation to males and females, the role of confirmation of the psychosocial quality of fidelity within the societal process was less marked among those who were classified with a normative identity construction. This result confirms the first pattern of psychosocial well-being that is associated with high ego strengths and psychosocial well-being.

Conversely, the negative form of fidelity shared 7% of variability for male participants and 14 % for female participants who operated from the diffuse/avoidant identity style. Theoretically, the indication of immature identity development was assumed and significantly confirmed in prior research. This result confirmed the second pattern of the psychosocial well-being associated with low ego strengths and risk for maladjustment.

10.09 Stepwise Multiple Linear Regression for Predicting the Total Score of the PIES and Fidelity

The Stepwise multiple linear regressions were the last part of the multivariate analyses in the quantitative study. In this analysis, the stepwise regression was performed, first to examine the relative contribution of the three identity styles to the psychosocial ego strengths as indicative of psychosocial healthy personality development, and second stepwise to predict the relationships between fidelity and the three identity styles.

10.09.01 Regression on the total score of ego strengths. I examined the relationship between the three identity styles and the total score of ego strengths, which is the measured aspects of psychosocial adjustment. This was based on two particular things. The first was the premise that individual differences in social cognitive identity processing styles predict different patterns of psychosocial adjustment (Berzonsky & Kuk, 2008). The second was Erikson's (1968, p. 165) statement that "an optimal sense of identity is experienced merely as sense of psychosocial well-being". Under this premise, the hypothesis H10 that stated that the identity processing styles predict the total score of the ego strengths as the function of the psychosocial well-being was examined, and identity styles were assumed to have the predictive power of psychosocial adjustment.

When identity styles regressed hierarchically on the total score of ego strengths, the informational identity style was a stronger predictor of psychosocial adjustment and accounted for (14%) of the variation in the PIES total score, and the diffuse/avoidant identity style added 4%, whereas gender added (5%) to the variation in the PIES. Thus, the achieved informational identity style and its counterpart diffuse/avoidant identity style was explained as 18% in addition to 5% added by gender to the variance in the psychosocial development in Saudi gifted adolescents.

Thus, the findings from the stepwise regression of testing the hypothesis H10 were supported in two forms of identity styles: the informational and the diffuse/avoidant identity styles. On the other hand, the normative identity style did not contribute to the psychosocial well-being as a measure by the total score of ego strengths. From the stepwise regression, the informational identity style is positively linked to the total score of the ego strengths whereas diffuse identity style has predicted the total score negatively. This result is consistent with the integral view of the theoretical framework of Erikson and Berzonsky (Chapter 2). To summarize this point, identity style has the power to predict the total score of the ego strengths

in anticipation of psychosocial well-being (Markstrom, 1997, 2007). As a result, Erikson's statement that identity development is the most functional of the optimal psychosocial well-being is confirmed with respect to gender, where the three variables explain (23%) the variance in the psychosocial well-being of Saudi gifted adolescents.

10.09.02 Regression on the ego strength of fidelity. The relationship between identity styles and the ego strength of fidelity as the positive form of psychosocial identity achievement was examined using the stepwise linear regression. When the identity styles regressed hierarchically on the score of fidelity, informational identity style was a significant predictor of fidelity, accounting for (10%) of the variance. Gender added (3%), then the diffuse/avoidant added (3%) of variance in fidelity. Finally, normative identity style added (2%). Thus, (16%) of the variance of the psychosocial ego strength of fidelity was from identity styles. Hypothesis H11 was supported and the three identity styles would predict the psychosocial fidelity as a function of identity development.

10.010 Summary of Specific and Multivariate Analyses

The specific and multivariate analyses were conducted to examine the usefulness of the conceptual model of the three key strengths. The effect of the three identity styles on the eight subscales and the total score of the PIES showed the dominant of the informational identity style in all ego strengths except care, and the ego strength of wisdom which dominated by the normative identity style. The correlation between the PIES and ISI-3 scales conformed in the same hypothetical directions. The stepwise tests examined the conceptual relationships between (1) identity style and the psychosocial ego strengths by which the identity styles have the power to predict the psychosocial adjustment as anticipated by the total score of the ego strengths the PIES, (2) the three identity styles, and (3) fidelity as the function of identity development.

Results of these analyses have confirmed the correlations between the two key strengths: identity style and ego strengths. Therefore, the model of the conceptual construct of the psychosocial well-being has been verified as follows:

1- Informational and the diffuse/avoidant identity styles predicted the psychosocial adjustment-maladjustment as measured by the total score of the PIES.

2- The normative identity style has not contributed to the psychosocial adjustment through the regressing analysis. However, significant positive correlation between the normative identity style and the total score of the ego strengths was confirmed in the correlation matrix.

3- Gender is associated with the correlation between identity styles and the psychosocial adjustment. It added (5%) to the variance in the psychosocial adjustment in Saudi gifted adolescents.

4- The three identity styles have the power to predict the psychosocial ego strength of fidelity as the function of identity development. (see the correlation matrix in the positive and negative association chapter 8).

5- Gender is associated with the correlation between identity styles and fidelity. It added (3%) to the variance in the psychosocial adjustment in Saudi gifted adolescents.

In sum, the prior multivariate and the correlation between the two key strengths, identity style and ego strengths, and the correlation of identity styles and fidelity have been confirmed in the quantitative study.

Next, the results of the qualitative will be discussed in light of the assumptions of the conceptual model of psychosocial well-being.

10.1 The Qualitative Study

In the previous section, the result of the quantitative data has been discussed and summarized in relation to the conceptual model of psychosocial well-being. The quantitative study comprised the correlation between the two key strengths, identity style, and ego strengths. The qualitative approach in this thesis has been supplementary to the quantitative study in which the participants in the quantitative enquiry were subgroups identified randomly from the highest quartile Q4 and lowest Q1 groups of ego strengths or the psychosocial adjustment.

The complexity of mind is the third key strength relevant to the mental health of adolescents. Therefore, the qualitative approach established the degree to which the relationship between the ego strengths, identity style, and the complexity of mind is constructed. Therefore, I built on the theoretical framework of this study that complexity of mind may be parallel to the process of the ego psychosocial development of the PIES, and not independent from the identity styles. In addition, the complexity of mind will add to the pattern of the psychosocial well-being of the Saudi gifted adolescents who have or have not developed identity orientations (see Chapters 1, 2, and 6).

10.1.01 Subject–Object Interview (SOI) Data Analysis

As I stated in Chapter 9, the qualitative study, the subject-object interview (SOI) was the process of measuring the structures of the subject–object balance or structure and not the content of the structure. Therefore, the levels of the subject–object structure were obtained from scoring the participants based on the manual of SOI (details in Chapter 9). The structure of the subject–object relationships as a level of complexity of mind has been explored within the contingency table approach. The contingency procedure has been used in some research to facilitate inferences of the relationships between more than two variables. Participants in the

SOI were classified based on their total score of the ego strengths, the PIES, and their preferred identity style.

Utilizing the contingency table, scores of the SOI were placed based on the characteristics of the 18 participants in the total score of ego strengths (Q4 or Q1) and identity style. In addition, four predictions about the level of complexity of mind were examined in contingence with the total score of ego strengths and identity style.

Analysis of the result of the four predictions (Chapter 9) illustrates that:

1. 2 males and 1 female who were in the Q4, the highest ego strengths and developing healthy identity informational construction, operate from the full stage 3, and no any higher structure, such as Stage 4.

2. 1 male and 2 females who were in the Q4, the highest ego strengths and developing healthy identity normative construction, operate from the full stage 3. This prediction was supported and normative adolescence and normative adolescence similar to informational adolescents was demonstrated in the highest ego strengths.

3. 1 male and 1 female who were in the Q4, the highest ego strengths and developing diffuse/avoidant identity construction, operate from the transition of Stage 3, (3(2) and 3 /2).

4. 2 males and 1female who were in the Q1, the lowest ego strengths and developing healthy identity informational construction, operate from the transition of Stage 3, (3(2) and 3 /2).

5. 1 male and 2 females who were in the Q1, the lowest ego strengths and developing healthy identity normative construction, operate from the transition of Stage 3, (3(2) and 3 /2).

6. 2 males and 2 females who were in the Q1, the lowest ego strengths and developing diffuse/avoidant identity construction, operate from the transition of Stage 2 (2(3) and 2/3).

10.1.02 The Conceptual Model of Psychosocial Well-Being

Based on what is stated in this chapter and in the previous two chapters that focused on the quantitative results and qualitative data, respectively, this thesis has examined the extent to which, as a complex constructed model, the three key strengths of ego strengths, identity style, and complexity of mind contribute to the psychosocial well-being in adolescents.

Drawing on the result of multivariate analyses of hypotheses and predications, the potential usefulness of the three key strengths as they were constructed within the conceptual model has been proved to reasonable extent. In this study, I started with the far-reaching research question: ***To what extent and in what form do the three key strengths; the ego strengths, identity styles, and the complexity of mind effectively define psychosocial well-being a constructed model in a sample of gifted students in high school?***

This question was answered through the examination of the usefulness of the three key strengths within the conceptual model in two profiles.

The first profile has been proposed to illustrate two patterns of mental health as predicted by the three identity styles (see the assumed profile in Chapter 2 with the conceptual model). Nonetheless, I ask to what extent the three identity styles have the power to predict the total score of ego strengths as the paradigm of psychosocial well-being. Findings from the stepwise regression of testing the hypothesis H10, that identity styles have the power to predict psychosocial ego strengths as the paradigm of psychosocial well-being, were reasonably supported in two forms of identity styles: the informational and the diffuse/avoidant identity

styles. On the other hand, the normative identity style does not contribute to the psychosocial well-being as measured by the total score of ego strengths.

From the stepwise regression, the informational identity style was positively linked to the total score of the ego strengths, whereas the diffuse/ avoidant identity style predicted the total score negatively. This result is consistent with the integral view of the theoretical framework of Erikson and Berzonsky. Informational identity style is a healthy choice of identity development. Individuals who process self-relevant information using the informational identity style deliberately evaluate and test all the identity elements and resources available to them. In Figure 4, I represents my findings about the relationships between identity style and the psychosocial ego strengths based on the quantitative results.

Figure 4: Profile 1 – Identity style and psychosocial-well being
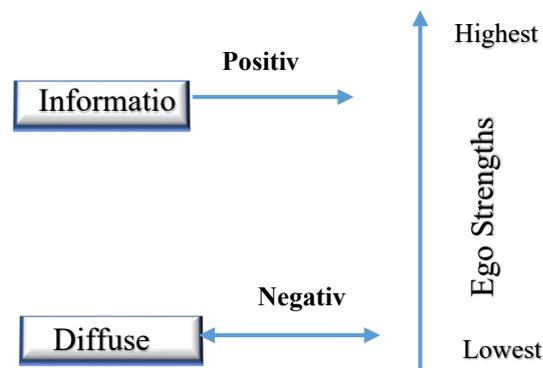
To summarize this point, identity style has the power to predict the total score of the ego strengths in anticipation of psychosocial well-being (Markstrom, 1997, 2007). As a result, Erikson's statement that identity development is functional for optimal psychosocial well-being is confirmed with respect to gender, and the three variables explained (23%) the variance in the psychosocial well-being in Saudi gifted adolescents. Accordingly, the profile of psychosocial well-being has only one positive (INFOST) and one negative (DIFFST).

As stated earlier, the normative identity style does not contribute to the profile of psychosocial well-being in Saudi gifted adolescents. Statistically, the stepwise regression as the mode of correlation takes the variables that show strong impacts. Although both the informational and the normative identity style confirmed their relation to the total score of ego strengths, the informational style has more power than the normative one. This is because both styles have been entered as scores and some Saudi gifted adolescents' score in both styles is very close. However, fundamental to Berzonsky's (1990, 1993) model is the individuals' development of all three identity styles in early and mid-adolescence. By the end of late adolescence, people normally sustain their identity in one style. However, Erikson (1959) discusses issues related to earlier times of identity crisis and the search for one's identity. From the theoretical literature, gifted adolescents experience an identity crisis and search for true identity just like their peers (Cross, 2008).

Given that the psychosocial well-being among the Saudi gifted adolescents is confirmed from the prediction of the total score of ego strengths, the form of psychosocial well-being is predicted through the stepwise regressing technique. Based on the hypothesis H10, the three-identity style independently regressed with gender as an independent variable into the score of the ego strength of fidelity as measured by the PIES. The result has been confirmed that identity style and gender uniquely contribute to the psychosocial ego strength of fidelity, and gender has a strong predictive power of fidelity. In Figure 5, I represent my findings about identity style and the ego strength of fidelity.

Figure 5: Model 2 – Identity style and Fidelity
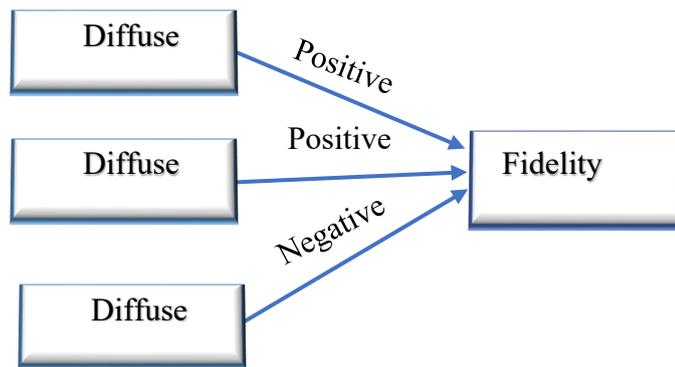
Consistent with the theoretical framework, the informational identity style was the stronger positive power as a predictor of fidelity, followed by gender and the diffuse/avoidant identity style negatively associated with fidelity, and it explained a further 3% of the variance. Identity style of the normative identity style comes last with only (2%) of the variance of the predictors of the psychosocial ego strength of fidelity. Compared to Profile 2 (see the conceptual model in Chapter 2), the three identity styles were linked to the psychosocial ego strengths of fidelity with respect to gender.

As the model shows clearly, fidelity as the virtue of identity achievement has been correlated to the three-identity styles in the sample of Saudi gifted adolescents. It has been hypothesized that fidelity is a form of psychosocial well-being when it positively correlates with identity development, whether identity style or normative style. The negative association just exhibits the role confusion or dysfunctional of identity style in relation to the psychosocial stage of adolescence. Accordingly, two key strengths have been examined in the quantitative study, and these show the psychosocial well-being among the total sample of 266 Saudi gifted adolescents. This is related to the following: the total score of ego strengths as measured by the PIES, and the two identity styles as measured by the ISI-3. The two identity styles are informational (a positive identity style) and diffuse (as negative identity style). Secondly, fidelity is the form of psychosocial well-being among gifted adolescent who are in the highest

ego strengths and developing informational style. On the other hand, adolescents who developed diffuse identity style as a preferred orientation to issue-related identity crises have negative associations with the virtue of fidelity. Thus, this answers the research question asked earlier. To recapitulate, the question was: ***To what extent and in what form do the three key strengths; the ego strengths, identity styles, and the complexity of mind effectively define psychosocial well-being as a constructed model   in a sample of gifted students in high school?***

The third key strength, the complexity of mind, is identified qualitatively among the subset group from the highest and lowest total score of ego strengths. The result obtained from the qualitative data partially supported the predictions about the stage of complexity of mind but was not fully consistent with the expectations.

As I discussed earlier, Saudi gifted adolescents operate only from full Stage 3 and the transition Stages (2 (3) and 2/3). Because of the role of the size of sample, inferences about the possible relationships between identity styles and the complexity of mind were limited. Participants in the SOI showed only evidence of mental capacity that was mostly embedded in the interpersonal stage of meaning-making. This state of order of the mind or meaning-making is associated with the complexity of the socialized mind (Kegan, 1994, 2009). This result indicated that the Saudi gifted adolescents utilized different identity styles but their mind capacity to deal with the increasing social demands evidently did not vary. Saudi gifted adolescents, both males and females, were embedded in the mental capacity of the socialized mind (see Chapter 9). Diffuse/avoidant participants were exhibited in transition between stages 2 and 3. This result is consistent with the way young people present as escaping commitment and loyalty to a form of identity. However, the possible correlation between identity styles and complexity of mind is limited to the method of the qualitative interpretations. In general, gifted adolescents who were participants in the subject–object approach operated from the third order

of mind, or the world of the interpersonal, or stage 3. The significance of this finding is that only gifted adolescents who demonstrated informational or normative identity styles received a smaller score in the subgroup of the highest ego strengths Q4 and they exhibited complexity of full stage 3. The characteristic of this stage as socialized mind is the ability to adjust to the social demands with respect to the personal environment. The relationships as a structure of the subject-object balance are influenced by the ego strength of fidelity in adolescence. Accordingly, the sense of psychosocial health among this group is related to the comfortable balancing between what the individual considers as personal and the demands of the environment. On other hand, the revolutionary truth (Kegan, 1982), or transformation is an opportunity among informational identity style individuals, because processing personal data about a core sense of self and evaluating personal information will assess the adolescents' 'identity- making.

Healthy personality development and psychosocial well-being are influenced by the successful resolution of identity crisis in adolescents which is the core of mental health. For Saudi gifted adolescents who were in the transition of stage 3, their interpersonal order of mind may have less opportunity to construct self-theory about self and maintain their identity.

10.1.03 Limitation

Methodological consideration. The target population in this thesis were comprised of homogeneous Saudi gifted adolescents. The formal procedure of the identification process is authorized by the Ministry of Education (MoE) in Saudi Arabia based on psychometric criteria. The sample for the quantitative study were represented of the top of (1-2%) Saudi gifted students. The results of statistical analyses likely to be more accurate within intellectually gifted adolescents population.

Additionally, the qualitative study, Subject-Object Interview (SOI), has been conducted among 18 male and female have been selected from the quantitative study. The SOI, is semi-structure interview has been conducted to distinguish the key strength of the order of mind. The procedure of identifieng the structure and the level of the subject-object balance is restricted to scoring the structures rather than analyzing themes on the content. Scoring the structure of the SOI is communally used based on the Guide of the Subject-Object Interview. Thus, the SOI, in this thesis has been used to add the level of complexity of mind to the conceptual model of the three key strengths.

10.1.04 Conclusion

This study is an initial test of three key strengths: ego strengths, identity style, and complexity of mind, constructed as a conceptual model for understanding psychosocial well-being in Saudi intellectually gifted middle adolescents. It has been thought that the unresolved identity crisis and the mental demands of mental health are inseparable issues related to the adolescent's psychosocial health. The results of the quantitative and qualitative approaches have highlighted some issues related to psychosocial well-being among Saudi female gifted adolescents, as the diffuse/avoidant identity style is a more preferred identity construction for adolescents to synthesize personal information and decision-making about who they think they are. However, an unsupportive environment and anti-intellectual school setting may have led those females to the psychosocial antipathy of identity formation, the risk of role-confusion, or the negative synthesis of identity formation.

As the process of identity development is a kind of psychosocial relativity (Erikson, 1968), it is not only the societal process that influences the young generation in the process of identity formation, but the individual differences by which the thinking process, cognitive development and the capacity of the mind influences a young person to make personal and academic decisions. Therefore, transforming the capacity of mind into a higher stage of

complexity of mind, means that individual will be able to distinguish the value of the next higher order of mind as capacity for a new balancing between what is subject and what is object.

The conceptual model has confirmed that the choice of identity processing style influences the ego strengths and psychosocial adjustment in adolescence. People who neither accept a normative identity style nor are active in processing the available alternative are at risk of psychosocial maladjustment. Supporting the young generation through adolescence to build a theory about themselves needs more than mutual love and care. It needs recognition of the special life achievements in the academic success and specific talents. Gifted education in Saudi Arabia is highly competitive but offers reach and real opportunities for gifted adolescents to experiment in their academic goals. This fact may sometimes create ambiguity and confusion for gifted adolescents in the middle of identity formation and who are in an ongoing process of exploring an alternative. Thus, the diffuse/avoidant identity style of Saudi gifted females places them in a position of postponing their future study and area of specialization until they can experiment with alternative choices. Accordingly, whether young people develop a negative identity, or role-confusion, this is a negative synthesis of identity content and may result in maladjusted behavior and neurotic symptoms. In addition, the societal process as well as the complex situations within educational settings, families, and social institutions influence a gifted adolescent's way of meaning-making and processing the self-relevant information.

In addition, this thesis has established the value of advanced cognitive development and intellectual giftedness within the field of psychosocial cognitive sciences. The developmental change in adolescence in regard to their thinking operations and associated mental capacities must be not overlooked in any study of the psychosocial development of adolescents. The structure of complexity of mind (meaning-making) seen in this study provides thoughtful insights into the capacity of mind that is embedded in ego development stages and identity,

through processing self-relevant information. Although in comparison to Saudi females, a significantly higher number of Saudi males construct an informational processing style, the meaning-making of their experiences is to some extent less than that of the females.

10.1.05 Recommendation for Practice and Further Research

Findings in this research have supported Erikson's (1968, p.165) view that the "optimal sense of identity, is experienced merely as sense of psychosocial well-being". Informational identity style INFOST was the preferred identity style for Saudi gifted adolescents, this positive choice of identity style is the functional aspects of the psychosocial wellbeing. Berzonsky's identity style model is grounded in epistemological thought, identity development then, is choice of creation rather than discovery. This view has practical implications for supporting new generation developing more positive identity style, for example:

1- Including the constructivist identity style model (ISI-3) within the admission on gifted programs may facilitate gifted adolescents fostering their epistemological identity style.

1- Combining the measure of complexity of mind with the Leadership Programs for gifted students may offers opportunity for the adolescents to promote their socialized mind into higher order of mind, self-authoring mind.

In addition, this study has explored different aspects of advanced conative development, psychodynamic process of identity formation in intellectually Saudi gifted adolescents. Incorporating these areas of investigation to cross-cultural studies, is important for expand our understanding the context of the psychosocial well-being in gifted individuals.

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APPENDICES

Appendix A: Identity styles inventory (ISI-3), the original version.

Identity Style Inventory (ISI-3)
(revised version)

Michael D. Berzonsky

1992

N	Theme	Describes Me Very Well	Slightly Describes Me	I Do Not Know	Slightly Doesn't Describe me	Doesn't Describe Me Very Well
1	Regarding religious beliefs, I know basically what I believe and don't believe.					
2	I've spent a great deal of time thinking seriously about what I should do with my life.					
3	I'm not really sure what I'm doing in school; I guess things will work themselves out.					
4	I've more-or-less always operated according to the values with which I was brought up.					
5	I've spent a good deal of time reading and talking to others about religious ideas.					
6	When I discuss an issue with someone, I try to assume their point of view and see the problem from their perspective.					
7	I know what I want to do with my future.					
8	It doesn't pay to worry about values in advance; I decide things as they happen.					
9	I'm not really sure what I believe about religion.					
10	I've always had purpose in my life; I was brought up to know what to strive for.					
11	I'm not sure which values I really hold.					
12	I have some consistent political views; I have a definite stand on where the government and country should be headed.					
13	Many times by not concerning myself with personal problems, they work themselves out.					
14	I'm not sure what I want to do in the future.					
15	I'm really into my major; it's the academic area that is right for me.					

N	Theme	Describes Me Very Well	Slightly Describes Me	I Do Not Know	Slightly Doesn't Describe me	Doesn't Describe Me Very Well
16	I've spent a lot of time reading and trying to make some sense out of political issues.					
17	I'm not really thinking about my future now; it's still a long way off.					
18	I've spent a lot of time and talked to a lot of people trying to develop a set of values that make sense to me.					
19	Regarding religion, I've always known what I believe and don't believe; I never really had any serious doubts.					
20	I'm not sure what I am doing in school.					
21	I know that I am going to college/ university and what academic area I am going to study.					
22	I have a definite set of values that I use in order to make personal decisions.					
23	I think it's better to have a firm set of beliefs than to be open minded.					
24	When I have to make a decision, I try to wait as long as possible in order to see what will happen.					
25	When I have a personal problem, I try to analyze the situation in order to understand it.					
26	I find it's best to seek out advice from professionals (e.g., clergy, doctors, lawyers) when I have problems.					
27	It's best for me not to take life too seriously; I just try to enjoy it.					
28	I think it's better to have fixed values, than to consider alternative value systems.					
29	I try not to think about or deal with problems as long as I can.					
30	I find that personal problems often turn out to be interesting challenges.					

N	Theme	Describes Me Very Well	Slightly Describes Me	I Do Not Know	Slightly Doesn't Describe me	Doesn't Describe Me Very Well
31	I try to avoid personal situations that will require me to think a lot and deal with them on my own.					
32	Once I know the correct way to handle a problem, I prefer to stick with it.					
33	When I have to make a decision, I like to spend a lot of time thinking about my options					
34	I prefer to deal with situations where I can rely on social norms and standards.					
35	I like to have the responsibility for handling problems in my life that require me to think on my own.					
36	Sometimes I refuse to believe a problem will happen, and things manage to work themselves out.					
37	When making important decisions I like to have as much information as possible.					
38	When I know a situation is going to cause me stress, I try to avoid it.					
39	To live a complete life, I think people need to get emotionally involved and commit themselves to specific values and ideals.					
40	I find it's best for me to rely on the advice of close friends or relatives when I have a problem.					

THE PSYCHOSOCIAL INVENTORY OF EGO STRENGTH (PIES)

By

Carol A Markstrom, Vicky M. Sabion, Bonnie J. Turner, and Rachel C. Berman

1997

INSTRUCTIONS

You will find a number of statements about yourself, beliefs, attitudes, and/or ways of dealing with issues and relationships. Read each carefully, then use it to describe yourself and bubble in the number which indicates the extent to which you think the statement describe you. There are no right or wrong answers. Use the 1 to 5-point scale to indicate the degree to which you think each statement is uncharacteristic (1) or characteristic (5) of yourself. Notice that the whole information you provide will be used for the research purpose only.

N	Theme	Describes me very well	Slightly describes me	I don't know	Slightly doesn't describe me	Doesn't describe me well
1	When I love someone, I can accept that they need to pursue some interests without me.					
2	I am able to follow through on task until it is completed.					
3	I know I have skills to carry out various tasks and responsibilities important to me.					
4	I find I can easily be distracted even when I really need to finish a task.					
5	I feel okay with the way I've handled my life so far.					
6	I prefer to be free-floating without making commitments to other people or things.					
7	I have experienced feeling of love with someone outside of my family.					
8	When I thank about the future, I feel optimistic.					
9	When I see someone with a need I help in whatever way I am able.					
10	I find that my opinions are frequently influenced by others.					
11	I really don't know what strengths or skills I have to offer society.					
12	I can't seem to forgive myself for a lot of things I've done in the past.					
13	I am involved in a variety of activities that allow me to use my skills and abilities.					
14	I don't think I have really loved anyone outside of my family.					
15	When things don't go my way, I remind myself of the positive things in my life.					

N	Theme	Describes me very well	Slightly describes me	I don't know	Slightly doesn't describe me	Doesn't describe me well
16	I really don't know what I want out of life.					
17	When I know someone is having a difficult time, I really feel concerned about them.					
18	When I make a commitment to something I stick with it.					
19	In many ways, I have control over my future					
20	I don't pretend to be something that I'm not.					
21	I really can't be bothered to help other people					
22	I'm not afraid of what the future has in store for me.					
23	I don't like it when someone I love wants to do things with anyone other than me					
24	I try to pursue my aims even when I have to take risks.					
25	I hesitate to put much energy into trying to reach my goals.					
26	I 'm only setting myself up for disappointment by looking forward to things in the future.					
27	I feel like I don't have control over my life.					
28	When I think of my future, I see a definite direction for my life.					
29	Even when I have opportunity to do things I might be good at, I usually can't get started.					
30	Beyond my closest friends and family, I 'm not that concerned about the needs of other people.					
31	I may have difficult times ahead, but I'll try face them with courage.					
32	When something doesn't work out for me, I just look forward to doing other things.					
33	If there is something I choose to do, I am determined to do it.					

N	Theme	Describes me very well	Slightly describes me	I don't know	Slightly doesn't describe me	Doesn't describe me well
34	When I care about a friend or partner, it usually doesn't lead to a committed relationship					
35	I have strengths that enable me to be effective in certain situations.					
36	Sometimes I feel as if I can't control my behavior.					
37	I believe in being true to myself and others.					
38	When I am in a close relationship with someone, I tend to lose sight of my interests and goals.					
39	No matter how bad things get, I am confident they will get better.					
40	Fear keeps me from striving for many of my goals.					
41	I'm not really sure what I believe in.					
42	When I feel really down, I have a hard time believing that things are going to get better.					
43	When I reflect on the past, I feel sadness and regret.					
44	I don't care about things anymore because they usually don't work out anyway.					
45	I 'm able to set realistic goals for myself.					
46	Even when someone I don't know that well asks me for advice, I take the time to try to help.					
47	I've got enough of my own problems that it is hard to worry about other people's problems					
48	I have trouble accepting a particular purpose or role in life.					
49	I am not afraid of what the future has in store for me.					
50	I don't look forward to the future.					
51	I hardly ever initiate activities, I usually follow the crowd.					
52	It is difficult for me to ignore the pain of others.					

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N	Theme	Describes me very well	Slightly describes me	I don't know	Slightly doesn't describe me	Doesn't describe me well
53	I stand up for the people and causes that are important to me.					
54	It doesn't matter what I do, it's not going to change anything.					
55	I don't have time to deal with other people's problems.					
56	I can accept that fact that I've made mistakes in my life.					
57	When I love someone such as a friend or partner, we are equally committed to one another.					
58	When something doesn't work out the way I had hoped, it makes me feel like just quitting everything.					
59	I like to work to make things happen.					
60	My friends and I believe we can disagree on things and still be friends.					
61	Most people just seem more capable than me.					
62	Even though I'm sometimes afraid of failing there's something I want to do try to do it.					
63	I 'm usually able to resist when I'm tempted to do something that's not in my best interest.					
64	I avoid tasks that might require much of my time and energy					