INSECURE ATTACHMENT, SELF-DISCREPANCY, AND SUICIDAL TENDENCY IN A SAMPLE OF KOREAN AND KOREAN-AMERICAN: A PATH MODEL OF SUICIDE

by

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Abstract

INSECURE ATTACHMENT, SELF-DISCREPANCY, AND SUICIDAL TENDENCY IN A SAMPLE OF KOREAN AND KOREAN-AMERICAN: A PATH MODEL OF SUICIDE

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Suicide, an intended self-destructive behavior, has various etiological risk factors related to social, biochemical, psychological, and even political components. Due to the need of psychological investigations for the multidisciplinary assessment of suicide, the current study was designed to investigate the relationship between attachment and suicide tendency with the mediator, self-discrepancy. A path analysis was utilized in this study to evaluate for the relationship among variables in the model. For the study, the Experiences in Close Relationships Scale-Short Form (ECR-S), the Integrated Self-Discrepancy Index (ISDI), and the Positive and Negative Suicide Ideation Inventory (PANSI) were employed as assessment instruments. The sample consisted of Korean and Korean-American adults.

Data analysis revealed that the suicidal participants among the sample had higher mean scores in all scales than the non-suicidal participants. This finding indicates that the suicidal participants were more insecurely attached and self-discrepant than the non-suicidal participants. The multiple regression analyses revealed that self-discrepancy slightly mediated in the relationship between insecure attachment and suicidal tendency. More specifically, actual/ideal self-discrepancy mediated more in the relationship between the insecure anxiety dimension and suicidal tendency than actual/ought self-discrepancy; actual/ought self-discrepancy mediated more in the relationship between the insecure avoidance dimension and suicidal tendency than actual/ideal self-discrepancy. However, the size of the mediating effect was small.

Dedication

I dedicate this dissertation to God, because He provided me with the passion for studying the topic of attachment and suicide. Throughout the study, He led me to the truth that His love endures forever (Psalm 136); and His love heals and restores the brokenhearted (Isaiah 61:1-3).

I also dedicate this project to my love, Hye-jeong Grace Jeon, who has supported, encouraged, and prayed for the study as my partner and wife. Her encouragement was my source of renewed energy in times of difficulty, and her patience was the root of making the fruit of this dissertation. Throughout my time of enrollment in the Ph.D. program at Liberty University, she took care of two young children, Tera and Joel, nourishing, educating, and spending enough time playing with them. Without her effort, I would not have completed this study. Therefore, I would like to express my sincere gratitude to my wife.

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CHAPTER ONE: INTRODUCTION

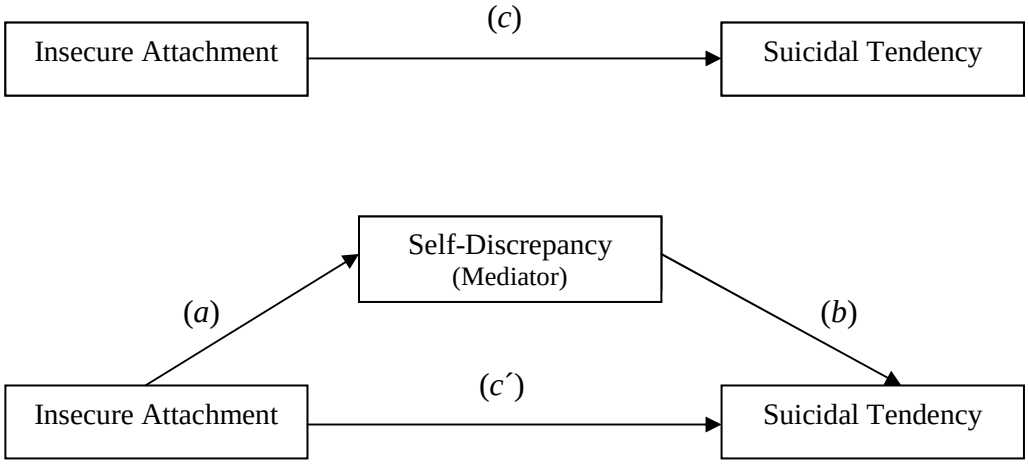
Psychologically, suicide is an intended self-destructive behavior (Silverman, 2006; Silverman & Maris, 1995) that produces over twelve thousand victims a year in South Korea (Park & Lee, 2008) and approximately one million annually world-wide (WHO, 2000). Judging from the assumption that the "self" is the entity formed out of relationship with significant others (Anderson, Chen, Miranda, 2002; Goodvin, 2007; Mann, 2006), suicide is intrinsically connected to the extreme result of distorted self-concept (Crane, Barnhofer, Duggan, Hepburn, Fennell, & Williams, 2008; Wilson, Braucht, Miskimins, & Berry, 1971) stemmed from insecure attachment relationships (Mikulincer, 1995). Notwithstanding suicide's psychological traits, current research trends put more weight on sociological and biological understandings (Lester, 1988; Maris, Berman, & Silverman, 2000; Maris, Canetto, McIntosh, & Silverman, 2000; Stoff & Mann, 1997) or on prevention rather than on etiological explanations. For example, some research findings (e.g., Kim et al., 2006; Vilhjalmsson, Kristjansdottir, & Sveinbjarnardottir, 1998) highlight sociodemographic conditions as major causal factors of suicide, and other studies (e.g., Baldessarini & Hennen, 2004; Roy, Rylander, & Sarchiapone, 1997) accentuate heritable contributions of suicide by employing molecular genetics.

For this reason, this study paid more attention to psychological etiology of suicide in relation to "self psychology" and attachment theory, focusing on the formation and development of the divided self which may cause cognitive and behavioral malfunctions such as cognitive constriction, suicide ideations, and suicide attempts (Crane, Barnhofer, Duggan, Hepburn,

Fennell, & Williams, 2008; Cornette, Strauman, Abramson, & Busch, 2009). More specifically, the study examined a path model which explains the relationship between insecure attachment and suicidal tendencies mediated by self-discrepancy. Some studies (e.g., Buelow, Schreiber, & Range, 2000; Ehnvall, Parker, Hadzi-Pavlovic, & Malhi 2008) proved the relationship (*c*) between insecure attachment and suicidal tendencies; other studies (e.g., Mikulincer, 1995; Nesbitt, 1994) demonstrated the relationship (*a*) between insecure attachment and self-discrepancy; still other studies (e.g., Cornette, Strauman, Abramson, Busch, 2009; Bentall, Kinderman, & Manson, 2005) addressed the relationship (*b*) between self-discrepancy and suicidal tendencies. Based on these findings, this study explored the path relationship (*c´*) between insecure attachment and suicidal tendencies mediated by self-discrepancy. The main hypothesis of the study is that the indirect effect of the path (*c´*) from insecure attachment to suicidal tendencies will be reduced when the mediator, self-discrepancy, is controlled. A macro level of a path model of the present study is as follows:

Figure 1.1

A macro level of a path model of the study



Background of the Problem

History of Suicide Research

Suicide as a problem is not only a recent phenomenon; it has been a common controversial topic of academic fields such as philosophy, theology, sociology, anthropology, and psychology for thousands of years. For philosophers, for example, questions about suicide have been asked in relation to the value of reason and knowledge since classical Greek times (Kaplan & Schwartz, 2008; Stillion & McDowell, 1996). During the ancient Greek era, suicide among people in high social positions such as patricians or philosophers was interpreted generously and even honorably, whereas suicide in people in low social classes such as plebeians or slaves was condemned and considered shameful (Shneidman, 2001; Yoshitake, 1994). According to the Greek law, suicide was prohibited implicitly; however the law did not condemn voluntary death explicitly (Whitehead, 1993). Also, the idea that the real truth can be achieved only by the soul made many Greek philosophers regard the physical body as the soul's prison; they facilitated suicide for the soul's freedom saying that philosophy is studying "dying and being dead" (Kaplan & Schwartz, 2008). Certain philosophers such as Pythagoras or Aristotle were against suicide (Fedden, 1938; Whitehead, 1993; Yoshitake, 1994).

In the medieval age, in spite of the dominance of the theological point of view that suicide originates from Satan, a medical explanation of suicide resulting from depression began to emerge (Minois, 1999). In his work, *Histoire du suicide*, Georges Minois (1999) presented the advent of psychological and medical definitions of suicide in the Middle age as follows:

> In his *Treatise of Melancholie* (1586) Timothy Bright presented suicide as the product of both divine vengeance and diabolical temptation. ….. In 1609 Jean Fernel related the "melancholic humor" to the earth and to autumn, and he defined it as a liquid "thick in

> consistency, cold and dry in its temperament." An excessive amount of that humor in the brain was responsible for the somber thoughts that afflict melancholiacs and lead them to fix their attention obsessively on an object: "All their senses are depraved by a melancholic humor spread through their brain," Johann Weyer wrote. ….Melancholia, which caused suicide, was indeed a disease. (pp. 98-99)

In the 20th century, Emile Durkhim (1951) presented a theory of suicide with a vast amount of statistical data from a sociological perspective. Regarding suicide as an individual's unbalanced relationship to society and culture, he divided suicide into three basic categories: egoistic suicide which occurs in individual's lack of integration into society; altruistic suicide which arises in individual's excessive integration with social rules or cultural tradition; and anomic suicide which originates when the relationship between an individual and society or culture is suddenly disturbed or changed. This categorical definition of suicide has greatly contributed to a sociological understanding of suicide. However, there was a criticism that questions the nature of Durkheim's raw data, because the data was aggregate statistics which was from earlier researchers (Shneidman, 2001).

Another line of suicide study in the 20th century arose out of psychoanalytic theory (Mikhailova, 2005; Smith, 1998), even though Freud never published on suicide (Briggs, 2006; Maltsberger & Weinberg, 2006). Psychoanalysis defines suicide as the murder of the ego by the superego (Mikhailova, 2005; Smith, 1998) and as a wish to kill the introjected love object (Menninger, 1938). In his work, *Man against Himself*, Menninger (1938) introduced the unconscious instincts, *Eros* and *Thanatos*, to propose a suicide theory. According to him, suicide is a result of conflicts between the instincts and a murder of an ambivalent self unconsciously formed by introjections:

> Suicide must thus be regarded as a peculiar kind of death which entails three basic internal elements and many modifying ones. There is the element of dying, the element of

> killing, and the element of being killed. Each is a condensation for which there exist complexes of motive, conscious and unconscious. What we call a suicide is for the individual himself an attempt to burst into life or to save his life. (p. 5)

Current Research of Suicide and the Need of Psychological Investigation

Contemporary positions of suicide research are generally based on the combination of sociological approaches and neurobiological understandings (Lester, 1988; Maris, Berman, & Silverman, 2000; Maris, Canetto, McIntosh, & Silverman, 2000; Stoff & Mann, 1997; Wasserman & Wasserman, 2009). For example, many contemporary suicidology studies (e.g., Maris, Berman, & Silverman, 2000; Maris, Canetto, & Silverman, 2000; Wasserman & Wasserman, 2009) introduce and emphasize sociological, neurobiological, or psychopharmacological findings rather than suggest a psychological understanding of suicide. This contemporary tendency of suicide research generates the lack of the psychological theoretical background on suicidology (Rogers, 2001). However, this tendency does not mean that the current suicidology excludes psychological contributions, nor have psychologists little concern of suicide problems; rather, it indicates the degree to which the current suicide study needs psychological investigations. Due to the complexity and multidimensional risk factors of suicide, bio-psycho-socio-spiritual assessment on suicide is needed to comprehend the full spectrum of suicide and to make competent treatment strategies to reduce the suicide rate (Bolton, Gooding, Kapur, Barrowclough, & Tarrier, 2007; Stillion & McDowell, 1996). In this vein, psychological investigations of suicide have to be continually expanded with various perspectives to prevent suicide.

Judging from the nomenclature of suicide (Andriessen, 2006; Silverman, 2006) that provides suicide criteria (e.g., intentional death, self-initiated death, self-destruction, and voluntary death) and distinguishes suicide from the other forms of death, suicide behavior is highly related to the psychological topic of the 'self' (Chioqueta & Stiles, 2007; Wilson, Braucht, Miskimins, & Berry, 1971). In addition, many suicide notes represent a victim's cognitive understanding of self-concept (e.g., "I must have been born to suffer" by a 31 year-old woman). The 'self' in suicide, therefore, is a critical subject that should be analyzed and investigated in suicide research for making a psychologically theoretical foundation. Regarding self theories, current studies represent the self from two major multidimensional perspectives: bi-dimensional self (Heidrich 1999; Higgins, 1987; Rogenburg, 1977, 1986) that refers to the dual self-concept (the actual and the ideal self) and situational or saturated self (Bahl, 2005; Gergen, 2000) which means that different situations may cause the specific actions of specific selves along with social and cultural situations. The present study focused on the bi-dimensional self, employing "self-discrepancy theory," because the self-discrepancy theory is strongly connected to attachment theory in terms of affect regulation, and because the structure of self-discrepancy also clearly linked to the dichotomous structure of suicidal cognition.

Attachment and Self-Discrepancy on Suicide Literature

Attachment (Bowlby, 1969/1982), in psychology, indicates an infant's emotional and physical tie with a caregiver to get comfort and security for survival. Through the relationship with the caregiver, the infant shapes the belief system, called "the internal working model." He also equips the ability to control his emotions through the relationship with the caregiver. Schore

(1994) stressed this attachment relationship to explain the origin of the self, emphasizing the role of affect regulation. Fonagy, Gergely, Jurist, and Target (2002) also demonstrated that affect regulation plays a key role in understanding and developing the self. In other words, learning how to regulate affects in attachment relationship is critical to shaping the self-structure and self-image and to molding the pattern to understand and interpret the world. Self-discrepancy (Higgins, 1987), which is the split self-structure and -image in this vein, is the result from affect dysregulation which originated from insecure attachment relationship.

According to Higgins (1987), the types of self-discrepancy depend on the types of affects. He suggested two types of negative emotion groups to describe the types of self-discrepancy (actual/ideal and actual/ought): dejection-related emotions such as depression, sadness, or shame; and agitation-related emotions such as anger, anxiety, or guilt.

Related to the literature dealing with the relationship between negative emotions and suicide, Lester (1998) found that shame is strongly associated with suicidality; Kendall and Wiles (2010) found that strong emotions of sadness and guilt are related to suicide. Strauman, Abramson, and Busch (2009) directly connected self-discrepancy to suicide ideation, using self-discrepancy as a form of negative self-evaluation. Regarding attachment, Ehnvall, Parker, Hadzi-Pavlovic, and Malhi (2008) found that rejection and neglect in childhood provide a greater chance of suicide attempt in their participants. In a qualitative study of adolescent suicide, Bostik and Everall (2007) reported that there were three common elements of healing from suicidality: attachment relationship, experiences of attachment and changing self-perceptions. Specifically, an outstanding shift of self-perceptions resulted from forming secure attachment relationships facilitating hope and healing.

As seen in previous psychological investigations of suicide, therefore, attachment and self-discrepancy have been essential indicators of suicide. Also, there is a strong possibility of the mediating role of self-discrepancy in the connection between insecure attachment which produces affect dysregulation and suicidal tendency.

Purpose of the Study

The purpose of this research is to provide a psychological path model of suicide by examining the relationship between insecure attachment, self-discrepancy, and suicidal tendency in a sample of Korean and Korean-American. Even though there are numerous methods to evaluate the causal variables of suicide, the present research focused on insecure attachment and the development of the divided self as etiological factors that produce psychological vulnerabilities to suicidal forces such as cognitive constriction or perfectionism (Adkins & Parker, 1996; Egan, Piek, Dyck, & Rees, 2007; Hewitt, Flett, &Weber, 1994; O'Connor, 2007), hopelessness (Beck, Kovacs, & Weissman, 1975; Hokans & Lester, 2009), and suicidal ideation (Brown, Jeglic, Henriques, & Beck, 2006). In order to explore the path model in this study, the researcher examined the mediating role of self-discrepancy in the relationship between insecure attachment and suicide ideation. Related to insecure attachment, the researcher tested two dimensions of attachment: insecure-anxiety and insecure-avoidance.

Research Questions

This study was designed to test both the direct and indirect effects of insecure attachment and self-discrepancy on suicidal tendency. A path analysis explored the following questions:

First, to what extent does suicidal tendency vary regarding anxiety or avoidance dimension in attachment?

Second, to what extent does self-discrepancy (actual/ideal or actual/ought) vary regarding anxiety or avoidance dimension in attachment?

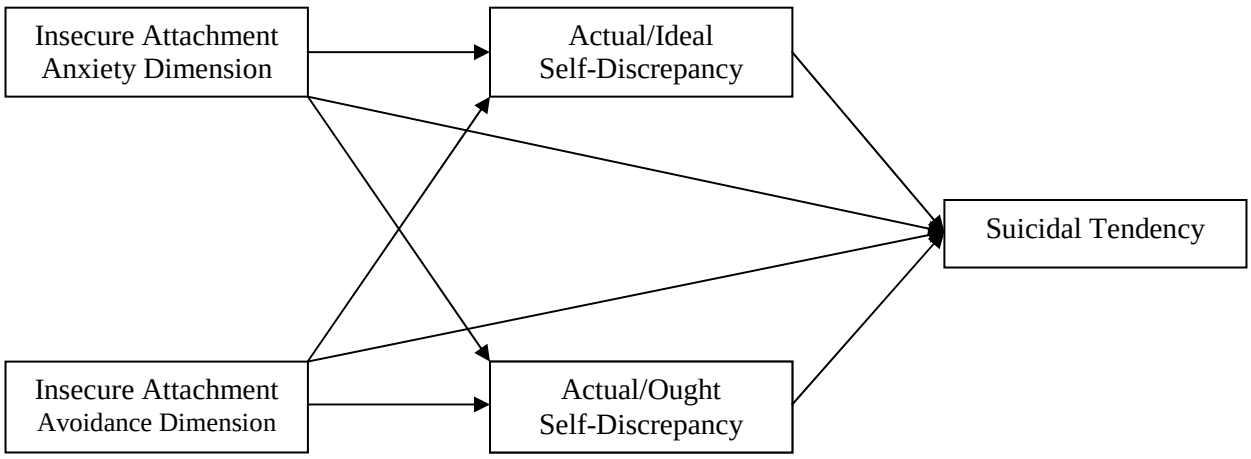
Third, to what extent does suicidal tendency vary regarding actual/ideal or actual/ought self-discrepancy?

Fourth, to what extent does actual/ideal or actual/ought self-discrepancy mediate the effect of the anxiety or avoidance dimension in attachment on the suicidal tendency?

A micro level of a path model according to research questions is as follows:

Figure 1.2.

A micro level of a path model of the study



Assumptions and Limitations

The major assumption of this study is that attachment relationship is a general developmental mechanism of the self. More specifically, attachment theory is applicable both to Western population and to Eastern or Korean population. Insecure relationships characterized by neglect, rejection, or hostility, therefore, generate the same pattern of negativity and doubt into the self-system (Firestone, 1997; Wallin, 2007) regardless of an ethnic group. Additionally, insecure attachment in this study plays as an etiological factor that makes self-discrepancy in the self. That is, self-discrepancy (Higgins, 1987), the mediator, is the negative result of insecure attachment relationship.

Another assumption is that the self-report instruments in this study are suitable to the Korean situation. Even though the instruments are psychometrically designed for the Western culture, many studies already have provided good validity and reliability on Korean samples. The instruments in this study were tested to verify the validity by conducting a factor analysis.

Regarding limitations, the exclusion of the effect of socio-cultural or biological risk factors on suicide is a limitation because this study is to test a self-psychological model of suicide, focusing on attachment and self-discrepancy. That is, other possible risk factors of suicide such as financial difficulties, alcoholism, or malfunctions of neurotransmitters were excluded in this study.

Because the chosen measuring tool is survey, another limitation is the total reliance on the respondents' honesty and ability to recall memories and to understand survey questions. Collecting reliable and correct answers from the sample is a critical factor to obtain accurate results. Still another limitation regarding a survey method is the 'snapshot' effect of the test

which makes it difficult to deal with respondents' context. Surveys are, furthermore, inflexible because they require a fixed format according to the research design to remain unchanged for the effective data analysis.

Significance of the Study

There is a large body of research examining the correlational relationship between attachment theory and self-concepts or self-models (e.g., Broemer & Blümle, 2003; Clark & Symons, 2000; Griffin & Bartholonew, 1999; Wu, 2009); some studies also reveal the correlation between self-discrepancy and suicide (e.g., Cornette, Struman, Abramson, & Busch, 2009; Firestone, 2006; Wilson, Braucht, Miskimins, & Berry, 1971). To date, no studies have investigated the mediating role of self-discrepancy between insecure attachment patterns and suicidal tendency to test a path model. In addition, most empirical research regarding suicide gives a great attention toward practical connections to mental disorders (e.g., depression, bipolar disorder, addiction) or to social factors (e.g., financial difficulties or marital conflicts) rather than toward establishing psychological considerations.

Investigating the relationship between attachment patterns and suicidal tendency in relation to self-discrepancy, therefore, may contribute to dynamic understanding of suicide not only for research purposes but also for clinical purposes. Through verifying the path model, in addition, this study can extend current suicide evaluation methods including attachment perspectives; also it may enable counselors to predict suicidal tendency with attachment history and divided self-concepts in clinical practice.

Theoretical/Conceptual Framework

The Theory of Attachment

Attachment Theory

Attachment theory (Bowlby, 1969/1982), formulated by the joint work of Ainsworth and Bowlby, demonstrates that infants need attachment figures to make an emotional bond or tie for both their instinctive survival and manufacturing their own felt security. According to Bowlby (1969/1982), the primal nature of attachment is to keep infants close to the caregivers as a secure base not only to get comfort or to stay away from danger but also to ensure their survival (Wallin, 2007). In other words, infants' behaviors such as smiling, clinging, or signaling are functionally related to survival and consequently lead to physical proximity. Bowlby (1969/1982) recognized that non-human baby primates as well as human infants exhibit the same attachment bond, showing their rushing to a mother in alarm whereas exploring the world when safe. Attachment in early life, therefore, is a crucial and indispensable mechanism to the infants' survival and to shaping healthy emotional and mental development (Pietromonaco & Barrett, 2000). The significance of the attachment relationship in terms of a developmental stage lies on the formation of lifelong, even transgenerational, inter- or intra-personal patterns of representation which contribute to the concept of self and others (Belsky, 2002; Fonagy & Target, 1997, 2005), since the infants shape individual differences by learning how to regulate their emotions and how to represent and interpret others and the self through the bonding relationship with the attachment figure. Bowlby referred to constructed lifelong belief patterns as internal working models (Belsky, 2002; Bowlby, 1969/1982, 1973; Griffith, 2004).

Internal Working Models

The internal working model is an affectively charged mental representation rooted in infants' experiences with attachment figures (Brisch, 1999; Griffith, 2004; Hewlett, Lamb, Leyendecker, & Schölmerich, 2000; Pietromonaco & Barrett, 2000). Bowlby (1973) claimed that working models of the self and others, molded out of attachment relationship in infancy, impact an individual's adult relationship emotionally, cognitively, and behaviorally. The core concept of internal working models is that infants internalize core beliefs and experiences regarding the self, their caregivers, and the world that they experience. Receiving consistent and secure care, the infants reify the world in a positive and trustworthy way, whereas they internalize that the world is unsafe and untrustworthy through inconsistent and neglectful care. In his book, *Separation*, Bowlby (1973) clearly embodied this concept of working model with two sets of assumptions, the self and the world (others):

> In the first volume it is suggested that it is plausible to suppose that each individual builds working models of the world and of himself in it, with the aid of which he perceives events, forecasts the future, and constructs his plans. In the working model of the world that anyone builds, a key feature is his notion of who his attachment figures are, where they may be found, and how they may be expected to respond. Similarly, in the working model of the self that anyone builds a key feature is his notion of how acceptable or unacceptable he himself is in the eyes of his attachment figures. (p. 203)

As a result, internal working models build up the representational models of the self and the environment from a developmental standpoint. More specifically, the internal working model generates an individual's perspectives and expectations about the self, others, the world, and the self in relation to others and the world by the infant-caregiver relationship (Goodvin, 2007; Pietromonaco & Barrett, 2000; Wallin, 2007).

Affect Regulation

Understanding how the attachment relationship shapes the self is crucial to define an individual's identity and from where individual differences come, because the quality of the attachment figure's response to the infant's need and affect plays a critical role in forming the origin of the self (Mikulincer, Shaver, & Pereg 2003; Schore, 1994; Wallin, 2007). Affect regulation, in this sense, is the core of the formation of the self from a fundamental perspective. The key concept of affect regulation is that an infant's proximity seeking device is designed not only to protect him or her from physical threats but also to manage emotional distresses for creating his or her own felt security (Axford, 2007; Mikulincer et al., 2003). Affect regulation, therefore, can be characterized as an individual's emotional management emphasizing the capacity to experience a full spectrum of emotions, to differentiate and modulate the emotions, and to inhibit and control impulses and emotions (Cozolino, 2006; Gross & Munoz, 1995). However, it is important to understand that emotion regulation itself differs from affect regulation in that it is only one of several forms of affect regulation (Rottenberg & Gross, 2007). Unlike emotion regulation, affect regulation, as an adaptive attachment strategy, influences on extensive aspects of human functioning such as feeling, mood regulation, coping, psychological defense and action for maintaining psychological homeostasis in various stressful life situations (Cozolino, 2006; Fonagy, Gergely, Jurist, & Target, 2002; Rottenberg & Gross, 2007; Wallin, 2007). In other words, affect regulation is strongly related to shaping and organizing the self since it makes the frame that the child is supposed to become in reflection to attachment relationship. For example, Koole and Coenen (2007) found that affect regulation impacts the shaping of the condition of self, making two different orientations: action-oriented self which is

characterized by decisiveness and initiative, and state-oriented self which is specified by indecisiveness and hesitation. Consequently, affect regulation plays a mediator role between attachment and the origin of the self as well as a role of emotion regulating. Regarding the connection of affect regulation to the origin of the self, Schore (1994, 2003a) has particularly contributed to the neurobiological explanation about the linkage in the context of the first couple of years of attachment. Throughout the research, Schore claims that human infancy is a critical period for shaping the self through general brain development with affect regulation and attachment.

The Theory of the Self

Multidimensional Self

The study of the self, in psychology, has been flourished since the twentieth century, particularly in its latter half (Brinich & Shelley, 2002); but the topic of multidimensional self has been focused on recently (Bahl, 2005). The concept of multidimensional self has been characterized in literature in various ways such as "dialogical self" (Richardson, Rogers, & McCarroll, 1998; Hermans, Kempen, & van Loon, 1992; Rowan, 2007), "fragmented self" (Lester, 2004; Scott, 1999), "multiple self-representations" (Ewing, 1990; Knight, 2009) "saturated self" (Gergen, 2000), and "subpersonalities" (Lester, 2007; Redfearn, 1994). The basic premise of multidimensional self is that the self operates in different roles in our mind according to different situations; that is, the self should be interpreted in a relational perspective. Similarly, as one of the multidimensional self concepts, the bidimensional self is also relational in terms of the distinction between the *I* and the *Me*. Coining the bidimensional concept of *I* and

Me self, James (1910) claimed that the *Me* dimension (the self as an object) contains the material characteristics of the self; and the *I* dimension (the self as an agent) functions as the doer (Hoyle, Kernis, Leary, & Baldwin, 1999; Jensen, Huber, Cundick, & Carlson, 1991). Just like subselves or fragmented selves work discretely but exist united in situations, two dimensions of self are also discrete but interact mutually as a whole (Sleeth, 2007). In other words, the core of multidimensional self can be characterized as "pluralistic but united" (Campbell, Assanand, & Paula, 2003).

Self-Discrepancy Theory

As one of the bidimensional self theories, self-discrepancy theory (Higgins, 1987) consists in two dimensions: the *'idealized'* or the *'ought self'* and the *'actual self.'* Defining the theory, Higgins refers the self to a complex, dynamic, and multidimensional cognitive structure (Fromson, 2006). The ideal self dimension, in the self-discrepancy theory, indicates the self that the individual idealizes to be, whereas the actual self dimension refers to the self who the individual really is (Fromson, 2006; Heidrich, 1999; Higgins, 1987). In relation to James' theory (1910), the ideal self or the ought self can be described as the self as an object, while the actual self as the self as an agent. Exploring the gap between the selves, a great deal of studies (e.g., Bentall, Kinderman, & Manson, 2005; Boldero, Moretti, Bell, & Francis, 2005; Formson, 2006; Heppen & Ogilvie, 2003) found that pathological outcomes as well as negative psychological emotions arise when a discrepancy exists between the selves, and that there is a strong correlation and prediction between the discrepancy and individual's affect. In addition, Higgins (1987) claimed that different types of discrepancies produce different types of negative affects

such as dejection-related affects and agitation-related affects. Consequently, in this sense, self-congruency which represents an optimistic self status lies on the development of affect regulation in terms of attachment theory. With various theoretical views of affect regulation, Westen (1994) confirms this linkage suggesting that affect regulation strategies can be utilized to answer the discrepancy of the self, others, and external situations. Mikulincer (1995), regarding attachment theory, claims that secure attachment produces a more balanced and congruent self-structure than insecure attachment causing self-discrepancy.

The Theory of Suicide

Cognitive Constriction as a Structure of Suicide Ideation

Of the common characteristics of suicide, cognitive constriction is a well-matched theoretical construct to propose the divided self-concepts of suicidal individuals. Cognitive constriction in suicide refers to a dichotomous thinking pattern that leads to considerable decrements in an individual's cognitive range of both problem-solving and information processing (Jobes & Nelson, 2006; Sheehy & O'Connor, 2002). As synonyms for constriction, Shneidman (1985) employs 'tunnel vision' or 'narrowing of perspective' to illustrate an individual's state of consciousness. This constrictive feature is also related to perfectionism in suicide. Beevers and Miller (2004) postulate that perfectionism and cognitive bias play a contributory role in suicide ideation, and Egan, Piek, Dyck, and Rees (2007) examine the role of dichotomous thinking and rigidity in terms of perfectionism. Flamenbaum (2005) describes, on the other hand, that perfectionistic tendency to attain unrealistic standards is a form of self-discrepancy. In this sense, the significance of understanding cognitive constriction in relation to

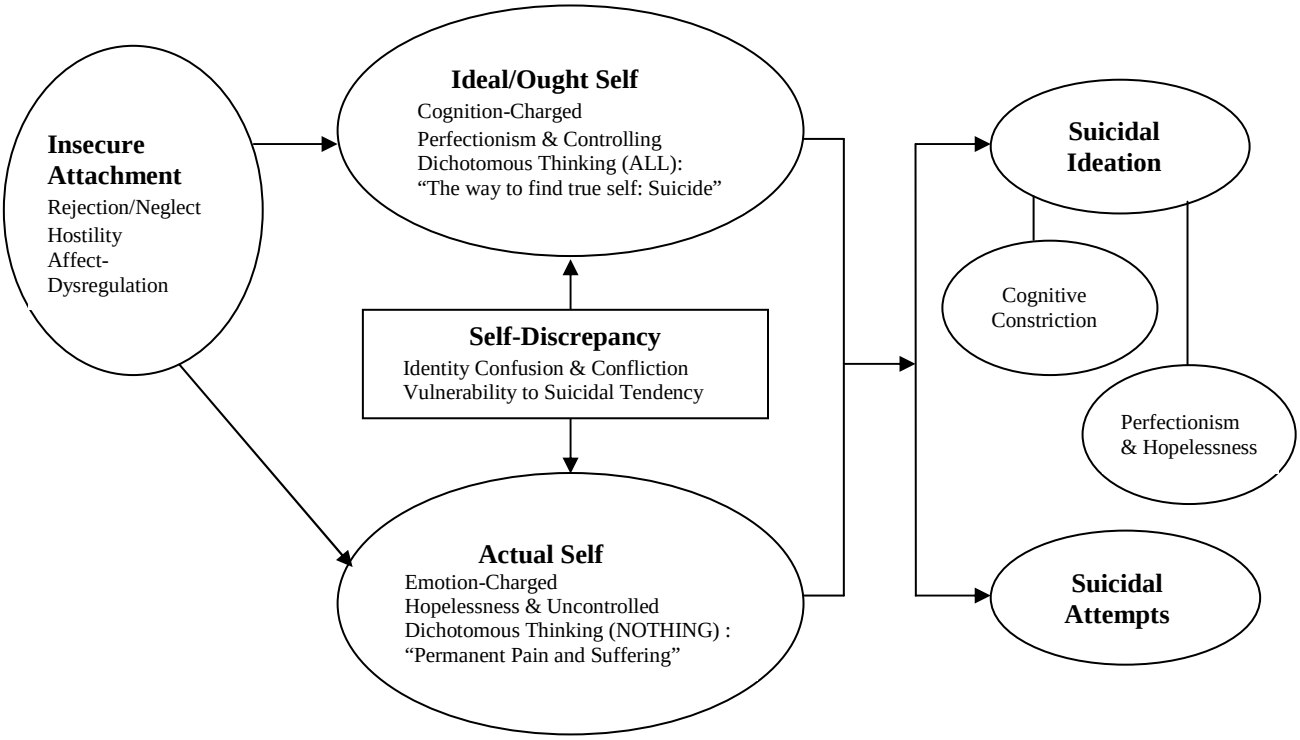
self-concept is that the constriction drives to the dichotomous view of one's self which is the core of the self-discrepancy theory.

A Model of Suicide

Therefore, based on attachment theory, self-discrepancy theory, and constriction in suicidal cognition, a path model can be formed for establishing a psychological suicide theory. This model contains three theoretical assumptions: (a) insecure attachment relationship has high probability to cause self-division due to forming internal working model in a negative way and affect dysregulation; (b) the pattern of division, self-discrepancy, and a constrictive cognitive style in the characteristics of suicide are fundamentally and causally interrelated; (c) there is a high possibility that self-discrepancy is a mediator in the relationship between attachment and suicide. With these assumptions, a diagram of a suicide model can be presented as follows:

Figure 1.3.

A theoretical model of suicide



Definition of Terms

Attachment

The term *attachment* in psychology refers to an affectional tie for attaining or maintaining proximity that an individual forms between himself or herself and another specific one who is conceived as better able to cope with the world (Bowlby, 1988). To get proximity, human infants use various active proximity- and contact-seeking behaviors such as approaching, following, and clinging, and signaling behaviors such as smiling, crying, and calling (Ainsworth & Bell, 1970). In this process the relationship with his or her primary caregiver plays a core role

in forming an individual attachment pattern. Throughout infancy and early childhood, infants develop this attachment pattern to maintain and strengthen their relationship by learning how to predict and respond to others' behaviors and emotions through mirroring of the caregiver (Fonagy et al., 2002; Wallin, 2007).

Attachment in this study will be focused on the origin of the self that plays as an agent of human behavior, thought, and emotion. In other words, the self formed out of attachment relationship is the main agent which governs all behavioral and emotional reactions according to the codes of attachment pattern (internal working models). The hypothesis of attachment, in this sense, is that the more an individual is securely attached to a caregiver, the more positive behavior, thought, and emotion he or she produces.

Adult Attachment

The term *adult attachment* generally refers to the attachment represented in adult relationships (Hazan & Shaver, 1987; Wallin, 2007). The Adult Attachment Interview (AAI) is a good example to assess how attachment patterns in infancy are represented in adulthood behavior (Wallin, 2007). The AAI is a semi-structured, hour-long interview designed to assess an adult's current state of mind with regard to past attachment relationships (Ballen, Deners, & Bernier, 2006). Adult attachment patterns are also shown in adult romantic relationships. Hazan and Shaver (1987) claimed that the emotional bond between adult romantic partners has the same functional motivation as the attachment behavioral system formed in infancy. They provided the evidence how romantic love is matched to an attachment process. Based on Hazan and Shaver's work, many attachment measurement scales (e.g., Adult Attachment Questionnaire, Adult

Attachment Scale, Experiences in Close Relationships Inventory, Measure of Attachment Qualities) have been developed to classify the patterns of attachment. For the purpose of the present study, adult attachment in close or romantic relationships will be focused rather than interviewing past attachment relationships to categorize either secure or insecure attachment. As Bowlby (1988) claimed attachment is a life-long process, attachment relationship is a love relationship that an individual has developed since his or her birth (Stanojević, 2004).

Affect Regulation

Generally, the term *affect regulation* refers to the attempt to alter or prolong one's mood or emotional state (Vandenbos, 2007). The core of affect regulation is the emotional management capacity to experience a full spectrum of emotions, to differentiate and modulate the emotions, and to inhibit and control impulses and emotions (Gross & Munoz, 1995). Affect regulation, however, is not limited to controlling human emotions, but rather it covers extended aspect of mental activities such as cognition, motivation, coping, mood regulation, or defense mechanism (Rottenberg & Gross, 2007). Affect regulation, therefore, supports the process of shaping the self by accounting for how an individual develops the capacity to handle negative emotions or incompatible situations with his or her thought in the relationship with the attachment figure (Fonagy et al., 2002; Wallin, 2007). In this study, affect regulation plays a mediator role between attachment and the origin of the self. Since affect dysregulation predicts various malfunctions of the self (Schore, 2003b), the current study assumes that it also predicts the discrepancy in the self.

Self-Discrepancy

As a theory of multidimensional self, self-discrepancy theory proves individual's different self-levels of discrepancies between the *actual* or *ought* self and the *ideal* self, and the theory also has a set of state levels, *own* and *other*. This discrepancy is associated with individual's different motivational predisposition (Higgins, 1987). The concept of self-discrepancy has a historical foundation in cognitive dissonance theory which explains incongruity between two or more psychological states in the individual; that is, individuals' conflicting and incompatible beliefs lead them to experience discomfort and various emotional problems (Fromson, 2006). Since incompatible beliefs are cognitive constructs, according to Higgins (1987), types of negative emotions and discrepancy can vary in both availability and accessibility to the constructs. He defines construct availability as "the particular kinds of constructs that are actually present in memory to be used to process new information" and construct accessibility as "the readiness with which each stored construct is used in information processing" (p. 320).

In this sense, the availability of any type of self-discrepancy depends on individual's conflicting self-state representations (e.g., actual/own vs. ideal/own). The greater gap between the two self-state representations, the greater magnitude of availability to discrepancy and the greater intensity of discomfort the individual can take (Higgins, 1987). The accessibility of an available self-discrepancy depends on its recency and frequency of activation and its applicability to the stimulus event. The greater the accessibility to a particular type of self-discrepancy, the stronger suffering and discomfort related to the particular type of discrepancy the individual feels (Higgins, 1987). The current study assumes that the self-discrepancy in

individual's cognition may cause cognitive constriction that influences an individual to have a suicidal mind.

Suicide

According to Shneidman (1993), the term *suicide* refers to "a conscious act of self-induced annihilation, best understood as a multi-dimensional malaise in a needful individual who defines an issue for which suicide is perceived as the best solution" (p. 4). He suggests the *cubic* model to illustrate the reason of suicide (Shneidman, 1987; Ellis, 2006). The model theorizes suicidal behavior as result of three different psychological forces that make three axes on the cubic. The first axis is unbearable psychological pain, known also as "psychache," ranged from 1 to 5; the second axis is unrelenting psychological pressures or stressors ranged from 1 to 5; and the third axis is perturbation, a state of emotional upset that sometimes makes an individual tend to take an action. Shneidman claimed that suicidal persons complete suicide when they reach at the maximum range (5-5-5) (Shneidman, 1987; Ellis, 2006).

Suicidality or suicide tendency is a suicide-related term that encompasses the full range of suicidal thoughts and behaviors such as ideation, plans, suicide attempts, and completed suicide (National Strategy for Suicide Prevention, 2001). The current study will put more focus on suicidal tendency rather than completed suicide. Regarding non-fatal suicide terms, O'Carroll and colleagues (1996) provided definitions of common terms of *suicide attempt* and *suicide ideation*. They defined a suicide attempt as "a potentially self-injurious behavior with a non-fatal outcome, for which there is evidence (either explicit or implicit) that the person intended at some (nonzero) level to kill himself/herself" (p.247). Suicide ideation, on the other hand, refers to "any

self-reported thoughts of engaging in suicide-related behavior" (p.247). In the same vein, Kreitman, Philip, Greer, and Bagley (1969) categorized and used the term, *parasuicide*, to describe all suicide attempts that did not result in fatal outcome. Firestone (1997) also provided a term, *microsuicide*, to illustrate a suicidal pattern, which includes behavioral patterns of progressive self-denial, inwardness, withholding, destructive dependency bonds, and physical harmful actions and lifestyles.

Cognitive Constriction

The term *cognitive constriction* refers to a dichotomous thinking pattern that contributes to considerable decrease of an individual's cognitive range of both problem-solving and information processing (Jobes & Nelson, 2006; Sheehy & O'Connor, 2002). More specifically, cognitive constriction is a type of cognitive style formed by an unhealthy cognitive structure that has a dichotomous way of information processing (Sheehy & O'Connor, 2002). This thinking pattern is one of the major characteristics of suicidal people (Bark & Miron, 2005; Jobes & Lelson, 2006). As a synonym for constriction, Schneidman (1985) suggested "a tunneling or focusing or narrowing of the range of options" (p. 138) in an individual's consciousness. Schneidman (1993) also argued that perturbation, a state of emotional disturbance that sometimes leads to impulse for action, implicates this dichotomous thinking pattern.

Organization of the Remainder of the Study

In the following chapter, the researcher provided the evidences regarding the suggested theoretical model through literature review. The literature review, Chapter 2, dealt with three

major topics to strengthen theorized path model: attachment theory, which explains how attachment relationships shape the individual self; self-discrepancy theory, which illustrates the relationship between insecure attachment and the divided self; and cognitive constriction, which support how self-discrepancy is related to suicide characteristics. After reviewing the literature, the researcher addressed how to conduct the experiment for the study in Chapter 3. This methodology section provided the information of the sample and recruitment procedure, of self-test instruments, of research procedure, and of data analysis of the study. In chapter 4, the data analysis and its result section, the researcher provided statistical results along with research questions. Research question from one to three were answered by bivariate analyses; research question four was answered by multivariate analyses. In the last chapter, the summary of the dissertation, conclusion about the results, and recommendations were suggested. The researcher also tried to connect the findings of the study to practical counseling settings for integration.

Summary

Suicide, as an intended self-destructive behavior, is intrinsically related to the way of one's self-representation (Crane, Barnhofer, Duggan, Hepburn, Fennell, & Williams, 2008; Wilson, Braucht, Miskimins, & Berry, 1971). Since the self is an experience-dependent mechanism, each dimension of the self is characterized by an individual's early experiences (Bowlby, 1969/1982; Cozolino, 2002, 2006; Schore, 1994, 2003a, 2003b). In other words, a good relationship with a primary caregiver in childhood is critical for shaping a positive dimension of the self-concept or self-acceptance (Anderson, Chen, Miranda, 2002; Mann, 2006). Insecure attachment relationship, conversely, may cause a negative dimension of the self-concept

or a sense of self-hate (Firestone, 1997; Firestone, 2006; Fonagy et al., 2002). Self-discrepancy theory (Higgins, 1987), which is a theory of the bi-dimensional self, explains how individuals create a distinctive dimension of the negative self-concept in relation to distinctive negative emotions. Self-discrepancy is also associated with perfectionism and cognitive constriction, a dichotomous thinking pattern, which are major characteristics of a suicidal mind (Beevers & Miller, 2004). Therefore, self-discrepancy was utilized as a mediator in a model of this study to connect insecure attachment to suicidal tendency.

CHAPTER TWO: REVIEW OF THE LITERATURE

As described in the previous chapter, self-discrepancy is a key component to link attachment theory and the formation of suicidal tendency. In this chapter, the researcher will explore how self-division is originated in terms of attachment theory and significantly influences suicidal tendency to develop a path model of suicide. Attachment theory is a critical theoretical base in this study since it is an initial etiological factor of the suicide model for the research purpose. Providing individual principles and rules of autonomy or heteronomy in the self, attachment relationship contributes to creating disparate attachment-related strategies that clearly characterize individual differences (Mikulincer et al., 2003). To put it another way, secure attachment helps individuals to utilize primary attachment strategies which enhance and broaden affect regulating skills by reinforcing the experiences of security when they face distressful situations (Mikulincer & Shaver, 2007). On the other hand, insecure attachments forces individuals to use secondary attachment strategies for security seeking which leads to hyper-activation such as overuse of emotions or overdependence, or de-activation such as avoidance or suppression (Ainsworth, 1970; Bartholonew, 1990; Mikulincer et al., 2003).

In the light of the development of the self, therefore, insecure attachment styles make individuals display the self in divided ways by driving them to internalize their emotions in hyper- or de-active ways. This unbalanced emotion-charged self creates vulnerability to identity confusion, emotional bias, and continual anxiety and distress which can trigger not only various symptoms of psychopathology (Cassidy & Mohr, 2001; Fortuna & Roisman, 2008; Ponizovsky,

Nechamkin, & Rosca, 2007; Ward, Lee, & Polan, 2006) but also diverse suicide factors (Ehnvall, Parker, Hadzi-Pavlovic, & Malhi, 2008; Fortuna & Roisman, 2008; Violato & Arato, 2004).

Investigating the relationship between attachment and psychopathology in a community sample, for example, Ward, Lee, and Polan (2006) found that individuals in the non-autonomous groups (the insecure attachment groups) have higher rates of psychopathology than those of individuals in the autonomous group (the secure attachment group). Ehnvall, Parker, Hadzi-Pavlovic, and Malhi (2008) also found that women who were neglected and rejected in childhood have a higher possibility of making suicide attempts at least once in a lifetime.

In this vein, this study expanded and focused on comprehending the process of shaping attachment patterns in childhood in relation to the process of shaping the divided self to understand the mediator role of self-discrepancy between insecure attachment and suicide ideations and behaviors as its later results.

Insecure Attachment, Regulation System, and Formation of the Insecure Self

Insecure Attachment in Childhood

Attachment theory has provided a theoretical framework for understanding how individuals interpret themselves, others, and situations. Attachment theory focuses on the systematic control of human affect and perception that is necessary for infants to survive both physically and emotionally. Developing the theory, Bowlby (1969/1982) defined ‘attachment behavior’ as “any of the various forms of behavior that a child commonly engages in to attain and/or maintain a desired proximity” (p. 371), taking an ethological-evolutionary point of view that highlights physical proximity for survival. On the other hand, Ainsworth (1970) stressed

relational proximity, approaching 'attachment' empirically with a laboratory investigation called the "Strange Situation." She has defined attachment as "an affectional tie that one person or animal forms between himself and another specific one – a tie that binds them together in space and endures over time" (Ainsworth, 1970, p. 50).

In more technical terms, Bowlby made a great seminal contribution to originating and developing attachment theory by newly employing "control systems theory" that enables to accentuate an infant's capacity and sensitivity to perceive and regulate his or her environment and context, rather than by maintaining Freud's drive reduction theory, dominant at those times, which stresses an infant's internal instinctual stimuli arising from unmet physical drives (Powers, 1994; Waters & Beauchaine, 2003; Waters & Cummings, 2000). This shift of perspective made attachment theory empirically accessible (Waters & Beauchaine, 2003). Ainsworth, thereby, tested and elaborated attachment theory empirically and systematically. The greatest work of Ainsworth, therefore, is that she has successfully provided evidence that attachment is empirically true, suggesting a discovery of three distinct attachment patterns through the experiment of the "Strange Situation" (Ainsworth & Bell, 1970; Ainsworth, Blehar, Waters, & Wall, 1978).

Regarding attachment patterns, Ainsworth and her colleagues (1978) categorized infants into one secure and two insecure patterns: group A, currently referred to as the avoidantly attached insecure group; group B, currently called the securely attached group; and group C, currently named the ambivalently attached insecure group. Many researchers (e.g., Brisch, 1999; Karen, 1998; Wallin, 2007; Waters, 2002) have summarized the characteristics of each attachment group as Table 1 demonstrates.

Table 2.1

The Criteria for Classification of Attachment Style

Attachment Style	Criteria for Classification
Insecure avoidant attachment style (Group A)	Infants seem to have little or no tendency to seek proximity to or to interact with the primary caregiver. They have apparent lack of distress on separation and demonstrate no clear attachment behaviors when the caregiver departure or return. The babies tend to mingle their welcome with avoidant responses such as turning away, moving fast, or averting the gaze. Sometimes they attack the caregiver with an act of aggression by random.
Secure attachment style (Group B)	Infants seek to proximity to or contact with the caregiver, particularly in the reunion episodes. They display confidence of accessibility to the caregiver as a secure base and have more concern of interacting with the caregiver than with the stranger. Little or no tendency to resist interaction with the caregiver has been found. Shortly after reunion, usually they become calm and readily resume play.
Insecure ambivalent /anxious attachment style (Group C)	Infants demonstrate the greatest anger and anxiety when separate from the caregiver. They may display both strong proximity-seeking and interaction-resisting behavior by being angrier than infants in other groups or being conspicuously passive. They also show little or no tendency to ignore the caregiver in the reunion episode.

In addition to Ainsworth's original classification, the fourth category was developed nearly 20 years later by Main and Solomon (1990), identified as "insecure disorganized" attachment. Infants with disorganized attachment freeze their movement in place, collapse to the floor, or fall into trance-like state when encounter distressful situations (Brisch, 1999; Wallin, 2007). Sometimes, they greet the caregiver but soon after avoid her because of being caught between contradictory impulses to approach and avoid. Their behavior and movement is stereotypical of the group (Brisch, 1999; Wallin, 2007).

Each attachment style is shaped by continual reinforcement of patterns of relationship with the primary caregiver; that is, insecure patterns indicate insecurely structured processes through which a child fails to perceive and regulate various affects, particularly negative emotions responding to the caregiver's mental representations (Bowlby, 1973; Grossmann et al., 2006). In the avoidant dyads, for example, the dominant style of relationship is rejecting, avoiding, rebuffing, or withholding. Children in avoidant attachment fail to learn how to express the distress that they feel, to get proximity or security, and to respond others' connection (Sibcy, 2000; Wallin, 2007). No wonder, therefore, that they have no clear attachment behaviors and have avoidant responses.

In the ambivalent/anxious dyads, on the other hand, the key word of the relationship is preoccupation. Parents of ambivalent children appear to amplify their expressions and provide inconsistent, intrusive, and unpredictable responses in their parenting. Children in ambivalent/anxious attachment, as a result, become more perfectionistic and unmistakable to get proximity in their unpredictable situation (Sibcy, 2000; Wallin, 2007). In case of insecure disorganized dyads, however, parenting style is more abusive and unresolved; disorganized relationship is usually mixed with traumas and losses (Sibcy, 2000; Wallin, 2007).

Therefore, the insecurely attached dyads have strong potential factors to form unstable relationship rules that a child interprets and evaluates the significance of the world in terms of the negative values from insecure attachment relationships (Bowlby, 1980; Bretherton, 2006). These rules function as a central developmental mechanism in childhood attachment, characterizing insecure attachment patterns; enabling to predict negative attachment relationship beyond childhood; and shaping a negative self-image (Mikulincer, 1995). In other words, early

parent-child relationship works as a prototype of later adult relationships and contributes to family patterns for intergenerational transmission (Crowell & Treboux, 1995; Rholes et al., 1997; Roisman et al., 2005; Waters, Merrick, Treboux, Crowell, & Albersheim, 2000). The childhood attachment relationship also reflects the individual process of shaping an original structure of the self. Schore (1994) demonstrates how this self structure is shaped in the early attachment relationship focusing affect regulation on early brain development. Fonagy and his colleagues (2002) emphasize *mentalization*, the self-regulatory system to comprehend one's and others' mental states, on the development of the self. Affect regulation and *mentalization,* therefore, can provide the main evidences of the insecure self from an attachment perspective (Fonagy, 1991; Fonagy et al., 2002; Schore, 1994, 2003).

Affect Regulation and Mentalization

Affect regulation, a psychological mechanism to modulate human affects, plays a critical role not only in shaping the individual differences and personality (Fonagy et al., 2002) but also in understanding the dynamics of attachment-related strategies: why people feel and behave the way they do (Mikulincer et al., 2003). Adaptively modulating various affects arising from inside and outside of the self, affect regulation facilitates an individual to develop the capacity to control emotions or feelings in particular and to extendedly regulate the self in general (Fonagy et al., 2002; Mikulincer et al., 2003; Wallin, 2007). Fonagy and his colleagues (2002) support this extended aspect of affect regulation from an attachment perspective:

> For attachment theorists and psychoanalysts, however, the object of regulation is more complex: the regulation of affects is linked to the regulation of the self. More precisely, affect regulation plays a crucial part in the explanation of how infants move from a state of coregulation to self-regulation. (p. 66)

Affect regulation, in this sense, goes further than controlling emotions aroused from the relationship between a child and a caregiver. In more technical terms, affect regulation makes an individual *individualized* by transforming the regulating pattern from interpersonal to intrapersonal (Fonagy et al. 2002; Sroufe, 1996). The purpose of affect regulation thus extends from simply controlling emotions and feelings to maintaining psychological homeostasis to achieve subjective well-being and personal mental health (Koole, 2009; Larsen & Prizmic, 2004). The most evident strategy to accomplish this goal is to maximize positive affects and to minimize negative affects (Larsen & Prizmic, 2004). By effectively optimizing the affects, the individual develops, gradually by him- or herself, the capacity to maintain the self-organization in distressful situations which makes affect regulation be a prototype of self-regulation (Fonagy et al. 2002; Sroufe, 1996). This regulatory strategy is also directly connected to seeking the felt security from an attachment perspective. By broadening and expanding a cycle of attachment security, an individual internalizes security-enhancing experiences in infancy (Mikulincer & Shaver, 2007) so that he or she transforms the experiences into a part of personal strength and resilience and to the availability of attachment resources for coping with distressful situations in adulthood (Frederickson, 2001; Mikulincer et al., 2003). Security-based affect regulation, consequently, facilitates the individual to promote autonomy, individuality, and self-actualization for developing the secure self (Mikulincer et al., 2003).

Alternatively, affect regulation in relation to insecure attachment can be presented in terms of two opposite attachment strategies: hyper-activating and de-activating (Cassidy & Kobak, 1988; Mikulincer et al., 2003). The insecure-ambivalent/anxious individuals attempt to attain the felt security by heightening their affects. Their affects are under-regulated since they

use a hyper-activating attachment strategy which requires continuous and intense vigilance and concerns (Fonagy et al. 2002; Mikulincer et al., 2003). Deficit of affect regulation caused by hyper-activating strategy results in over-dependent tendency in interpersonal relationships, and perceptions of helpless and incompetent which contribute negatively to the self-image (Hazan & Shaver, 1994; Mikulincer et al., 2003).

On the other hand, insecure-avoidant individuals tend to minimize their affects for handling distressful situations by avoiding the situations. Their affects are over-regulated by their de-activating attachment strategy to avoid the distress and frustration caused by security unavailability (Fonagy et al. 2002; Mikulincer et al., 2003). The over-regulation, as a result, makes individuals independent emotionally, cognitively, and behaviorally struggling to create self-reliance (Cassidy & Kobak, 1988; Mikulincer et al., 2003). Therefore, the more the individual uses the secondary attachment strategies, the hyper activating or deactivating strategies, the steeper self-discrepancy he or she gets.

Regarding emotional arousal in relation to attachment, Feeney and Kirkpatrick (1996) observed that both avoidant and ambivalent individuals have showed more increased level of physiological arousal (anxiety in the study) than that of individuals securely attached in completing a stressful task. Simpson, Rholes, and Nelligan (1992) found that individuals insecurely attached tend to be incompetent to seek support from their partners for controlling negative affects in an anxiety-provoking situation. In connection with these findings, therefore, affect regulation is strongly related to self-control to deal with distressful situations and insecure attachment individuals are more likely to be incompetent to regulate negative affects due to their internal working models and the increased level of emotional arousal.

Connecting the regulation competency to the capacity to understand others' mental functions such as emotion, cognition or behavior, Fonagy and his colleagues (2002) broaden the concept of regulation utilizing the term *mentalization*, also called as "reflective function" (Fonagy et al., 2002), "alpha-function" (Bion, 1962), and "symbolization or symbol formation" (Segal, 1957) in other literature. The term, *mentalization*, refers to "the developmental acquisition that permits children to respond not only to another person's behavior, but to the children's conception of others' belief, feeling, attitudes, desires, hopes, knowledge, imagination, pretense, deceit, intentions, plans, and so on. Reflective function, or mentalization, enables children to 'read' other people's minds" (Fonagy et al., 2002, p. 24). Central in mentalization is the using comprehending capacity implicitly and explicitly to interpret both the self and others' mental state in a meaningful and predictable way (Choi-Kain & Gunderson, 2008). In relation to affect regulation, mentalization is the ability to unfold the subjective meanings of individuals' affect states, resulting in the discovery of a sense of self and a sense of agency (Fonagy et al., 2002).

As a flip side of the result, however, misunderstanding the meanings of his or her affects due to the failure of mentalization makes the individual have the distorted or false sense of self as well as the deprivation of emotion (Fonagy et al., 2002; Rizq, 2005). Regarding the process of mentalization, there is a general agreement that mentalizing models are formed in early mirroring relationships with a caregiver (Fonagy et al., 1991; Fonagy & Target, 1997). For a child's ability to comprehend another's mind and his or her own, the parental affect-mirroring against the child's automatic emotion expression is crucial in that the child recognizes and learns the representational character of the human mind through the parental reactivity (Fonagy & Target,

1997; Slade, 2005). In other words, the child's mentalizing capacity hinges on the continual opportunity to recognize the representational self in the mind of another. The capacity to understand the subjective state, thus, results from the observations of other's mental activity and the awareness of being observed (Fonagy et al., 2002; Fonagy et al., 1991; Rizq, 2005). The insecure attachment relationship, in this sense, prevents children from developing their mentalizing capacity and instigates false adaptive goals and strategies that make them desensitize the true sense of the self and fail to achieve self-organization (Fonagy & Tartget, 1997; Gergely, 2004).

As a consequence, both affect regulation and mentalization obviously play a pivotal role in shaping the sense of self and representational patterns of the self (Fonagy et al., 2002), and they are commonly characterized by socially adaptive and both inter- and intra-reflective capacity to organize the self (Choi-Kain & Gunderson, 2008; Slade, 2005). A child, therefore, forms an insecure state of mind due to the lack of social experiences to develop the capacity to regulate various affects and of opportunities to learn about others' mental states through the experiences (Fonagy et al., 2002; Slade, 2005). Many research findings (e.g., Fonagy & Target, 1997; Fonagy et al., 1991), as an example, demonstrate that insecurely attached infants are less likely to become mentalizing children and to regulate their affect in a harmonious way. Other research findings (e.g., Cozolino, 2006; Fries, Ziegler, Kurian, Jacoris, & Pollak, 2005; Schore, 1994, 2000, 2003b) also support that a child's good emotional attunement is deeply based on the growth and development of the brain through the good attachment with his or her caregiver, and its failure results in various disorders of the self.

Neuropsychological Understanding of Insecure Self

Both affect regulation and mentalization in terms of the development of the self are interdisciplinary. They are based not only on psychological but also on biological foundations (Fonagy et al., 2002; Harris, 2003; Knox, 2009; Swain, Lorberbaum, Kose, & Strathearn, 2007; Youell, 2007). Neuropsychologically, it is well established that the origin of the self or mind strongly appertains to the social environments, particularly attachment relationships (Cozolino, 2002, 2006; Decety & Sommerville, 2003; Harris, 2003; Knox, 2009; Lieberman, 2007; Schore, 1994, 2000, 2003a, 2003b; Siegel, 2001, 2006). Thus, how the insecure self is developed in terms of attachment theory can be illustrated from a neuropsychological perspective.

Two major concepts of neuropsychological studies will be emphasized to connect the formation of the insecure self to attachment relationship: *"social brain"* (Cozolino, 2002, 2006; Schore, 1994) and *"mirror neurons"* (Gallese, 2009; Keysers & Fadiga, 2008; Knox, 2009; Rizzolatti & Craighero, 2004; Schulte-Rüther et al., 2007). In organizing attachment relationship with neuropsychological evidences, Schore (1994) asserts that the first two years of social environment is very crucial for infants' brain development. During this critical period, the brain perceives external stimulations most sensitively and susceptibly, accelerating the growth of the various brain circuitries (Cozolino, 2002, 2006; Schore, 1994, 2003a, 2003b). Many research findings (e.g., Schore, 1994, 2001a, 2003b; Siegel, 2001, 2006; Swain et al., 2007), in the same vein, indicate that the maturation of the brain structure is substantially experience-dependent and that the development of the prefrontal cortex, the largest area of cerebral cortex and the core region for interaction with external world, is pivotally influenced by the early critical period.

Studies (e.g., Cozolino, 2006; Ramasubbu, Masalovich, Peltier, Holtzheimer, Heim, & Mayberg, 2007) also demonstrate that the primitive cortical structures such as the orbital medial prefrontal, insula, and cingulate cortices play an essential adaptive role in early social interactions by interconnecting limbic structures, which are central for processing social and emotional information. Particularly, the orbitofrontal region of the cerebral cortex takes three significant roles relating to the attachment process: social and emotional involvement, somatic and affect regulation, and the adjustment of emotional responses (Nitschke, Nelson, Rusch, Fox, Oakes, & Davidson, 2004; Schore, 1994, 2003b). Also, the orbitofrontal cortex is not only the first developing region of the frontal lobe but also is larger in the right hemisphere (Cozolino, 2006; Schore, 1994). This right-biased orbitofrontal neural connection reflects its executive role in the right-hemispheric social network and in somatic and emotional regulation (Cozolino, 2006; Kolb & Tayor, 2000). The evidence of earlier development of the right cortical hemisphere than of the left in infancy also indicates that the "shaping the self substrate" is deeply involved in processing and regulating emotional and social stimulations which come from early attachment interactions with a caregiver (Kolb & Tayor, 2000; Mohr, Rowe, & Crawford, 2008; Schore, 1994, 2000). The development of the social brain, in this vein, is closely connected to good affect regulation; conversely a strong neuropsychological evidence of insecure self can be found from affect dysregulation and immature development of the social brain (Cozolino, 2006; Schore, 2003).

Another neuropsychological evidence of linkage between shaping the self and attachment is the discovery of mirror neurons which robustly contributes to the research of mentalization, intersubjectivity, and the identification or representation of the self (Fonagy et al.,

2002; Gallese, 2009; Knox, 2009). Mirror neurons, found mostly in the premotor cortex and the inferior parietal cortex, fire in the brain both when an individual executes behavior and when he or she observes the same actions performed by someone else (Gallese, 2009; Keysers & Fadiga, 2008; Rizzloatti & Craighero, 2004). Due to this functional activation, mirror neurons are intimately related to social brain development, anchoring one's own neural system to the others' neural mechanism for social connectedness (Gallese, 2009; Rizzloatti & Craighero, 2004). In the mirror neuron system, audio-visual stimulations are significant triggers for activating neural motor representations in the observer's premotor cortex (Cozolino, 2002, 2006; Gallese, 2009; Rizzloatti & Craighero, 2004). However, the audio-visual data per se are not sufficient for the observer to comprehend the meaning of act without pre-existent experiential knowledge of the act (Gallese, 2009). That is, mirror neurons are activated on a neural substrate in the observer's motor system interconnected to other brain areas to integrate internal data with external inputs (Cozolino, 2002, 2006; Gallese, 2009).

Not only for this somatic operation, according to Gallese (2009), are mirror neurons activated but also for emotional mirroring purposes. Evaluating the emotional neural resonance on decayed food, for example, Wicker and his colleagues (2003) found that both observing disgust through facial expression and feeling disgust activates neural firing in the same area of the brain. This result implies that the capacity to empathize with others is deeply involved in the mirroring mechanism (Cozolino, 2006; Gallese, 2009; Schulte-Rüther et al., 2007). Therefore, the mirror neuron system matters in understanding the self since it explains the psychological origin of the representational self in a biological way associated with the early social mirroring experiences in attachment relationships. Mirroring activities between an infant and a caregiver

which stimulate mirror neurons to fire build the inner (*I*) and outer (*Me*) sense of self by constructing social identity and by integrating physical brain reactions with psychological interaction (Gallese, 2009; Youell, 2007). In other words, the lack of secure mirroring activities that results from insecure social relationship blunts an individual's sense of self, creating identity confusion and inhibiting ability to understand others' intentions (Knox, 2009; Youell, 2007). The lack of mirroring experiences also makes the individual feel isolated and discrepant and weakens the capacity of affect regulation and mentalization (Fonagy et al., 2002). Consequently, the quality of early attachment relationships with a caregiver directly affects the way the brain is wired and the pattern in which the individual comprehends the self and others (Cozolino, 2002, 2006; Schore, 1994, 2003a, 2003b).

In summary, the formation of the insecure self is deeply associated with early attachment relationships (Bowlby, 1973; Mikulincer, 1995). Because each attachment style is shaped by continual reinforcement of a relationship pattern with a caregiver, the insecure self stems from the negative reinforcement of affect regulation and mentalization in the relationship (Bowlby, 1973; Grossmann et al., 2006). This process of forming the insecure self is also supported by neuropsychological research (Fonagy et al., 2002; Harris, 2003; Knox, 2009; Youell, 2007). According to the studies, the development of the human brain is strongly dependent upon social experiences (Cozolino, 2002, 2006; Schore, 1994). The initial right-biased development of the brain indicates how the social experiences are interrelated with affect regulation and mentalization (Cozolino, 2006; Kolb & Tayor, 2000). Therefore, the insecure attachment pattern formed in childhood highly predicts (a) the lack of affect regulation and mentalization, (b) the

formation of the insecure sense of the self, and (c) the sense of self-discrepancy (Bowlby, 1973; Fonagy et al., 2002; Mikulincer, 1995).

Affect Dysregulation and Self-Discrepancy

Insecure Self and Affect Dysregulation

Studying the characteristics of the insecure self in the context of separation, Bowlby (1973) has regarded the failure to regulate anxiety and anger as an origin of insecurity in the human mind. Anxiety, according to Bowlby (1973), is allied to fear which is the emotional state that arises for a protection purpose. Insecure individuals are more likely to respond with intense fear than secure individuals because they feel the availability and accessibility of their attachment figure has been uncertain. This potentially increased inclination of the insecure individuals to fear results in dysfunctional anxiety and hyper-vigilance that causes continual fear in both familial and extra-familial situations (Bowlby, 1973). The inclination also makes the individuals develop and use a strong defense mechanism not only to protect themselves from fear-arousing situations, but also to maintain the insecurely formed psychological homeostasis (Bowlby, 1973; Firestone & Catlett, 1999).

Anger, like anxiety or fear, is also closely associated with mastering one's physical environment and controlling emotional regulatory function for facilitating problem solving (Lemeise & Dodge, 2000; Parrott, 2002). Bowlby (1973) claims that the dysfunctional anger which inhibits the regulatory roles of anger arises when the bond between individuals is weakened or alienated due to intense or continual anger which is followed by prolonged or repeated separation or threat of being abandoned. Anger, thus, is connected to the individual's

relationship to the environment; and dysfunctional anger results from the deterioration of ability to adapt to the environment (Lemeise & Dodge, 2000; Parrott, 2002). In this sense, insecure attachment – entailing dysfunctional anxiety, fear, and anger – keeps an individual not only from being emotionally regulated or functional but also from remaining socially attached or strengthened (Bowlby, 1973; Lemeise & Dodge, 2000).

Learning proper regulation skills and experiencing correct mirroring against negative emotions from a secure attachment relationship, therefore, are crucial for forming the secure self. The failure of regulating negative affect by the caregiver's absence or by the caregiver's insecure state of mind brings about forcing a child to internalize the representation of the caregiver's negative state of mind as a core working model of himself or herself (Fonagy et al., 2002; Rizq, 2005). Fonagy and his colleagues (2002) term this internalized false self formed by the caregiver's state of mind as the *alien self*; they also claim that this self is always unconnected to the actual self. The alien self can be also represented with two other types of false self in related literature: The *anti-self* (Firestone, 1997, 1999) and the *narcissistic self* (Bennett, 2006; Fonagy et al. 2002; Horvath & Morf, 2009). Firestone (1997) defines the anti-self as "the accumulation of negative introjects or buildup of internalized cynical or hostile [representations]" (p. 25). The anti-self, according to him (1997, 1999), is created in situations where parental ambivalence (e.g., love and rejection or hate) is dominant and inward anger is a major negative emotion in the anti-self system. More precisely, if a child continually uses a hyper-activating attachment strategy that causes a deficit of affect regulating ability due to ambivalent parenting, he or she accumulates and internalizes the negativity of parental representations into the self system, creating unconscious negative attitudes toward self and others (Firestone, 1997, 1999;

Mikulincer et al., 2003). On the other hand, the narcissistic self, characterized as an inflated view of self as special and superior, is involved in an insecure avoidant model of attachment (Bennett, 2006; Horvath & Morf, 2009). Narcissistic individuals usually utilize a de-activating attachment strategy which minimizes and represses negative emotions to avoid distressful situations. Thereby they have a deficit of mind-interpreting capacity because in looking for love and attunement they internalize a parent's dismissive pattern of relationship (Bennett, 2006; Cozolino, 2002; Fonagy et al., 2002). Regarding narcissistic affect dysregulation, Horvath and Morf (2009) claim that worthlessness is a major negative emotion for narcissistic individuals to try to defend and regulate for protecting their grandiose self-views, and that they use two major defense skills for regulating worthlessness: hypervigilance and avoidance.

Therefore, it is obvious that the insecure self, whether the anti-self or narcissistic self, results from the deficit of affect regulation and that the deficit also causes a strong tendency of the alien self to create division and discrepancy in the self (Fonagy et al., 2002). In addition, according to research outcomes (e.g., Giegling, Olgiati, Hartmann, Calati, Möller, Rujescu, & Serretti, 2009; Williams, Crane, Barnhofer, Van der Does, Segal, 2006), dysregulated and repressed negative emotions such as anxiety, anger, and worthlessness in insecure individuals closely correspond to the emotional traits of suicide.

Affect Dysregulation and Self-Discrepancy

The self-discrepancy theory, suggested by Higgins (1987), is a study of relating the self and human affect. The theory is proposed that different types of self-discrepancy are associated with different types of negative psychological situations in the self, and that the magnitude of

discrepancy in the self corresponds to the intensity of the related distinctive negative emotions. That is, the stronger an individual feels the distinctive emotions related to the types of discrepancy, the deeper discrepancy the individual has in the self (Boldero et al., 2005; Higgins, 1987). Affect dysregulation, in this sense, plays a critical role in making discrepancies in the self. As described in the first chapter, the major function of affect regulation is an emotional management, not only to modulate and control emotional impulses, but also to regulate and organize the self (Gross & Munoz, 1995; Rottenberg & Gross, 2007). In other words, affect dysregulation makes an individual fail to differentiate and to control the emotions, and feel confused and misconstrued about the self, creating the alien self fitting to the outcomes of affect dysregulation (Fonagy et al., 2002).

The alien self, therefore, corresponds to the two domains of the self in the self-discrepancy theory (Higgins, 1987): the *ideal self* and the *ought self*.[1] According to Higgins (1987), the ideal self is "[one's] representation of the attributes that someone (oneself or another) would like [the one] ideally to possess" (p. 320) and the *ought self* is "[one's] representation of the attributes that someone (oneself or another) believes [the one] should or ought to possess" (p. 321). In discussing the relationship of negative emotions to these two domains of the self, Higgins (1987) and Boldero, Moretti, Bell, and Fracis (2005) demonstrate that the discrepancy between the actual and the ideal self indicates the *absence of positive outcomes* which is uniquely connected to the dysregulation of dejection-related emotions (e.g., depression, sadness, shame, worthlessness, dissatisfaction). In this case, an individual believes that he lacks the qualities that match to the ideal state (Higgins, 1987). Likewise, they also claim that

[1] The actual self is included in the total domains of the self-discrepancy theory.

"discrepancies between the actual and [the ought self] represent the *presence of negative outcomes*" (Boldero et al., 2005, p. 139), which is uniquely related with the dysregulation of agitation-related emotions (e.g., anger, anxiety, tension, threat, guilt). In this case, an individual's state of mind does not match his or her responsibility imposed by sanctions (e.g., penalty) or related to negative consequences; and thereby the person is predicted to be vulnerable to feeling threatened or guilt (Higgins, 1987).

From an attachment perspective, two major theoretical overlaps are found in this relationship between self-discrepancy and emotions. First, the function between self-discrepancy and emotion is closely tied to the function of the individual's internal working model because the self-discrepancy theory assumes that emotional outcomes are determined by one's interpretation of external events which indicates one's significance or meaning to the events. This significance or meaning which brings about emotions, according to the self-discrepancy theory, depends on the relation between the actual self and the ideal or ought self (Boldero et al., 2005; Higgins, 1987). More specifically, individual differences or the types of discrepancy in the self are determined in accordance with how external events are interpreted by the individual's internal working models (Higgins, 1987; Pietromonaco & Barrett, 2000). This interpretation process, on the one hand, integrates the explicit meaning of the event with implicational meanings containing emotional memories in the implicational cognitive subsystem. On the other hand, it produces distinctive emotional impulses and arousal fitting to each type of discrepancy in the self (Boldero et al., 2005; Tong-gui, 2006).

Second, the relationship between discrepancy and emotions also reflects two types of alien self (the anti-self and the narcissistic self) and affect dysregulation. For example, the

discrepancy between the actual and the ideal self corresponds to the narcissistic state of mind. Narcissistic individuals tend to represent a grandiose sense of self by idealizing the self to be special and unique; however, their actual self privately hides fears of inferiority and emptiness (Cozolino, 2002; Horvath & Morf, 2009). Their inability to regulate their own affect reflects the reason why their self-representation is exaggerated and why they experience dejection-related emotions such as shame, emptiness, or worthlessness (Hotchkiss, 2005). Cozolino (2002) explains that the origin of formation of the narcissistic self occurs in neglectful parenting situations where no emotional mirroring or attunement was experienced.

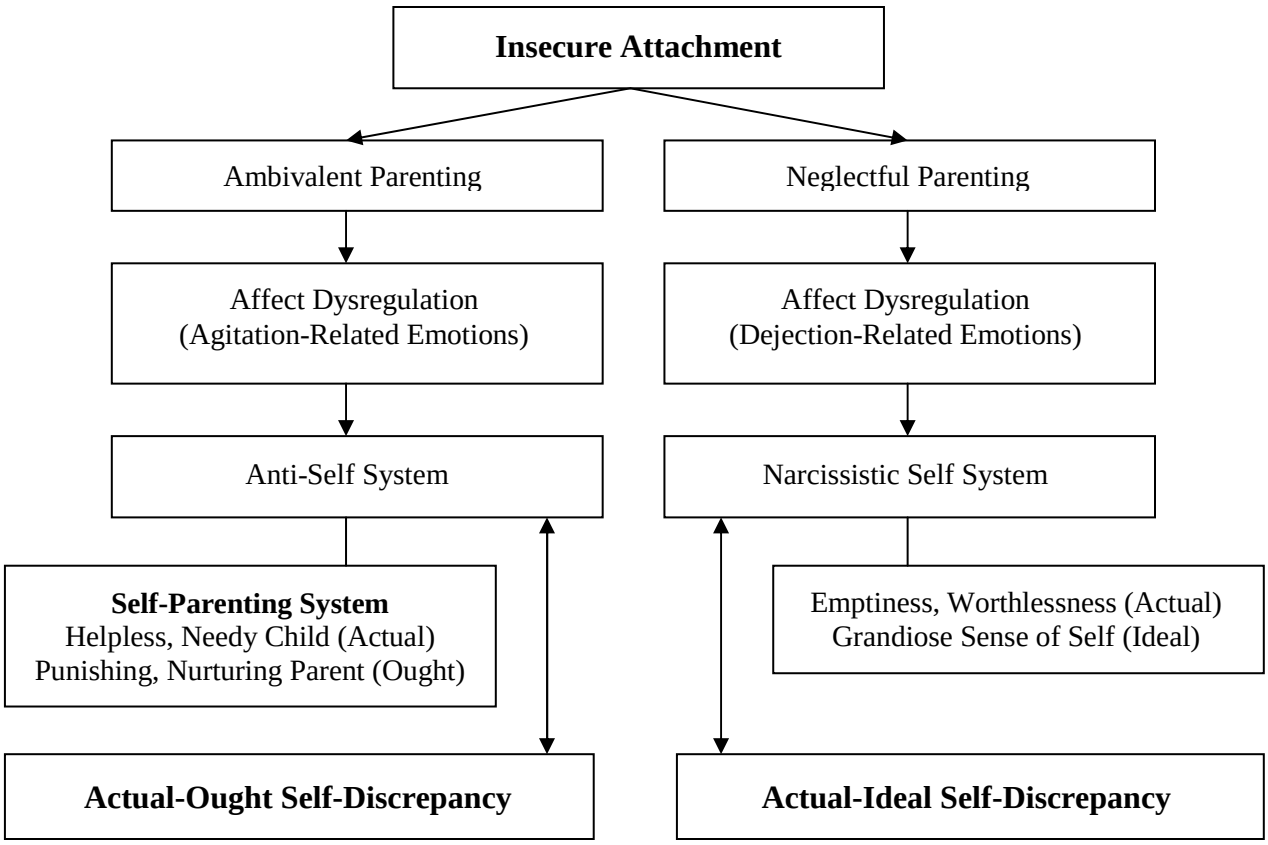
The discrepancy between the actual and the ought self, alternatively, corresponds to the anti-self state of mind. As the ought self includes the representation of the attributes or expectations that a significant other believes an individual should or ought to have (Boldero et al., 2005; Higgins, 1987), the anti-self system, according to Firestone (1997), also has the representation of a parent suggesting two essential systematic elements: the helpless, needy child and the punishing, nurturing parent. The anti-self system, in this sense, is a self-parenting system representing the parent's ambivalent style (love and hate) of child caring in terms of attachment. Not surprisingly, both the anti-self system and the actual/ought self system can be closely associated with agitation-related emotions such as fear, anger, or restless.

In summary, the core of self-discrepancy is its relation to the distinctive affect (Higgins, 1987). Affect dysregulation due to insecure attachment relationship, therefore, originates and develops discrepancy in the self. Higgins (1987) suggests three domains of the self to describe the discrepancy: the actual self, the ideal self, and the ought self. According to him, the actual/ideal self discrepancy creates dejection-related emotions, while the actual/ought self

discrepancy stimulates agitation-related emotions (Higgins, 1987). Since the types of discrepancy are determined by an individual's cognitive and affective interpretation about the self, the self-discrepancy is theoretically associated with both internal working models and two false self systems: anti-self (Firestone, 1997) and narcissistic self system (Fonagy et al., 2002; Horvath & Morf, 2009). A diagram of the self discrepancy, therefore, can be shown as follows:

Figure 2.1

A diagram of self-discrepancy



Self-Discrepancy and Suicidal Tendency

Cognitive Constriction as Self-Discrepancy

The concept of cognitive style refers to the way an individual understands, interprets, categorizes, and retrieves memory in the process of decision making and problem solving (Sheehy & O'Connor, 2002). A cognitive structure, on the other hand, can be described as the organized mental representations of previous experiences or knowledge that enable the individual to interpret and understand new stimuli (Sedikides & Skowronski, 1991). Many research outcomes support that the styles and structures of cognition are correlated to the internal working models and attachment patterns (Mikulincer, 1997; Tong-gui, 2006) and to types of the self-discrepancy (Marsh, 1999). For example, Mikulincer (1997) demonstrates that secure individuals are more likely to accept new information for processing and more likely to express in social judgments than insecure persons. Marsh (1999) explains the connection between the cognitive discrepancy and the types of self-discrepancy in an individual's perception of body image. Therefore, cognitive constriction is a type of cognitive style formed by an unhealthy cognitive structure that has a dichotomous way of information processing (Sheehy & O'Connor, 2002); and this distorted structure of cognition is more likely to be predisposed to insecurely attached individuals and to individuals who have strong discrepancy in the self (Barrett & Holmes, 2001; Marsh, 1999; Mikulincer & Shaver, 2007).

Ingram, Miranda, and Segal (1998) suggest two controversial approaches regarding this distorted style of information processing: a *distortion by commission* and a *distortion by omission*. A distortion by commission suggests that individuals change or transform positive or neutral information or stimuli into negative ones by the distorted cognitive structures (schema),

while a distortion by omission implies that individuals process negative information in an accurate and elaborate way but treat positive stimuli in an ignorant or omissive way (Ingram et al., 1998). Although the data processing style is different, the overall effect would be distortion and imbalance in cognition caused by an individual's cognitive preference (either schematic or negativity-biased) of availability and accessibility to the information or stimuli (Ingram et al., 1998).

Cognitive constriction, whether from a distortion by commission or from omission, likewise, is assumed to depend on the individual's cognitive preference of availability and accessibility. For example, individuals who have an actual/ideal type of self-discrepancy believe that their personal hopes or wishes cannot be filled or they fail to achieve significant others' hopes or wishes (Boldero et al., 2005; Higgins, 1987), because their hopes or wishes seem unavailable and inaccessible to achieve according to their cognitive preference (Ingram et al., 1998; Tong-gui, 2006). In the case of suicidal individuals who have the actual/the ideal self discrepancy, they tend to believe their ultimate goals or wishes could be achieved only through death because their actual self prefers to believe their availability and accessibility of goals or ideals are impossible to achieve and the pain could be permanent. They also tend to have dejection-related emotions (e.g., depression, frustration, worthlessness) that are strongly linked to suicidal thoughts (Cornette, Strauman, Abramson, & Busch, 2009). This way of thinking makes the individuals have cognitive constriction, instigating suicide ideation.

Alternatively, individuals who have an actual/ought type of self-discrepancy believe that they violate personally accepted moral standards (Boldero et al., 2005; Higgins, 1987). In this case, the individuals set the moral standard too high to achieve and they think that they must

comply with the rules to fulfill their own or significant others' hopes (Higgins, 1987). Suicidal individuals in this category tend to believe that they are useless because they feel that all faults or mistakes are from themselves, and that the only way to confirm to the rules for other people is to commit suicide (Adkins & Parker, 1996). Their agitation-related emotions such as guilt and anxiety also positively predict suicide ideation (Cornette et al., 2009; Tong-gui, 2006).

Therefore, cognitive constriction in suicidal people is strongly tied to self-discrepancy. For suicidal individuals, their only way to find and fulfill the ideal or the ought self, or to escape from hardship or acute mental pain could be a suicide which is a constricted-cognition-oriented behavior. Based on their negative implicational cognitive subsystem, their actual self feels and interprets that their difficulties or pain would be everlasting (Cornette et al., 2009; Higgins, 1987; Tong-gui, 2006). Investigating the writing characteristics of suicidal people on the internet, as an example, Bark and Miron (2005) found that suicidal individuals express more cognitive constrictions and emotional pain; also they are more distinctively self-focused in addressing and interpreting their events than non-suicidal people.

Perfectionism and Hopelessness in Suicide Ideation

With the characteristic of cognitive constriction, suicide ideation contains a range of expressions from simple thoughts about killing oneself to technically designed plans to commit suicide (Joiner, Steer, Brown, Beck, Pettit, & Rudd, 2003). Joiner and his associates (2003) categorize the suicide ideations of psychiatric outpatients into seven components: reasons for living (negatively); wish to die; wish not to live; passive attempt; desire for attempt; lack of deterrents to attempt; and talk of death or suicide. As these characteristics imply, suicide ideation

is strongly connected to perfectionism and hopelessness. For example, a great deal of study (e.g., Beevers & Miller, 2004; Gençöz, Vatan, Walker, & Lester, 2007; Hewitt, Flett, & Weber, 1994; Hewitt, Norten, Flett, Callander, & Cowan, 1998) demonstrates that perfectionism and hopelessness strongly influence an individual's conception of suicidal ideation and suicide attempts. Regarding perfectionism, in particular, Beevers and Miller (2004) found that perfectionism is statistically correlated to suicide ideation independently of both depression and hopelessness.

In general, perfectionism has two categories: *positive* and *negative or passive* perfectionism (Burns & Fedewa, 2005; Terry-Short, Owens, Slade, & Dewey, 1995); and *self-oriented, other-oriented,* and *socially prescribed* perfectionism (Hewitt & Flett, 1989; Hewitt et al., 1994). Perfectionism has been originally linked to maladaptive cognitive constructs that cause emotional distress and irrational beliefs such as avoidance, over-dependence, helplessness, hopelessness, or "should" and "must" thoughts (Burns & Fedewa, 2005). Positive perfectionism, in this sense, is an expanded perspective of perfectionism. Slade and Owens (1998) claim that both positive and negative perfectionism seem to be analogous in individuals' behavior but the core of perfectionism is totally different. Whereas positive perfectionism is optimistic, creative and conscientious, the negative one is discrepant, destructive, and intolerant.

Burns and Fedewa (2005) emphasize two characteristics of negative perfectionism: ruminative thoughts and categorical thinking. They explain that ruminative thoughts make individuals focus on "current aspects of the self and the environment rather than goal-directed modes of action" (p. 105), and that rumination also destroy the individuals' problem-solving ability. Categorical thinking, on the other hand, is characterized by a polarized pattern of

thinking or cognitive bias (Beevers & Miller, 2004; Burns & Fedewa, 2005). This dysfunctional way of thinking leads individuals to make a biased decision and to behave in a dichotomous way. Negative perfectionists, therefore, tend to excessively worry over the negative situation that they currently suffer, and the possibility of failure or mistake. They also tend to be cognitively and behaviorally biased (Adkins & Parker, 1996; Burns & Fedewa, 2005; Blatt, 1995). Many studies on perfectionism (e.g., Adkins & Parker, 1996; Beevers & Miller, 2004; Blatt, 1995; Hamilton & Schweizer, 2000) connect this negative or passive dimension of perfectionism to depression and suicide ideation.

In addition to the negative or passive dimension of perfectionism, many research findings (e.g., Hewitt et al., 1994; Hewitt et al., 1997) also explain suicidal ideation through the other category of perfectionism – self-oriented, other-oriented, and socially prescribed perfectionism. According to Hewitt, Flett, and Weber (1994), individuals who have self-oriented and socially prescribed perfectionism are more likely to have suicide ideation. They refer to self-oriented perfectionism as "a self-related dimension involving a strong motivation for oneself to be perfect, setting unrealistic self-standards, all or none thinking, and focusing on one's own flaws" (p. 441); and also define socially prescribed perfectionism as "an interpersonal dimension involving perceptions of one's need and inability to meet the standards and expectations imposed by others" (p. 441). Therefore, individuals who have self-oriented perfectionism have a strong tendency to be perfect, to focus on failures and mistakes, and to have a narrow range of problem solving skill (Ferrari & Mautz, 1997). Individuals who have socially prescribed perfectionism, alternatively, tend to have an irrational fear of being criticized by others, and thereby they set unrealistic standards to themselves for others' approval (Ferrari & Mautz, 1997). These irrational beliefs

that result from both self-oriented and socially prescribed perfectionism generate negative emotions and predict suicidal ideation. Particularly, if emotional pain is present, socially prescribed perfectionism is more likely to be connected to suicidal ideation (Blatt, 1995; Flamenbaum & Holden, 2007).

Hopelessness, like perfectionism, is also a strong precursor of suicide ideation (Gençöz et al., 2007; Lester & Walker, 2007; Williams et al., 2008). Cognitively, hopelessness is a biased interpretation regarding future expectancies (Miranda, Fontes, & Marroquín, 2008). For example, individuals who have hopelessness may predict future events from a negative or pessimistic perspective because of their maladaptive cognitive structure and negative thinking process. They tend to be certain in predicting negative future events rather than positive future events; that is, they have an imbalance in anticipating and interpreting their world or future (Miranda et al., 2008). Beck's hopelessness theory (Beck, 1986), for example, explains that an individual's negative mental representation creates a negative view of the future as well as a negative view of the self and the world (Grewal & Porter, 2007). He theorizes that suicide ideation occurs when the individual's reasoning is impaired and he or she is in hopelessness (Brown, Jeglic, Henriques, & Beck, 2006).

Another example of imbalance is Snyder's hope theory (Snyder, 2000), a branch of positive psychology. According to Grewal and Porter (2007), the core of hope theory is the thinking process of goals. The more imbalanced a person's thinking process, the more likely that they perceive their goal to be unachievable. Their expectancies of the future, therefore, depend on the balance of thinking process of "hope or goals" (Grewal & Porter, 2007).

Consequently, hopelessness is "a set of negative expectations about the future" rather than an emotional state (Ellis, 2006, p.17). Hopelessness is also closely associated with cognitive constriction and perfectionism in terms of an imbalanced pattern of cognition (Beevers & Miller, 2004). From an attachment perspective, this cognitive imbalance can be accurately explained with the internal working model. For example, Main, Kaplan, and Cassidy (1985) stressed cognitive aspects of working models using the term, "schemata." Particularly, they highlighted "general event schemata" that systemize one's experiences as a structured process that contextualizes emotion and cognition and interprets and predicts the event in the sequences of thoughts and action:

> …what is encoded by and guides the individual is not a concept abstracted out of static environmental features but a generalized representation of the events experienced. In this view, the child's memory is seen as being guided by general event schemata that organize experience in terms of reactions, goal paths, attempts, and outcomes. A young child's knowledge of relationships will then be organized schematically rather than categorically, that is, by actions and action outcomes rather than by the abstraction from the environment of similarities and differences. (p. 75)

Accordingly, the cognitive structure (schema), formed by attachment relationships in childhood, plays a catalytic role in interpreting and anticipating the events in adulthood. Therefore, the tendency of cognitive constriction, perfectionism, and hopelessness are derived from the cognitive structure of the self; and each tendency is concurrently interrelated, creating suicide ideation (Beevers & Miller, 2004; Hunter & O'Connor, 2003).

Summary

The model of suicide in this study stresses the relationship among insecure attachment, self-discrepancy, and suicidal tendency. In this chapter, the formation of the insecure self was

most emphasized because of its initial etiological position in the model. Attachment theory (Bowlby, 1969/1982), as a primary cause of the insecure self, has provided a good framework for understanding how individuals interpret themselves, others, and situations. In relation to attachment theory, the main causal factors of the insecure self are affect dysregulation and lack of mentalization (Fonagy et al., 2002). Due to these two causal factors, two insecure self systems are originated: the anti-self system (Firestone, 1997, 1999) and the narcissistic self system (Bennett, 2006; Fonagy et al., 2002; Horvath & Morf, 2009). Each insecure self system is also related to a specific self-discrepancy. Because self-discrepancy theory (Higgins, 1987) is an affect relation theory, self-discrepancy is highly related to affect dysregulation. Consequently, affect dysregulation and lack of mentalization, which are a result of insecure attachment relationships, originate and develop discrepancy in the self (Boldero et al., 2005; Pietromonaco & Barrett, 2000).

Self-discrepancy is also strongly associated with cognitive constriction, which is a core element of suicide ideation (Jobes & Nelson, 2006; Sheehy & O'Connor, 2002). Like self-discrepancy theory, cognitive constriction can be explained by an imbalance of interpretation (Sheehy & O'Connor, 2002). This imbalance of information processing produces perfectionism and hopelessness, creating suicide ideation. Many research findings (e.g., Beevers & Miller, 2004; Gençöz et al., 2007; Hewitt et al., 1994; Hewitt et al., 1998) demonstrate that perfectionism and hopelessness strongly predict suicide ideation or suicide attempts.

CHAPTER THREE: METHOD

In a research model including a mediator, the role of a mediator is to transmit the effects of the predictor variable to the outcome variable (Vogt, 1999). In this study, self-discrepancy mediated the path from insecure attachment to suicidal tendency. A mediator refers to a variable demonstrating "how" or "why" a predictor variable produces or causes an outcome variable in a sequential way (Frazier, Tix, & Barron, 2004). The most common way to explain the model with a mediator variable is to utilize path analysis (Grimm & Yarnold, 1995).

Focusing on the role of the mediator, therefore, the present study, by using path analysis, tested and answered the four following research questions that were described in the first chapter: First, to what extent does suicidal tendency vary regarding anxiety or avoidance dimension in attachment? Second, to what extent does self-discrepancy (actual/ideal or actual/ought) vary regarding anxiety or avoidance dimension in attachment? Third, to what extent does suicidal tendency vary regarding actual/ideal or actual/ought self-discrepancy? Fourth, to what extent does actual/ideal or actual/ought self-discrepancy mediate the effect of the anxiety or avoidance dimension in attachment on the suicidal tendency?

In this chapter, the researcher described four major methodological subsections: a research design to explain how to obtain raw data; hypotheses to test the relationship between variables; a procedure to describe the agendas of the research process, including ethical issues; and data processing and analysis to test the research model.

Research Design

This study was intended to examine the path model among the following three variables: insecure attachment, self-discrepancy, and suicidal tendency. For this research purpose, a correlational design was employed as a research design for the present study. One of the major characteristics of correlational research is that it makes it possible to predict the value of an outcome variable from the value of a predict variable (Bordens & Abbott, 2002). In other words, the value of self-discrepancy can be predicted from the value of insecure attachment style; the value of suicidal tendency can be potentially calculated from the value of self-discrepancy in this study. This characteristic also matches with the structural features of path analysis.

Another characteristic of correlational research is that it makes it possible to observe variables without manipulation (Bordens & Abbott, 2002). Because correlational analysis is used to determine the nature of relationship between variables, the value of variables totally depends on the participants, not on the researcher. For this reason, a survey method using questionnaires was utilized to obtain raw data. The survey questionnaire was based on three psychological instruments: The Experiences in Close Relationships Scale-Short Form (ECR-S, Wei, Russell, Mallinckrodt, & Vogel, 2007), the Integrated Self-Discrepancy Index (ISDI, Hardin & Lakin, 2009), and the Positive and Negative Suicide Ideation Inventory (PANSI, Osman, Gutierrez, Kopper, Barrios, & Chiros, 1998). Also, a demographic questionnaire was included in the survey package to understand the participants' background. The survey was administered to Korean and Korean-American adult population.

Selection of Participants

As stated in the first chapter, the qualification of participation to survey was limited to Korean population, and to focus on adult attachment, the age of the sample was restricted to 20 years old and above. A cluster sampling method was used to recruit the sample. Clusters consisted of Koreans who use mental and social facilities (e.g., community centers, and counseling or social services) in Chŭngnam in South Korea, and Korean immigrants in Virginia and Maryland. There were no limitations in socioeconomic conditions, marriage status, and religious preference.

To combine both Korean and Korean-American samples into one single sample for unified analysis, *t*-tests and chi-square (χ^2) tests were used for measuring the difference between the samples. There was no significant statistical difference between the sample groups.

Instrumentation

Three different self-report instruments were administered to the participants: the ECR-S (Appendix E), the ISDI (Appendix D), and the PANSI (Appendix F).

The Experiences in Close Relationships Scale-Short Form (ECR-S)

The ECR-S which was developed by Wei et al. (2007) measures adult attachment subscales of anxiety and avoidance. Each subscale contains six items for each attachment dimension. The original version of ECR, developed by Brennan, Clark, and Shaver (1998), has the same subscales as ECR-S, containing 36 items of attachment-related statements. The ECR-S consists of 12 items which were selected from the original 36-item inventory. Participants rated

each statement regarding their close relationships on 7-point Likert-type scale ranging from 1(disagree strongly) to 7(agree strongly).

For classification, individuals who score high on anxiety and low on avoidance are categorized as the insecure-ambivalent/anxious group; individuals who score high on avoidance and low on anxiety are classified as the insecure-avoidant group. Low scores on both subscales of anxiety and avoidance indicate secure attachment, and high scores on both subscales as insecure-disorganized attachment. In this study, only two subscales (insecure-anxiety and insecure-avoidance dimensions) were tested and analyzed to connect to the two subscales (the actual/ideal and the actual/ought self-discrepancy) of the ISDI. The higher the scores on each subscale that individuals have, the higher levels of anxious or avoidant attachment pattern they have in their relationships.

Regarding psychometric properties, Wei and her colleagues (2007) provided the internal consistency reliability, test-retest reliability and validity of the short form measure through factor analyses. For internal consistencies for the subscales of the short version of ECR, coefficient alphas were .78 for the Anxiety subscale and .84 for the Avoidance subscale. Although the coefficient alpha score of the ECR-S is lower than that of the original 36-item ECR (.92 for Anxiety, and .93 for avoidance), the ECR-S still has good internal consistency reliability for future research. The test-retest reliability of the ECR-S was .86 for the anxiety subscale and .82 for the avoidance subscale.

Regarding correlations with validity, the anxiety subscale of ECR-S was correlated with *excessive reassurance seeking* (r = .41 - .45) from the Excessive Reassurance Seeking Scale (Joiner & Metalsky, 2001) and with an *emotional reactivity* subscale (r = .27 - .45) from

Differentiation of Self Inventory (Skowron & Friedlander, 1998). The avoidance subscale of ECR-S was significantly correlated with an *emotional cutoff* item (r = .25 - .59) from Differentiation of Self Inventory (Skowron & Friedlander, 1998). Wei and her colleagues (2007) also supported the validity of the ECR-S through the equivalent factor structure analysis between the short and original version of ECR.

The Integrated Self-Discrepancy Index (ISDI)

The ISDI was developed by Hardin and Lakin (2009) to provide a new system for assessing self-discrepancy by modifying the Selves Questionnaire. The ISDI was designed to measure ideal or ought self-discrepancies from a participant's own and/or a significant other's standpoint, integrating idiographic and nomothetic methods (Hardin & Lakin, 2009). In the present study, only ideal-own and ought-other self-discrepancies were evaluated to link insecure avoidant and insecure ambivalent attachment subscales. As an idiographic method, participants were asked to list five traits or attributes that they believe they would ideally like to possess as their ultimate goals for themselves; and to list another five qualities that the participants believe that their significant others think the participants should or ought to possess. After creating the qualities for each self-state, the participants were presented 60 adjectives as a nomothetic method to modify or choose to complete their answers (if the list is less than 5 qualities). After completing the answers, the participants were asked to rate the extent of how much they thought the listed answer actually described their current self-state from 1 (Does not describes me at all) to 5 (Completely describes me). For scoring, the average of the rating scores is their self-

discrepancy score. To make higher ratings larger discrepancies, the scores from the samples were reversely calculated in this study.

Regarding reliability, Hardin and Lakin (2009) provided the Cronbach's alpha scores from a sample of 169 university students. The reliability score of *ideal* self-discrepancy was .81; whereas the score of *ought* self-discrepancy was .80. Additionally, they found that ideal self-discrepancies were significantly correlated with depressive symptoms; ought self-discrepancies were significantly correlated with social anxiety symptoms. This result accounts for Higgins' (1987) theory that specific types of self-discrepancies are related to different kinds of emotional vulnerabilities.

The Positive and Negative Suicide Ideation (PANSI)

The PANSI which was developed by Osman et al. (1998) measures positive and negative thoughts about suicide. The PANSI has two subscales, positive suicide ideation (PI) and negative suicide ideationv(NI), containing seven items in each. The PI subscale measures thoughts that are "buffers against the possibility of suicide or parasuicidal behaviors" (Corcoran & Fischer, 2000, p. 589); the NI subscale, on the other hand, assesses active suicide ideations. Participants rated each statement regarding suicide ideation on a 5-point Likert-type scale ranging from 1 (None of the time) to 5 (Most of the time). For scoring, the average of the rating scores of each subscale is the subscale's suicide ideation score with higher ratings representing more positive or negative suicide ideations (Corcoran & Fischer, 2000). In this study, the total score was computed and analyzed to measure the suicidal tendency variable.

Regarding psychometric properties, Muehlenkamp, Gutierrez, Osman, and Barrios (2005) present the reliability and the validity of the PANSI in a diverse sample of young adults. The sample consists of Caucasians (51.4%), African Americans (29.7%), Latino/Hispanic Americans (9.8%), and Asian Americans (9.1%). They found that the reliability analyses show good internal consistency supporting the reliability within the diverse groups of sample. Cronbach Alpha scores were .85 (Caucasians) and .83 (Asian American) for the PANSI-PI; whereas .92 (Caucasians) and .93 (Asian American) for the PANSI-NI.

They also found that correlational analyses support the adequate validity of the PANSI. Scores on the NI scale were positively and significantly associated with the scores of suicidal behavior, hopelessness, and negative affect from other suicide-related instruments (e.g., the Suicidal Behaviors Questionnaire-Revised; the Beck Hopelessness Scale; the Positive and Negative Affect Schedule Scale; the Reasons for Living Inventory for Young Adults; the Self-Harm Behavior Questionnaire). Alternatively, scores on the PI scale correlated significantly and inversely with the scores of items that belong to other suicide-related instruments.

Demographic Information

The demographic questionnaire was designed to ask the participants' background information. The questionnaire contained age, marital status, religious preference, income, educational level, and occupation. The questionnaire also asked about participants' history of any particular mental disorders (e.g. depression, anxiety, and substance abuse) and their episode of suicide ideation or trials. The questionnaire is attached to the appendix C.

Translation and Back Translation

The original English versions of the ECR-S, the ISDI, and the PANSI were translated from English into Korean for the participants. Three steps of translation procedure were taken to control for validity in content. First, a qualified bilingual individual who is fluent in Korean and English translated the original English questionnaires into Korean. Second, a second qualified bilingual individual then translated the translated Korean version of questionnaires back to English. Third, both translated versions of questionnaires were compared with the original versions by a third bilingual individual to verify no difference among them. All translators have been over 25 years in the United States and two of them have a bachelor degree and one has a doctoral degree.

Research Hypotheses

This study was designed to evaluate the path model among insecure attachment, self-discrepancy and suicidal tendency. Attachment serves as a framework for forming an individual's self-concept; at the same time, the discrepancy between the actual self and the idealized self predicts suicidal tendency. Based on this path model, the following hypotheses were proposed:

Hypothesis 1: Anxiety dimension in insecure attachment is correlated with suicidal tendency. More specifically, more anxiously attached individuals will report having higher tendencies of suicide than less anxiously attached individuals.

Null Hypothesis 1: There is no correlation between anxiety dimension in insecure attachment and suicidal tendency. More specifically, more anxiously attached individuals will report having lower tendencies of suicide than less anxiously attached individuals.

Hypothesis 2: Avoidance dimension in insecure attachment is correlated with suicidal tendency. More specifically, more avoidantly attached individuals will report having higher tendencies of suicide than less avoidantly attached individuals.

Null Hypothesis 2: There is no correlation between avoidance dimension in insecure attachment and suicidal tendency. More specifically, more avoidanly attached individuals will report having lower tendencies of suicide than less avoidantly attached individuals.

Hypothesis 3: Anxiety dimension in insecure attachment is correlated with actual/ideal self-discrepancy. More specifically, more anxiously attached individuals will get higher score of actual/ideal self-discrepancy than less anxiously attached individuals.

Null Hypothesis 3: There is no correlation between anxiety dimension in insecure attachment and actual/ideal self-discrepancy. More specifically, more anxiously attached individuals will report having lower score of actual/ideal self-discrepancy than less anxiously attached individuals.

Hypothesis 4: Anxiety dimension in insecure attachment is correlated with actual/ought self-discrepancy. More specifically, more anxiously attached individuals will get higher score of actual/ought self-discrepancy than less anxiously attached individuals.

Null Hypothesis 4: There is no correlation between anxiety dimension in insecure attachment and actual/ought self-discrepancy. More specifically, more anxiously attached

individuals will report having lower score of actual/ought self-discrepancy than less anxiously attached individuals.

Hypothesis 5: Avoidance dimension in insecure attachment is correlated with actual/ideal self-discrepancy. More specifically, more avoidantly attached individuals will get higher score of actual/ideal self-discrepancy than less avoidantly attached individuals.

Null Hypothesis 5: There is no correlation between avoidance dimension in insecure attachment and actual/ideal self-discrepancy. More specifically, more avoidantly attached individuals will report having lower score of actual/ideal self-discrepancy than less avoidantly attached individuals.

Hypothesis 6: Avoidance dimension in insecure attachment is correlated with actual/ought self-discrepancy. More specifically, more avoidantly attached individuals will get higher score of actual/ought self-discrepancy than less avoidantly attached individuals.

Null Hypothesis 6: There is no correlation between avoidance dimension in insecure attachment and actual/ought self-discrepancy. More specifically, more avoidantly attached individuals will report having lower score of actual/ought self-discrepancy than less avoidantly attached individuals.

Hypothesis 7: Self-discrepancy is correlated with suicidal tendency. More specifically, (a) individuals who get higher scores in actual/ideal self-discrepancy will report having higher tendencies of suicide than individuals who get lower scores in actual/ideal self-discrepancy; (b) individuals who get higher scores in ought/ideal self-discrepancy will report having higher tendencies of suicide than individuals who get lower scores in ought/ideal self-discrepancy.

Null Hypothesis 7: There is no correlation between self-discrepancy and suicidal tendency. More specifically, (a) individuals who get higher scores in actual/ideal self-discrepancy will report having lower tendencies of suicide than individuals who get lower scores in actual/ideal self-discrepancy; (b) individuals who get higher scores in ought/ideal self-discrepancy will report having lower tendencies of suicide than individuals who get lower scores in ought/ideal self-discrepancy.

Hypothesis 8: Self-discrepancy has a partial mediating effect in the relationship between insecure attachment and suicidal tendency. More technically, (a) in the attachment-avoidance dimension, individuals with higher actual/ideal self-discrepancy will report higher suicidal tendency. The path coefficient from independent variable (attachment-avoidance) to a dependent variable (suicidal tendency) will be reduced when the mediator, self-discrepancy (actual/ideal), is controlled. (b) In the attachment-anxiety dimension, individuals with higher actual/ought self-discrepancy will report higher suicidal tendency. The path coefficient from independent variable (attachment-anxiety) to a dependent variable (suicidal tendency) will be reduced when the mediator, self-discrepancy (actual/ought), is controlled.

Null Hypothesis 8: Self-discrepancy does not have a mediating effect in the relationship between insecure attachment and suicidal tendency. More technically, (a) in the attachment-avoidance dimension, individuals with higher actual/ideal self-discrepancy will report lower suicidal tendency. The path coefficient from independent variable (attachment-avoidance) to a dependent variable (suicidal tendency) will not be reduced when the mediator, self-discrepancy (actual/ideal), is controlled. (b) In the attachment-avoidance dimension, individuals with higher actual/ought self-discrepancy will report lower suicidal tendency. The path coefficient from

independent variable (attachment-anxiety) to a dependent variable (suicidal tendency) will not be reduced when the mediator, self-discrepancy (actual/ought), is controlled.

Research Procedures

After the present study was approved by the Liberty University Institutional Review Board (IRB), the researcher recruited the sample from both South Korea and the United States. For the Korean sample, the researcher contacted the directors of mental or social facilities in Chŭngnam, South Korea, to request approval for recruitment. Among the facilities contacted, three counseling centers and three social community centers provided approval for the research survey. For Korean-American participants, the researcher visited some Korean communities such as Korean churches and mental facilities to recruit. Two pastors allowed to recruit the samples. In total, eight facilities participated in this study.

Both Korean and Korean-American participants received the same survey packet that contained a survey invitation letter (Appendix A), an informed consent form (Appendix B), a demographic questionnaire (Appendix C), and three psychological instruments: the ECR-S (Appendix E), the ISDI (Appendix D), and the PANSI (Appendix F). All participants were asked to read and comprehend the instructions for the survey, to respond all questionnaires, and to submit the final survey packet to the directors who granted permissions to survey.

Ethical Considerations

In order to conduct this present study ethically, several strategies and procedures were employed. Firstly, the research survey did not ask private questions such as name, address, or

phone number. Returned survey was totally anonymous without means of identifying the respondent. Additionally, an informed consent form and a statement of research purpose were provided along with the contact information of the researcher in case of emerging additional questions regarding the survey (Appendix B).

For confidentiality of the participants, secondly, all data collected from the sample were used only for the current research purpose and was not distributed, shared, or circulated for any other purpose. In the case of this study being published in the future, only aggregate statistical data will be reported or cited; no raw data or original copies of the survey will be circulated.

Thirdly, the collected paper copies of the data were stored in the researcher's security container that only the researcher can access. All collected data will be stored or saved for 5 years.

Data Analysis

The first facet of data analysis was descriptive statistical analyses to describe the sample and each variable. This process included means, standard deviation, reliability coefficient, and frequencies. SAS 9.2 was used to calculate the data. As the second facet, simple linear and multiple regression analyses were used to evaluate the research hypotheses regarding the path model:

Research Question 1: To what extent does suicidal tendency vary regarding anxiety or avoidance dimension in attachment?

Hypotheses (#1 and 2) emerged from the first research question. Simple linear regression analyses were used to answer the first research question. Through the analyses, Pearson-product

correlation coefficients (*r*), which indicate the extent of correlation between the dependent variable and the independent variable, were calculated to find the effect of the two dimensions of attachment on suicidal tendency.

Research Question 2: To what extent does self-discrepancy (actual/ideal or actual/ought) vary regarding anxiety or avoidance dimension in attachment?

Hypotheses (#3, 4, 5, and 6) emerged from the second research question. Simple linear regression analyses were used to answer the second research question. The same statistical method was employed which was used in the first research question.

Research Question 3: To what extent does suicidal tendency vary regarding actual/ideal or actual/ought self-discrepancy?

One hypothesis (#7) emerged from the second research question. Like the first research question, the third research question also used simple linear regression analyses to address the model. The same statistical method was employed which was used in the first research question.

Research Question 4: To what extent does actual/ideal or actual/ought self-discrepancy mediate the effect of the anxiety or avoidance dimension in attachment on the suicidal tendency?

One hypothesis (#8) emerged from this research question. To test the hypothesis, a path analyses were conducted to confirm the mediating role of self-discrepancy. Multiple regression analyses were used to explain the hypothesis. For the self-discrepancy to be a mediator, the effect size of the path from insecure attachment to suicidal tendencies should be diminished when the mediator, self-discrepancy, is controlled.

Summary

There are three variables in this study: insecure attachment, self-discrepancy, and suicidal tendency. To measure the variables, three psychological instruments were utilized: the ECR-S for adult attachment styles, the ISDI for self-discrepancy, and the PANSI for suicidal ideation. The research design for this study was a correlation design that proves interacting or causal relationships; the research method was a survey using questionnaires. The survey packet included an instruction guide, an informed consent form, a demographic questionnaire, and the three psychological scales. For sample recruitment, a cluster sampling method was employed, targeting Korean and Korean-American population whose age is 20 and above. For data analysis, descriptive analysis was performed prior to path analyses. Three research questions were answered and described using simple linear regression analyses and one research question was answered using multiple regression analyses. SAS 9.2 was utilized for descriptive statistics and multiple regression analyses.

CHAPTER FOUR: DATA ANALYSIS AND RESULTS

The purpose of this study was to investigate the relationship between insecure attachment and suicidal tendency with a mediator of self-discrepancy in a sample of Korean and Korean-American. To reach the purpose, the study employed a correlational design with a survey method. In this chapter, the researcher analyzed the survey data to obtain statistical results and tested the hypotheses to answer the research questions. In the first section, preliminary analyses of data were performed to understand basic statistical conditions of the data. The preliminary analyses encompassed descriptive statistics of demographic data, descriptive statistics of variables, missing data, multicollinearity, skewness and kurtosis. The second section included the descriptive statistics of measurements and the analyses of measurement reliability. In the third section, bivariate analyses were performed to test the correlation between variables. Research questions from one to three were analyzed in this section. In multivariate analyses as the final section, the fourth research question was analyzed to verify the research model by employing path analyses. The direct and indirect effects of mediating paths were tested to confirm the path models.

Preliminary Analyses

Descriptive Statistics of Demographic Data

The sample in the current study consisted of 229 participants whose mean age was 29.6 (SD= 11.08, range = 20 – 70). The majority of participants were female (N=176, 76.86%) whose

mean age was 28.91 (SD=10.75, range = 20 – 70) but there were 53 male participants (23.14%) whose mean age was 32.02 (SD=11.91, range = 20 – 64). The mean scores, standard deviation, and percentages of the demographic information of the study are presented in Table 4.1. Among 229 participants involved in this study, 199 (86.9%) were from Chungnam, South Korea, and 30 (13.1%) were from Virginia and Maryland, the United States. The statistical result of *t*-test and chi-square (χ^2) test for the sample groups from different locations verified that the sample groups were not significantly different and thereby they were combined together as a single sample for the analysis.

Regarding marital condition, 27.51% (N=63) of the sample were currently married, 70.31% were currently single (N=161), .87% (N=2) were remarried and .87% (N=2) were divorced. Concerning educational attainment of the sample, a total of 7.86% (N=18) have completed the graduate level of education; 31% (N=71) have completed the 4-year college level of education; 12.23% (N=28) have finished the 2-year college level of education; 48.47% (N=111) graduated from high school; only .44% (N=1) of the population have not finished any high school. Related to the religious preference, 56.77% (N=130) of the sample answered that they are Protestants; 7.42% (N=17) responded they are Catholics; 5.24% (N=12) reported they are Buddhists; and 30.13% (N=69) of the sample answered they are atheists.

Of the sampled population, concerning the mental health and suicidal tendency, only 11 cases (4.80%) reported they have been diagnosed with one or more mental disorders; 105 participants (45.85%) reported they have suicidal ideation but have never attempted; 8 participants (3.49%) responded they attempted suicide once; and three participants (1.31%) answered they attempted suicide twice or more.

Table 4.1

Descriptive and Frequency Statistics of the Sample

Variable	Frequency	Percent	Mean	St.D	Range
Research Site					
South Korea	199	86.90			
The US	30	13.10			
Age	229		29.63	11.08	20-70
Gender					
Male	53	23.14			
Female	176	76.86			
Education					
< High School	1	0.44			
High School Diploma	111	48.47			
Bachelor's Degree	99	43.23			
> Master's Degree	18	7.86			
Family Income					
<10,000 dollars	21	9.17			
10,000 – 20,000	26	11.35			
20,001 – 40,000	90	39.30			
40,001 – 70,000	57	24.89			
70,001 – 100,000	25	10.92			
> 100,000	10	4.37			
Marital Status					
Single	161	70.31			
Married	63	27.51			
Separated	1	0.44			
Divorced	2	0.87			
Remarried	2	0.87			
Mental Disorder					
Depression	9	3.93			
Anxiety	2	0.87			
No Problems	218	95.20			
Suicide Ideation/Attempts					
S. Ideation with no attempts	105	45.85			
One time attempt	8	3.49			
More than two times	3	1.31			
No S. Ideation and attempts	113	49.34			
Indirect Suicide Experience					
Family members	20	8.73			
Relatives/Friends	48	20.96			
No Experience	161	70.31			

Missing Data

The total samples participated in this study were originally 282. However, the data from 53 participants were deleted due to the missing values. Most of missing values came from the ISDI test (Hardin & Lakin, 2009) in this study. Only one came from the ECR-S (Wei et al., 2007) and one from the PANSI (Osman et al., 1998). Even though the participants were informed regarding the directions of the questionnaires, some of the participants skipped the ISDI or did not score the adjectives they wrote. The total of 229 data, consequently, was analyzed for the study.

Multicollinearity

Multicollinearity occurs when two or more independent variables (predictor and mediator variables) are highly inter-correlated (e.g. >.85) and they significantly influence the model equation with the same information (Grimm & Yarnold, 1995; Motulsky, n.d.; Vogt, 1999). This is a problem because it makes it hard to ascertain the individual effect of predict variables on the outcome variable (Kenny, 2009; Vogt, 1999). To detect and remove the multicollinearity problem, the researcher examined bivariate correation analyses (see Table 4.6). As presented in Table 4.6, there are two correlation coefficients higher than .85: the relationships between the ISDI variable and the actual/ideal variable, and between the ISDI variable and actual/ought variable. Although they are highly correlated in their own relationship, the correlations are not a significant problem because the relationships are intra-relationships in the same scale. Also, the current research model equation does not include these relationships as the paths for analyzing the effect size among the predictor, mediator, and outcome variable.

Skewness and Kurtosis Values of the Data

The skewness and kurtosis values for all variables were presented in Table 4.2. Skewness refers to asymmetrical distribution of scores or measures (Vogt, 1999). More technically, a positive skewed distribution occurs when most of scores are below the mean, whereas a negative skewed distribution follows in the opposite case. Kurtosis, on the other hand, refers to the degree of peakedness in a graphic curve representing a frequency distribution (Vogt, 1999). The more a kurtosis value is positive, the higher the peak is in the graphic curve. In both skewness and kurtosis, the value of 0 indicates that a distribution is symmetrical; generally the values between -2.0 to 3.5 are acceptable for the research (Lei & Lomax, 2005).

As presented in Table 4.2, all the values of insecure attachment, self-discrepancy, and suicidal ideation were within the range of -2.0 to 3.5, which are acceptable limits to be a normal distribution for each measure of the predict, the mediator, and the outcome variable.

Table 4.2

Skewness and Kurtosis Values of the Data

Variable	N	Skewness	Kurtosis
Insecure Attachment ECR-S (Total)	229	-0.14	-0.42
Insecure Anxiety	229	0.22	0.12
Insecure Avoidance	229	-0.02	-0.40
Self-Discrepancy ISDI (Total)	229	0.13	0.11
Actual/Ideal	229	-0.01	-0.29
Actual/Ought	229	0.01	-0.09
Suicidal Tendency PANSI (Total)	229	1.09	1.24
Cognitive Constriction	229	1.96	3.29

Analyses of Measurements

Descriptive Statistics of Measurements

The demographic attributes of the predictor and mediator variables (i.e., attachment dimensions, and types of self-discrepancy) were presented in Table 4.3. Attachment dimensions were discovered by summing participant's scores on the ECR-S scale. The possible range of scores of ECR-S is from 1 to 7. The range of the scale in this sample was from 1.42 to 5.42, with the mean of 3.31 (SD=0.74). As a subscale of the ECR-S, the anxiety attachment scale had scores ranging from 1.0 to 7.0 with a mean of 3.58 (SD=1.07). Another subscale, the avoidant attachment scale, had scores ranging from 1.0 to 5.67 with a mean of 3.05 (SD=0.89).

Self-discrepancy types were discovered by computing each participant's score of the ISDI scale. The scores of the ISDI in this study ranged from 1.0 to 5.0 and the mean of the ISDI was 2.92 (SD=0.76). As two subscales of the ISDI, the actual/ideal scale had scores ranging from 1.0 to 5.0 with a mean of 2.94 (SD=0.87), whereas the actual/ought scale had scores ranging from 1.0 to 5.0 with a mean of 2.9 (SD=0.84).

The demographic attributes of the outcome variable, suicidal tendency, was presented in Table 4.3. Suicidal tendencies were discovered by analyzing 229 participants' scores of the PANSI scale. The possible range of the PANSI is from 1 to 5. The range of the scale from the participants was from 1.0 to 4.0, with the mean of 1.87 (SD=0.61). Of the 229 participants involved in this study, even though more than half of the participants (N=116, 50.65%) reported that they have either experience of suicidal ideation or attempts, most of participants responded with low scores on the PANSI test.

Table 4.3

Descriptive Statistics of Measures

Variable	N	Mean	Std. D	Minimum	Maximum
ECR-S	229	3.31	0.74	1.42	5.42
Insecure Anxious	229	3.58	1.07	1.0	7.0
Insecure Avoidant	229	3.05	0.89	1.0	5.67
ISDI	229	2.92	0.76	1.0	5.0
Actual/Ideal	229	2.94	0.87	1.0	5.0
Actual/Ought	229	2.90	0.84	1.0	5.0
PANSI	229	1.87	0.61	1.0	4.0
Cognitive Constriction	229	1.47	0.86	1.0	5.0

The measures used in the study were also analyzed by gender and the experience of suicide ideation/attempts. The statistical findings of this analysis were presented in Table 4.4. In the ECR-S scale, as illustrated in Table 4.4, female participants had a higher mean score (3.64, SD=1.08) than male participants' score (3.33, SD=1.03) in the insecure anxiety dimension, whereas in the insecure avoidance dimension, male participants had a higher mean score (3.24, SD=0.80) than female participants' score (3.00, SD=0.91). In the ISDI scale, female participants had higher mean scores (2.99, SD=0.73; 3.05, SD=0.82; 2.94, SD=0.83) in all subscales. In the PANSI test, female participants also had higher mean scores in the PANSI total (1.89, SD=0.61) and the cognitive constriction dimension (1.48, SD=0.85).

Regarding the experience of suicide ideation/attempts, the researcher divided participants into two groups: the participants who had suicide ideation or attempts (Suicidal Group) and the participants who have never had suicide ideation and attempts (Non-Suicidal Group). As presented in Table 4.4, the suicidal group had higher mean scores in all scales than the non-

suicidal group. This finding indicates that the suicidal participants were more insecurely attached and self-discrepant than the non-suicidal participants. Also, the *t*-scores (e.g. the ECR-S, the ISDI, and the PANSI) which show a significant mean difference between the groups reveal that the suicidal group has higher scores from all survey questionnaires than the non-suicidal group.

To measure cognitive constriction as an attribute of suicidal tendency, the researcher took the related questions out of the PANSI and analyzed the scores to understand how the cognitive constriction was associated with other scales. Two questions were used for the analyses: Thought about killing yourself because you could not find a solution to a personal problem? Thought that your problems were so overwhelming that suicide was seen as the only option to you? Statistical findings of cognitive constriction were presented in Table 4.3 and 4.4. Data analysis reveals that the participants in the suicidal group are more cognitively constricted than the participants in the non-suicidal group.

Table 4.4

Descriptive Statistics of Measures by Gender and Suicidal Ideation/Attempts

Mean (Std. D.)	Gender			Suicide Ideation/Attempts		
	Male	Female	T	Suicidal Group	Non-Suicidal Group	T
N	53	176		116	113	
ECR-S (Total)	3.28 (0.71)	3.32 (0.75)	-0.31	3.58 (0.69)	3.04 (0.69)	5.87***
Insecure Anxiety	3.33 (1.03)	3.64 (1.08)	-1.87	3.93 (1.10)	3.20 (0.91)	5.45***
Insecure Avoidance	3.24 (0.79)	3.00 (0.91)	1.74	3.22 (0.85)	2.88 (0.90)	2.96**
ISDI (Total)	2.68 (0.81)	2.99 (0.73)	-2.70**	3.07 (0.71)	2.76 (0.77)	3.19**
Actual/Ideal	2.59 (0.92)	3.05 (0.82)	-3.49***	3.09 (0.86)	2.80 (0.85)	2.58*
Actual/Ought	2.77 (0.87)	2.94 (0.83)	-1.31	3.06 (0.83)	2.73 (0.82)	3.02**
PANSI (Total)	1.80 (0.61)	1.89 (0.61)	-0.97	2.12 (0.66)	1.62 (0.42)	6.87***
Cognitive Constriction	1.46 (0.91)	1.48 (0.85)	-0.11	1.78 (0.98)	1.15 (0.57)	5.94***

* p -value <.05, ** p -value < .01, *** p -value < .001

Reliability of Measurements

The internal coefficient alphas used in the study are presented in table 4.5. In most research, Cronbach's alpha of .70 or higher is considered acceptable reliability, but in some research (e.g., Nunnally, 1967; Murphy & Davidshofer, 1988) suggested that Coronbach's alpha of .60 or higher is also acceptable, particularly in the exploratory research (Peterson, 1994). As

presented in Table 4.5, the findings reveal that all the scales and subscales have acceptable alpha values for the study: Insecure Attachment (α = .67), Insecure Anxiety (α = .74), Insecure Avoidance (α = .64), Self-Discrepancy (α = .84), Actual/Ideal Self-Discrepancy (α = .78), Actual/Ought Self-Discrepancy (α = .74), Suicide Tendency (α = .89), and Cognitive Constriction (α = .88).

Table 4.5

Reliability of Measures

Variable	Cronbach's Alpha
Insecure Attachment ECR-S (Total)	0.67
Insecure Anxiety	0.74
Insecure Avoidance	0.64
Self-Discrepancy ISDI (Total)	0.84
Actual/Ideal	0.78
Actual/Ought	0.74
Suicidal Tendency PANSI (Total)	0.89
Cognitive Constriction	0.88

Bivariate Analyses

Three research questions were investigated at this bivariate level of analysis: the extent of correlation between insecure attachment and self-discrepancy; the extent of correlation between insecure attachment and suicidal tendency; and the extent of correlation between self-discrepancy and suicidal tendency. To test these correlations, the researcher conducted simple

linear regression and calculated Pearson product-moment correlation coefficient. Correlation matrix with coefficient values is presented in Table 4.6.

Table 4.6

Correlation Matrix for Predictor, Mediator, and Outcome Variables

		Correlation Coefficient						
	Variable	B	C	D	E	F	G	H
A	**Insecure Attachment**	0.80***	0.69***	0.30***	0.28***	0.26***	0.51***	0.33***
B	Insecure Axi.		0.13	0.22***	0.24***	0.16*	0.47***	0.34***
C	Insecure Avo.			0.23***	0.17**	0.23***	0.28***	0.14*
D	**Self-Discrepancy**				0.89***	0.88***	0.44***	0.30***
E	Actual/Ideal					0.58***	0.40***	0.25***
F	Actual/Ought						0.38***	0.29***
G	**Suicidal Tendency**							0.79***
H	Cognitive Constriction							

N=229. * p -value <.05, ** p -value < .01, *** p -value < .001.

Research Question One

To what extent does suicidal tendency vary regarding anxiety or avoidance dimension in attachment? Regarding this question, bivariate correlations were evaluated with two hypotheses: First, anxiety dimension in insecure attachment is correlated with suicidal tendency, and second, avoidance dimension in insecure attachment is correlated with suicidal tendency. As presented in Table 4.6, data analysis revealed that both the attachment anxiety dimension and the avoidance dimension are positively and significantly correlated with suicidal tendency. There is a

significant correlation ($r = .47$, $p < .001$) between the insecure anxiety dimension and the suicidal tendency scale, indicating that higher anxious attachment is associated with suicidal tendency. In addition, avoidance dimension also has a positive correlation ($r = .28$, $p < .001$) with suicidal tendency. Consequently, Pearson correlations demonstrated that insecure attachment is strongly correlated with suicidal tendency ($r = .51$, $p < .001$). In particular, the anxiety dimension is more strongly correlated with suicidal tendency than the avoidance dimension, suggesting that the anxiously attached participants are more likely to have suicidal tendency than the avoidantly attached participants.

Research Question Two

To what extent does self-discrepancy (actual/ideal or actual/ought) vary regarding anxiety or avoidance dimension in attachment? To answer this question, four hypotheses were evaluated with bivariate analyses: a) Anxiety dimension in insecure attachment is correlated with actual/ideal self-discrepancy. b) Anxiety dimension in insecure attachment is correlated with actual/ought self-discrepancy. c) Avoidance dimension in insecure attachment is correlated with actual/ideal self-discrepancy. d) Avoidance dimension in insecure attachment is correlated with actual/ought self-discrepancy. Table 4.6 presents the effect sizes of the bivariate correlations.

Data analysis reveals that the anxiety dimension is positively and significantly correlated with both actual/ideal and actual/ought self-discrepancy. Particularly, the relationship with the actual/ideal scale ($r = .24$, $p < .001$) is more strongly correlated than the relationship with the actual/ought scale ($r = .16$, $p < .05$). For the avoidance dimension, alternatively, there are also positive correlations with both actual/ideal and actual/ought self-discrepancy. As opposed to the

anxiety dimension, the avoidance dimension is more strongly correlated with the actual/ought self-discrepancy ($r = .23$, $p < .001$) than with the actual/ideal self-discrepancy($r = .17$, $p < .01$).

Consequently, insecure attachment was reported to be positively and moderately correlated with self-discrepancy ($r = .30$, $p < .001$). Even though some relationships (e.g. $r = .16$, $p < .05$; $r = .17$, $p < .01$) have a weak correlation in magnitude, the relationships support direct relations between the variables. The result also indicates that the individuals who are anxiously attached are more self-discrepant in the actual/ideal aspect than the actual/ought aspect, whereas the individuals who are avoidantly attached are more self-discrepant in the actual/ought aspect than the actual/ideal aspect.

Research Question Three

To what extent does suicidal tendency vary regarding actual/ideal or actual/ought self-discrepancy? In regard to this question, one hypothesis was tested: Self-discrepancy is correlated with suicidal tendency. As presented in Table 4.6, data analysis revealed that both actual/ideal and actual/ought self-discrepancy are positively and significantly correlated with suicidal tendency. Actual/ideal self-discrepancy is moderately correlated ($r = .40$, $p < .001$) with the suicidal tendency scale, indicating that higher actual/ideal self-discrepancy is associated with suicidal tendency. In addition, actual/ought self-discrepancy is also moderately correlated ($r = .38$, $p < .001$) with suicidal tendency. Consequently, there is a significant correlation ($r = .44$, $p < .001$) between self-discrepancy and suicidal tendency, indicating that the more the participants feel self-discrepant in evaluating the self, the more they are likely to have suicidal tendency.

Multivariate Analyses

Research Question 4

To what extent does actual/ideal or actual/ought self-discrepancy mediate the effect of the anxiety or avoidance dimension in attachment on the suicidal tendency? The question was tested to see whether self-discrepancy acts as a mediator on the relationship between insecure attachment and suicidal tendency. The hypothesis regarding this question is that self-discrepancy has a partial mediating effect in the relationship between insecure attachment and suicidal tendency. To verify the test, multiple regression analyses were conducted for calculating the path coefficients. As a method to evaluate the mediating role in the research model, the researcher followed the steps that Baron and Kenny (1986) and Judd and Kenny (1981) suggested. There are four steps to establish mediation: first, the predictor variable should be correlated with the outcome variable (Path *c*); second, the predictor variable should be correlated with the mediator variable (Path *a*); third, the mediator variable should be correlated with the outcome variable (Path *b*); and fourth, to establish that the mediator variable completely mediates the relationship between the predictor variable and the outcome variable, the effect size of the predictor variable on the outcome variable controlling for the mediator variable should be zero, or diminished when partially mediated (Path *c´*). The present study demonstrated a path model among the variables in two levels: macro and micro level. The macro level deals with the total estimates of each variable, while the micro level covers the relationships among the subscales. Table 4.7 and Figure 4.1 reveal the path coefficients of the macro level of a path model of suicide. The path coefficient (β) can be calculated with correlation coefficient by the equation as follows:

$$\hat{\beta} = r_{(\mathrm{x,y})} \times \frac{\mathrm{Stan.D(y)}}{\mathrm{Stan.D(x)}}$$

Table 4.7

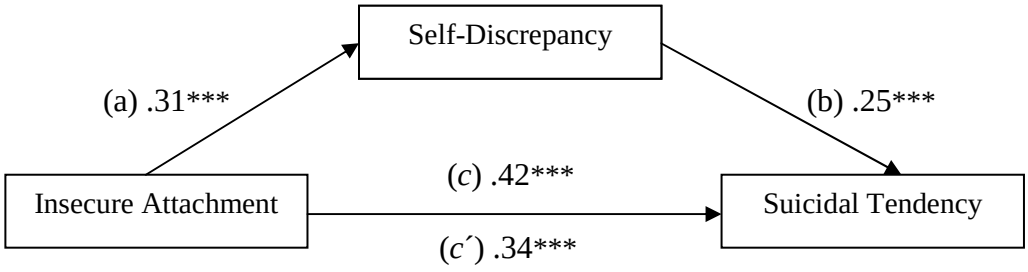
Standardized Regression Coefficients (Macro Level)

Dependent Variable	Independent variables		
	ECR-S (T value)	ISDI (T value)	R^2 Adj. R^2
PANSI	0.422 9.01***		0.2636 0.2603
ISDI	0.308 4.76***		0.0908 0.0868
PANSI	0.345 7.47***	0.249 5.52***	0.3510 0.3453

*** *p* -value < .001

Figure 4.1

A Path Model of Suicide (Macro Level)



*** *p* -value < .001

As revealed in table 4.6, there was a strong correlation (r (229) = .51, p < .001) between insecure attachment and suicidal tendency. In the macro level of a path model, the direct path (c) from insecure attachment to suicidal tendency was also significant (β = .42, p < .001), indicating

that the participants who reported they are more insecurely attached were likely to have more suicidal tendency. Additionally, the indirect path via self-discrepancy was statistically significant. Insecure attachment moderately predicted self-discrepancy (β (a) = .31, $p < .001$), and self-discrepancy was also a significant predictor of suicidal tendency (β (b) = .25, $p < .001$).

In regard to the role of mediator, there was a significant reduction of the effect size in the path from insecure attachment to suicidal tendency, when Path *a* and *b* are controlled in the model. As shown in Figure 4.1, the effect size was reduced from β (c) = .42, $p < .001$ to β (c') = .34, $p < .001$, indicating that self-discrepancy was partially mediated in the relationship between insecure attachment and suicidal tendency. However, the R^2 score between insecure attachment and self-discrepancy was .09, indicating that the effect of self-discrepancy predicted only 9 % of the variance in insecure attachment. This explains why the difference between regression coefficients of the Path *c*, which also indicates indirect effect, is only .08 in the model. The equation of indirect effect is as follows:

$$\beta \text{ (c)} - \beta \text{ (}c'\text{)} = \beta \text{ (a)} \times \beta \text{ (b)}$$

For the micro level of analyses, subscales of the variables were computed in the path model. Insecure attachment was evaluated by two subscales as predictor variables: the insecure anxiety scale and the insecure avoidance scale. Self-discrepancy was estimated by two subscales as mediator variables: the actual/ideal scale and the actual/ought scale. Table 4.8 depicts the path coefficients of the micro level of a path model of suicide.

Table 4.8

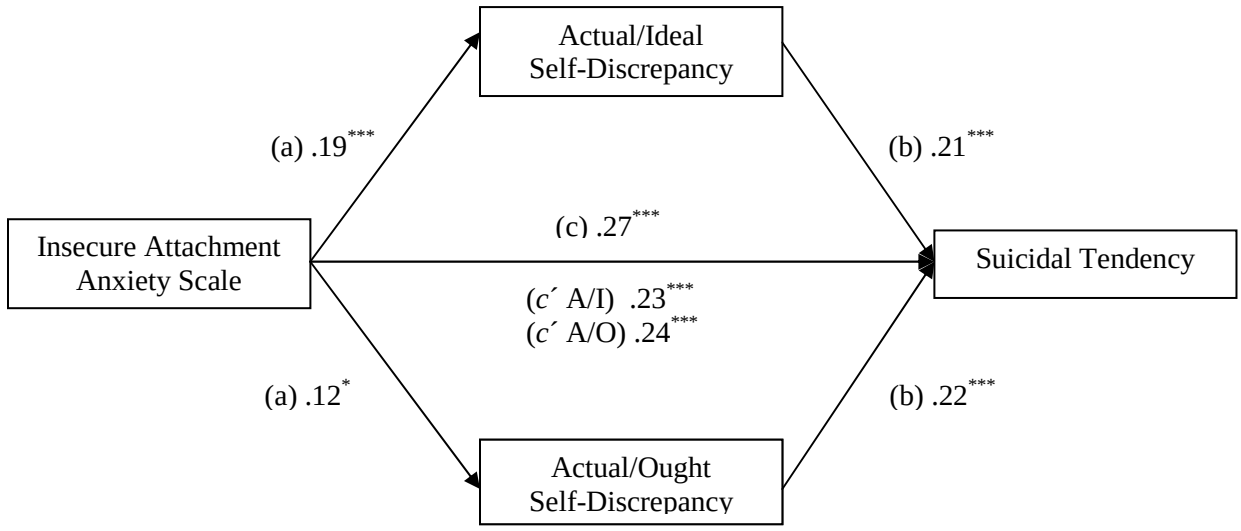
Standardized Regression Coefficients (Micro Level)

Dependent Variables	Independent Variables						R^2 Adj. R^2
	ECR-S Anxiety	ISDI Actual/ Ideal	ISDI Actual/ Ought	ECR-S Avoidance	ISDI Actual/ Ideal	ISDI Actual/ Ought	
PANSI Suicidal Tendency	0.269 8.13***						0.2256 0.2222
ISDI Actual/Ideal	0.190 3.65***						0.0554 0.0512
PANSI	0.229 7.11***	0.213 5.35***					0.3126 0.3065
ISDI Actual/Ought	0.125 2.45*						0.0257 0.0214
PANSI	0.241 7.65***		0.223 5.53***				0.3179 0.3119
PANSI Suicidal Tendency				0.191 4.40***			0.0786 0.0745
ISDI Actual/Ideal				0.169 2.67**			0.0304 0.0261
PANSI				0.148 3.61***	0.253 5.98***		0.2046 0.1976
ISDI Actual/Ought				0.219 3.62***			0.0544 0.0503
PANSI				0.139 3.29**		0.238 5.31***	0.1807 0.1734

* p -value <.05, ** p -value < .01, *** p -value < .001

Figure 4.2

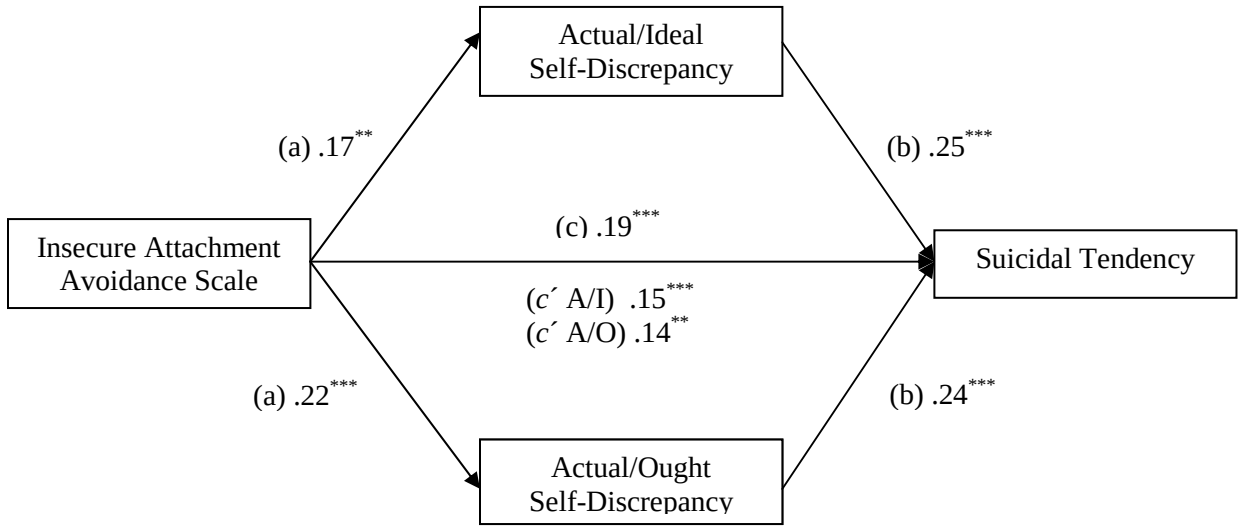
A Path Model of Suicide (Insecure Anxiety)



* *p*-value <.05, ** *p*-value < .01, *** *p*-value < .001

Figure 4.3

A Path Model of Suicide (Insecure Avoidance)



** *p*-value < .01, *** *p*-value < .001

For both relationships of insecure anxiety and avoidance to suicidal tendency, the results revealed that there were statistically significant correlations between the relationships. Insecure anxiety was moderately correlated with suicidal tendency (r (229) = .47, $p < .001$), whereas insecure avoidance was significantly correlated with suicidal tendency (r (229) = .28, $p < .001$). In the micro level of a path analysis, the result demonstrated that both insecure attachment subscales were found to be a significant predictor of suicidal tendency in the participants. Insecure anxiety predicted suicidal tendency at $\beta = .27$, $p < .001$ and explained 22% of the variance in mean PANSI score ($t = 8.13$, $p < .001$). Insecure avoidance, alternatively, predicted suicidal tendency at $\beta = .19$, $p < .001$ and explained 7% of the variance in mean PANSI scores ($t = 4.40$, $p < .001$). This result indicates that insecure anxiety was more strongly predicted suicidal tendency than insecure avoidance (See Figure 4.2 and 4.3).

In both insecure attachment dimensions, two indirect paths were tested: the paths via actual/ideal self-discrepancy and via actual/ought self-discrepancy. As demonstrated in Table 4.8, all paths have statistically significant coefficient values. In the insecure anxiety dimension (Figure 4.2), the path to actual/ideal self-discrepancy ($\beta = .19$, $p < .001$) has a stronger effect size than the path to actual/ought self-discrepancy ($\beta = .12$, $p < .05$). However, for the path from self-discrepancy to suicidal tendency, actual/ought self-discrepancy ($\beta = .22$, $p < .001$) predicted suicidal tendency slightly more than actual/ideal self-discrepancy ($\beta = .21$, $p < .001$).

Regarding the role of mediator, there were slight reductions of path coefficient in the paths from insecure anxiety to suicidal tendency when the mediators, actual/ideal and actual/ought self-discrepancy, are controlled in the model. As presented in Figure 4.2, the path coefficient was reduced from β (c) = .27, $p < .001$ to β (c') = .23, $p < .001$ in the relationship

between insecure anxiety and suicidal tendency, mediated by actual/ideal self-discrepancy, and was reduced from β (c) = .27, $p < .001$ to β (c') = .24, $p < .001$, when actual/ought self-discrepancy was mediated. Therefore, even though the reduction amounts were small, both mediators were partially mediated in the relationship between insecure anxiety and suicidal tendency.

In the insecure avoidance dimension (Figure 4.3), the path to actual/ought self-discrepancy ($\beta = .22$, $p < .001$) has a stronger path effect size than the path to actual/ideal self-discrepancy ($\beta = .17$, $p < .01$). Contrast to the insecure anxiety dimension, for the path from self-discrepancy to suicidal tendency, actual/ideal self-discrepancy ($\beta = .25$, $p < .001$) predicted suicidal tendency slightly more than actual/ought self-discrepancy ($\beta = .24$, $p < .001$).

Regarding the role of mediator, there were slight reductions of effect size in the paths from insecure avoidance to suicidal tendency when the mediators are controlled in the model. As shown in Figure 4.3, the effect size was reduced from β (c) = .19, $p < .001$ to β (c') = .15, $p < .001$ in the relationship between insecure avoidance and suicidal tendency, mediated by actual/ideal self-discrepancy and was reduced from β (c) = .19, $p < .001$ to β (c') = .14, $p < .001$, when actual/ought self-discrepancy was mediated. Therefore, both mediators were partially mediated in the relationship between insecure avoidance and suicidal tendency even though the mediating effect was not strong enough.

As previously explained, since the R^2 score between insecure attachment and self-discrepancy were very low compared to other R^2 scores, the indirect effect sizes were also slight in the model. Table 4.9 presents direct and indirect effects in the research model.

Table 4.9

Direct and Indirect Effects

Path Ways of Association	Direct Effect (β)	Indirect Effect (β)	Total Effect (β)	Correlation (r)
1. Insecure Attachment (Macro)				
Direct Effect	0.34			
Indirect Effect via				
Self-discrepancy		0.08		
Total Effect			0.42	0.51
2. Insecure Anxiety (Micro)				
Direct Effect	0.23(A/I), 0.24(A/O)			
Indirect Effect via				
Actual/Ideal		0.04		
Actual/Ought		0.03		
Total Effect			0.27	0.47
3. Insecure Avoidance (Micro)				
Direct Effect	0.15(A/I), 0.14(A/O)			
Indirect Effect via				
Actual/Ideal		0.04		
Actual/Ought		0.05		
Total Effect			0.19	0.28

Summary

A total of 229 samples were analyzed for the study. Among the samples, 116 were suicidal and 113 were non-suicidal. The suicidal group had higher mean scores in all scales than the non-Suicidal group, indicating that the suicidal participants were more insecurely attached and self-discrepant than the non-suicidal participants. In bivariate analyses, there was a strong correlation between insecure attachment and suicidal tendency. In particular, the insecure anxiety scale was more strongly correlated with the suicidal tendency scale than the insecure avoidance scale. In addition, insecure anxiety had stronger correlation with actual/ideal self-discrepancy

than actual/ought self-discrepancy; insecure avoidance was more strongly correlated with actual/ought self-discrepancy than actual/ideal self-discrepancy.

In multivariate analyses, the path model of suicide was tested in two levels: a macro level and a micro level. In the macro level, self-discrepancy, the mediator, slightly mediated in the relationship between insecure attachment and suicidal tendency. However, because of the low R^2 score between insecure attachment and self-discrepancy, the mediating effect was not strong enough. In the micro level, actual/ideal self-discrepancy mediated more in the relationship between insecure anxiety and suicidal tendency than actual/ought self-discrepancy; actual/ought self-discrepancy more mediated in the relationship between insecure avoidance and suicidal tendency than actual/ideal self-discrepancy. However, the mediating effect was not strong.

CHAPTER FIVE: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

In the previous chapter, the researcher discussed the results of the study examining the relationship between insecure attachment and suicidal tendency with the mediating role of self-discrepancy. In this chapter, a brief overview of the study, conclusions regarding the results, implication and limitation, and recommendations for the future research are presented.

Overview of the Study

The purpose of the study is to evaluate the path model of suicide in the relationship among insecure attachment, self-discrepancy, and suicidal tendency. Since the study paid attention to a psychological model of suicide rather than a biological or sociological model, the researcher focused on "self" psychology and attachment theory which are proper to account for forming the insecure self (Crane, Barnhofer, Duggan, Hepburn, Fennell, & Williams, 2008; Cornette, Strauman, Abramson, & Busch, 2009; Schore, 1994, 2000, 2003a, 2003b). Attachment theory (Bowlby, 1969/1982) presents a good framework for understanding how an individual interprets him/herself, others, and the world. According to attachment theory, the main causalities of the insecure self are affect dysregulation and lack of mentalization (Fonagy et al., 2002). The insecure self, formed out of affect dysregulation and lack of mentalization, is strongly associated with self-discrepancy, because self-discrepancy theory (Higgins, 1987) is an affect relation theory which is highly related to affect dysregulation. Consequently, affect dysregulation

and the lack of mentalization originate and develop discrepancy in the self (Boldero et al., 2005; Pietromonaco & Barrett, 2000).

Self-discrepancy is also strongly associated with cognitive constriction, which is a critical component of suicidal ideation (Jobes & Nelson, 2006; Sheehy & O'Connor, 2002). Cognitive constriction can be explained by an imbalance of interpretation (Sheehy & O'Connor, 2002) regarding incoming stimuli into the brain. The incoming information itself is neutral and valueless before the brain interprets and puts values on it. The information can have a particular value when the brain interprets it using internal working models or schemata. Therefore, the imbalance of information processing produces various types of misinterpreting tendencies such as perfectionism, dichotomous or biased thinking, and suicidal tendency (Brown, Jeglic, Henriques, & Beck, 2006; Hewitt, Flett, Sherry, & Caelian, 2006; Ingram, Miranda, & Segal, 1998; Reineche & Didie, 2005; Weishaar &Beck, 1992). In this sense, suicidal ideation as a cognitive imbalance can be a result of improper interpretation of the self and the world.

On this theoretical foundation, the current study was designed to investigate the relationship between insecure attachment and suicidal tendency with consideration to mediating effect of self-discrepancy. To test the relationship, four research questions were established: First, to what extent does suicidal tendency vary regarding anxiety or avoidance dimension in attachment? Second, to what extent does self-discrepancy (actual/ideal or actual/ought) vary regarding anxiety or avoidance dimension in attachment? Third, to what extent does suicidal tendency vary regarding actual/ideal or actual/ ought self-discrepancy? Fourth, to what extent does actual/ideal or actual/ought self-discrepancy mediate the effect of the anxiety or avoidance dimension in attachment on the suicidal tendency?

Participants for this study were Koreans and Korean-Americans who are over 20 years-old. A survey method was employed to examine a model of suicide and the surveys were administered at various mental facilities such as counseling centers, community centers, social services in the Chungnam area in South Korea, and churches in the Virginia and Maryland area. A total of 282 people participated, and 229 surveys were used for the study. The survey packet included an invitation letter, an informed consent letter, a demographic survey, and three psychological instruments: the ECR-S for insecure attachment, the ISDI for self-discrepancy, and the PANSI for suicidal tendency.

After survey packets were collected, the results were analyzed with 229 data from the participants. Descriptive statistics of the sample revealed that female participants (N=176, 76.86%) were more than male participants (N=53, 23.14%), and 116 (50.65%) participants were suicidal, whereas 113 (49.35%) were non-suicidal. For samples, since the participants were recruited under the same conditions (e.g., mental facilities, age limitation) from eight different locations for the study, the sample can be considered as representative; however, the sample was not balanced on the age and gender variables. In descriptive statistics of measures, suicidal participants have higher mean scores than the non-suicidal group in all survey instruments. Even though suicidal participants reported they are suicidal, however, the mean score in the PANSI test was low. Cronbach's alpha was estimated for the internal consistency for each total scale and subscales.

To test research questions, the researcher performed bivariate analyses by a simple linear regression method and multivariate analyses for a path analysis by a multiple regression method. For the bivariate analyses, Pearson product-moment correlation efficient values were estimated

between mean scores on the total scales and subscales. For the multivariate analyses, on the other hand, path analyses were conducted to examine the mediating effect on the relationship between insecure attachment and suicidal tendency. The path coefficients were computed in two levels: macro level for total scales and micro level for subscales.

Conclusions

Research Question 1

To what extent does suicidal tendency vary regarding anxiety or avoidance dimension in attachment? For this question, two hypotheses were established in this study. Hypothesis 1: The anxiety dimension in insecure attachment is correlated with suicidal tendency. Hypothesis 2: The avoidance dimension in insecure attachment is correlated with suicidal tendency. Many research findings (e.g., Buelow, Schreiber, & Range, 2000; Stepp et al., 2008; West, Spreng, Rose, & Adam, 1999) support the correlation between insecure attachment and suicidal tendency. For example, Stepp and her colleagues (2008) found that both attachment styles are associated with suicidal behavior with the mediator of interpersonal problems. Zeyrek, Gençöz, Bergman, and Lester (2009) found that unhealthy attachment styles predicted suicidality. In the current study, as other studies found, there was a strong correlation ($r = .51$, $p < .001$) between insecure attachment and suicidal tendency. More specifically, insecure anxiety was moderately correlated with suicidal tendency ($r = .47$, $p < .001$); insecure avoidance was also significantly correlated with suicidal tendency ($r = .28$, $p < .001$).

The findings are in line with the previous research findings (e.g., Hochdorf, Latzer, Canetti, & Bachar, 2005; Stepp et al., 2008) that the insecure anxiety dimension was more

strongly correlated with suicidal behaviors than the insecure avoidance dimension. In attachment theory, the anxiety dimension is characterized by a strong tendency of proximity-seeking and interaction-resisting behavior (Ainsworth & Bell, 1970; Ainsworth, Blehar, Waters, & Wall, 1978; Brisch, 1999; Wallin, 2007). This may increase suicidal tendency by making an individual not only seek an unreachable safe haven to escape his/her life but also resist properly interacting with the world. The internal working models formed out of insecure anxiety attachment relationships may cause the individual to think that his/her safe haven is always unstable and insecure and that the world does not want him/her.

In the avoidance dimension, alternatively, the main feature is no tendency to seek proximity because he/she makes his/her own safe haven, thinking that the world is not trustworthy (Ainsworth & Bell, 1970; Clinton & Sibcy, 2002; Wallin, 2007; Waters, 2002). Even though people in the avoidance dimension are less suicidal than the anxious dimension, they were suicidal when their social role functions were not effectively working due to their distrustful tendency to the world (Grunebaum, Galfalvy, Mortenson, Burke, Oquendo, & Mann, 2010). In consequence, this difference of characteristics between attachment dimensions seems to create different results in the study, indicating that the anxiously attached participants are more likely to have suicidal tendency than the avoidantly attached participants. Both hypotheses 1 and 2, therefore, are fully supported in this study.

Research Question 2

To what extent does self-discrepancy (actual/ideal or actual/ought) vary regarding anxiety or avoidance dimension in attachment? Four hypotheses were made to verify this question.

Hypothesis 3: The anxiety dimension in insecure attachment is correlated with actual/ideal self-discrepancy. Hypothesis 4: The anxiety dimension in insecure attachment is also correlated with actual/ought self-discrepancy. Hypothesis 5: The avoidance dimension in insecure attachment is correlated with actual/ideal self-discrepancy. Hypothesis 6: The avoidance dimension in insecure attachment is also correlated with actual/ought self-discrepancy.

Self-discrepancy theory (Higgins, 1986) has three domains of the self: the actual self is the self that an individual believes he/she actually possesses; the ideal self is the self that an individual believes he/she would like to possess; the ought self is the self that a significant other believes the individual should possess. In relation to attachment theory, self-discrepancy is strongly associated with the function of the individual's internal working models because the self-discrepancy theory assumes that emotional outcomes are determined by one's interpretation of external events which indicates one's significance or meaning to the events. In other words, individual differences or the types of discrepancy in the self are determined in accordance with how the self and external events are interpreted by the individual's internal working models (Higgins, 1987; Pietromonaco & Barrett, 2000). Related to attachment, Mikulincer (1995) revealed that insecurely attached individuals are more likely to have a discrepant self-structure than securely attached individuals.

The present study predicted that the insecure anxiety dimension is more strongly correlated with the actual/ought than actual/ideal self-discrepancy because the anxiety dimension is associated with agitation-related attachment experiences with significant others. In the same pattern, the insecure avoidance dimension was predicted to be more correlated with the actual/ideal self-discrepancy than actual/ought self-discrepancy due to the self-focused tendency

of the avoidance dimension. In this study, however, data analysis revealed that the attachment anxiety dimension is more strongly correlated with the actual/ideal self-discrepancy ($r = .24$, $p < .001$) than the actual/ought self-discrepancy ($r = .16$, $p < .05$), and the attachment avoidance dimension is more strongly correlated with actual/ought self-discrepancy ($r = .23$, $p < .001$) than with the actual/ideal self-discrepancy($r = .17$, $p < .01$). The results were opposite to the predictions of the theorized model. Perhaps, the participants who are anxiously attached seemed to think that they are not a perfect or ideal person to get to an unreachable safe haven ($r = .24$, $p < .001$) even though they have tried to be the person who others want them to be ($r = .16$, $p < .05$). Alternatively, the participants who are avoidantly attached seemed to think that others would see them in a biased way ($r = .23$, $p < .001$), even though the participants believed that they are an ideal person from their perspectives ($r = .17$, $p < .01$).

In this sense, hypotheses 3 and 6 were fully supported, while hypotheses 4 and 5 were partially supported in the study.

Research Question 3

To what extent does suicidal tendency vary regarding actual/ideal or actual/ ought self-discrepancy? For this question, one hypothesis was established. Hypothesis 7: Self-discrepancy is correlated with suicidal tendency. As explained previously, the current study analyzed two types of self-discrepancy: actual/ideal self-discrepancy and actual/ought self-discrepancy. Related to suicidal ideation, previous research (e.g., Bentall & Manson, 2005; Cornette, Strauman, Abramson, & Busch, 2009) revealed that both actual/ideal and actual/ought self-discrepancy were significantly correlated with suicidal ideation. A strong possibility of a direct

correlation between self-discrepancy and suicidal tendency can be found in negative evaluation of the self or a distorted way of interpretation of the self in both areas (Cornette, Strauman, Abramson, & Busch, 2009). Along with the results of the previous research, the current study also revealed that there was a moderate correlation between self-discrepancy and suicidal tendency ($r = .44$, $p < .001$), indicating that the more the participants evaluated the self in a negative way making self-discrepancy, the more they are likely to have suicidal tendency. Specifically, the correlation coefficient between actual/ideal self-discrepancy and suicidal tendency was $r = .40$ ($p < .001$), and between actual/ought self-discrepancy and suicidal tendency was $r = .38$ ($p < .001$). There was no significant difference of correlation coefficient between both subscales of self-discrepancy. Consequently, both actual/ideal and actual/ought self-discrepancy significantly predicts suicidal tendency, and thereby hypothesis 7 was fully supported in the study.

Research Question 4

To what extent does actual/ideal or actual/ought self-discrepancy mediate the effect of the anxiety or avoidance dimension in attachment on the suicidal tendency? For this question, one hypothesis was established. Hypothesis 8: Self-discrepancy has a partial mediating effect in the relationship between insecure attachment and suicidal tendency. To answer this question, the researcher analyzed the model in two levels: macro and micro. The macro level was calculated with the total estimates of each variable, and the micro level was analyzed with the estimates of subscales. To evaluate the mediating effect, the researcher followed Baron and Kenny's steps. In the macro level, there was a significant direct path coefficient from insecure attachment to

suicidal tendency (β (c) = .42, $p < .001$). When the mediator, self-discrepancy, was controlled in the model, there was a slight but significant reduction in the relationship between insecure attachment and suicidal tendency (β (c') = .34, $p < .001$). Low coefficient of multiple determination ($R^2 = .091$) between attachment and self-discrepancy explained the possible reason of the significant but slight mediating effect in the path model. Consequently, self-discrepancy was partially mediated in the relationship between insecure attachment and suicidal tendency.

In the micro level, like the result of the macro level, there were significant direct effects on the paths from both the anxiety dimension ($\beta = .27$, $p < .001$) and avoidance dimension ($\beta = .19$, $p < .001$) to suicidal tendency. When the mediator, actual/ideal self-discrepancy, was controlled in the model, the path coefficient from the anxiety dimension to suicidal tendency was reduced to $\beta = .23$ ($p < .001$); whereas the path coefficient from the avoidance to suicidal tendency was decreased to $\beta = .15$ ($p < .001$). On the other hand, when the mediator, actual/ought self-discrepancy was controlled in the model, the path coefficient from the anxiety dimension to suicidal tendency was reduced to $\beta = .24$ ($p < .001$); whereas the path coefficient from the avoidance to suicidal tendency was decreased to $\beta = .14$ ($p < .01$). In consequence, both mediators were partially mediated in the path from both insecure anxiety and avoidance dimension to suicidal tendency, even though the mediating effects were not strong enough.

Judging from the size of the mediating effect, the self-discrepancy in this study was not sufficient as a full mediator for the relationship between insecure attachment and suicidal tendency. However, as hypothesized, there is an obvious theoretical connection among those three variables with partial mediation. Additionally, the data analysis revealed that the insecure anxiety dimension (not the avoidance dimension) highly predicted suicidal tendency; and self-

discrepancy also significantly predicted suicidal tendency. This prediction of suicide indirectly indicates that the role of internal working models is critical to understand how an individual interprets the world and the self. Attachment experiences make an individual shape core beliefs through internal working models and the core beliefs facilitate to interpret the present world and to anticipate the future (Pietromonaco & Barrett, 2000).

The anxiously attached individuals using hyper-activation strategy, therefore, tend to think they are not capable to provide their own needs as they have a problem and feel overwhelmed by the full spectrums of emotions. They also tend to misinterpret that others' help is always difficult and distant, anticipating a gloomy future. As a result, these tendencies significantly account for how the insecure anxiety dimension predicts suicidal tendency in the study and how the emotion irregulation affects a suicidal mind.

Limitations

There were some limitations to this study. Since the focus of the study was on suicide, recruiting relevant participants was difficult, particularly in obtaining a sufficient sample for good statistical power. One of the limitations regarding the sample was that the dispersion of the age was not balanced, even though the surveys were performed at eight different sites. Even though the age range was from 20 to 70, the mean of the age was 29.63 (SD = 11.08). Perhaps, this limitation would occur because older populations (> 40) tend to be reluctant to visit hospitals or mental facilities for treating their mental problems (Kim, 2010; Woo, 2008).

Another limitation related to the sample was that it was hard to recruit the relevant participants who are suicidal even though the national suicide rate is very high in South Korea.

In the study, the mean of the PANSI score was low, indicating that the participants answered they are not suicidal or slightly suicidal; however, the participants who answered "suicidal" from the demographic survey were 116 out of 229. In this sense, qualitative research can be a good method for the suicide study as well.

Another limitation was related to a survey instrument – the ISDI. The ISDI is an idiographic method that asks participants to list five traits or attributes about themselves, then to rate the extent of how much they thought the listed answer actually described their current self-state from 1 to 5. In the survey, however, many participants were unfamiliar with this method, thereby 51 unusable data were found.

Implications

The findings of the study can support the various practice areas such as psychiatric practices, counseling centers, social services, churches, and schools. Since the suicide issue is a matter of common interest in most practices, the results of the study are useful to assist practitioners and conducive to the sessions for suicide. Attachment is the great source of comprehending an individual's belief system. The outcomes of the study support how attachment relationship shapes an individual's belief system and how the system creates suicidal tendency in the mind. They can be applied to the practical settings in various ways. For example, since suicide was strongly correlated with insecure attachment, creating and developing secure relationships can be conducive to changing one's belief system, thereby preventing suicide. By adjusting negative relationship patterns and enhancing trust, intimacy, and identity, the features of secure relationships can be shaped and developed. Additionally, since self-discrepancy was

also correlated with suicidal tendency, reducing the discrepancy between the selves by practicing emotion regulation skills can be a great method to help suicidal clients. Therefore, the practitioners who work in professional clinical settings should consider the issue of attachment and self-discrepancy for the effective sessions for suicidal clients.

The outcomes also can be applied to pastoral counseling in the church settings. God is a perfect being. From the attachment perspective, God is the ultimate attachment figure (Clinton & Sibcy, 2002). Helping suicidal members to have a secure relationship with God will be an effective method of suicide-related counseling at churches. Kaplan and Schwartz (2008) introduce biblical examples of suicide prevention. Many biblical figures were restored from their sufferings evoking suicidal ideation by the renewal of relationship with God. Elijah was restored by experiencing God's nurturance and protection (1King 18-19); Moses was restored from the burdens evoking suicidal ideation by God's practical advice (Num. 11); and Job was restored by the renewal of relationship with God. In Christianity, God is not only a therapist but also a perfect attachment figure. Therefore, the result of correlation between insecure attachment and suicidal tendency can be applied to pastoral counseling by introducing members to God as an ultimate attachment figure. Pastors and lay counselors who work in church settings should focus attention on how the members who have a suicide ideation shape the concept of God, compared with their attachment relationships with significant others.

The self-discrepancy issue is strongly associated with God's creation of human beings (Gen. 1-2). God made humans in His image (Gen. 1:27). There is no discrepancy in God. In God's trinity, there is always unity and harmony. In this sense, the path relationship among insecure attachment, self-discrepancy, and suicidal tendency implies that secure attachment with

God results in reducing self-discrepancy to make unity and harmony, and thereby in living one's life in unity and harmony rather than in suicidal tendency. In other words, having a secure relationship with God indicates being more like Him in one's life, making unity and harmony with Him and the self. For this unity and harmony, pastors and lay counselors should consider providing suicidal members specific teaching and training about the biblical concept of the self, how the self-concept is related with God's trinity, and how to create the unity and harmony using the attachment relationship with God in actual life for a better future. Biblical psycho-education, therefore, could be an effective treatment method for assisting the suicidal members or clients to develop unity and harmony in the self in the pastoral or Christian professional counseling setting.

Recommendations

The Use of a Mixed Research Method

There are many previous studies exploring the topics of attachment, self-discrepancy, and suicide. However, there were no studies to seek the path relationship among them. The current study, in this sense, is a meaningful work to understand an etiological possibility of suicide. Due to the continual increase of the suicide rate, continual research of suicide will be needed to help suicidal people and decrease the rate. As stated previously, however, recruiting relevant samples for suicide research is not an easy task because many people tend to camouflage their suicidal tendency or to be reluctant to participate in the research, so as not to reveal their mental pain. For this reason, a mixed research method is recommended for the future study, since the qualitative method is performed under the participants' agreement to share their personal suicidal

experiences, and thereby the result from the qualitative analysis can provide strong evidences to assist the quantitative results at the same time for the study.

The Use of Full Dimension of Attachment

Dealing with attachment theory, the present study was focused on two insecure attachment dimensions by using the ECR-S: insecure anxiety and insecure avoidance. Secure attachment and disorganized dimensions were excluded since self-discrepancy theory is originated with two different affects (agitation-related emotions and dejection-related emotions), which have a strong theoretical connection to the two insecure attachment dimensions, insecure anxiety and insecure avoidance. For the future suicide research, however, it is highly recommended to study with the full spectrum of attachment dimensions to compare and contrast the results. Obviously, comprehending how internal working models and affect regulation strategies function in each dimension of attachment plays a key role in understanding how each dimension of attachment serves in the individuals' suicidal mind.

The Use of Emotion Regulation as a Mediator

The main reason of the slight reduction of mediating power in the path models was because the relationship between the predictor variable of insecure attachment and the mediator variable of self-discrepancy was weak. The researcher tried to connect attachment theory (Bowlby, 1962) to self-discrepancy theory (Higgins, 1987) because both theories were emphasized on the human affect. However, the questionnaires regarding self-discrepancy (e.g., the Selves Questionnaire (Higgins, Klein, & Strauman, 1985) or the Integrated Self-Discrepancy

Index (Hardin & Lakin, 2009)) were developed to test how an individual think about him/herself rather than how he or she emotionally feels about him/herself. Therefore, to concentrate on the human affect for the study, adding the instruments explaining emotion regulation (e.g., Cognitive Emotion Regulation Questionnaire (Garnefski & Kraaij, 2006)) as another mediator will be conducive to theorize a better path model.

The Research for the Suicide Prevention

Since the purpose of the study was to account for the etiological result of suicide rather than to develop suicide prevention methods, the present study did not support the explanations of suicide prevention. However, as described in the implication section, the result of the study implies the methods of suicide prevention indirectly. For the future study, therefore, the investigation of the psychological explanations of prevention strategy rather than the etiological reason of suicide will be effective. Employing positive psychology will be beneficial to the study of suicide prevention.

Summary

This study was designed to examine the relationship among insecure attachment, self-discrepancy, and suicidal ideation using path analyses. The study found that the insecure attachment relationships were strongly correlated with conceiving suicidal ideation. More specifically, the anxiety dimension in insecure attachment was more strongly correlated with suicidal ideation than the avoidance dimension in insecure attachment. In addition, self-discrepancy was also moderately correlated with suicidal ideation. In this variable, both

actual/ideal and actual/ought self-discrepancy were moderately correlated with suicidal ideation. In the path analysis, the mediator, self-discrepancy, was partially mediated in the relationship between insecure attachment and suicidal tendency. However, the mediating effect was not strong. As a result, the hypotheses presented in this study were fully or partially supported by the data analyses. Through the statistically-proven hypotheses, the researcher provided the discussions and conclusions about research questions with the findings of previous studies; he also suggested various possible implications for the practitioners who work in both professional and pastoral counseling settings and recommendations for the future study.

As a contribution to practical implications, the study enhanced the significance for professional and pastoral counselors to better comprehend suicidal individuals from the attachment perspective. Since the incoming stimuli are neutral and valueless before the brain's working of interpretation, understanding the tendency of an individual's interpretation about the irritating stimuli provides the sources with how the individual sees and defines the world and the self and why the individual suffers from the stimuli. One of the significant advantages of attachment theory is that the theory suggests the reason why the individual has their own tendencies of acting, feeling, and thinking. Therefore, the researcher suggested for professional counselors to employ the techniques related to the attachment approach to help suicidal individuals; and recommended for pastoral counselors to help suicidal church members by teaching and training them that God is an ultimate attachment figure and that the concept of the self is supposed to be harmonious rather than discrepant, because the image of God is shown in God's unity and harmony in trinity.

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APPENDIXES

Appendix A: Survey Invitation Letter (For Participants)

Dear Participants,

Thank you for participating in this research. As a doctoral candidate of the Center for Counseling and Family Studies of Liberty University, I am currently conducting a study on the relationship among insecure attachment, self-discrepancy, and suicidal tendency. Dr. John Thomas will act as an advisor for this study. Judging from the statistical data that suicide is the fifth leading cause of death in South Korea and the eighth in the U.S., your contribution to this survey not only will assist the future development of suicide research but will also help professionals who work with suicidal individuals. Since the accuracy of the study depends on your honesty, the survey will proceed in an anonymous and voluntary way. Private questions such as your name, address, or phone number are not included in the survey; they are not required unless you would like me to send you a copy of the results of the study. It will take approximately 20-30 minutes to complete the questionnaires.

Before you start to answer, please check the package items and read the informed consent section carefully. The package contains:

a. A Survey Invitation Letter
b. An Informed Consent Form
c. A Demographic Questionnaire
d. The Integrated Self-Discrepancy Index
e. The Experiences in Close Relationships Scale-Short Form
f. The Positive and Negative Suicide Ideation Inventory

Thank you for your help and participation.

Sincerely yours,

Joongkeun Joseph Yoo

Survey Invitation Letter (For Directors of Mental Facilities and Communities)

Dear, _____

I am writing to invite you to participate in a research project that may be of professional concern to you. As a doctoral candidate of the Center for Counseling and Family Studies of Liberty University, I, with Dr. John Thomas, am currently conducting a research on how insecure attachment influences on self-discrepancy and suicidal tendency. Judging from the statistical data that suicide is the fifth leading cause of death in South Korea and the eighth in the United States, your help in this study will contribute not only to assisting the future development of suicide research but also to helping other professionals who work with suicidal individuals.

The research method will be a survey type using a series of questionnaires; and the research will be anonymous and private for confidentiality. Participation in the survey is also completely voluntary. Participants may choose to withdraw from participation at any time and they do not need to explain any reason. In case of publication of this study, only statistical data will be reported or cited; and no raw data or original copies will be circulated for any purpose.

The researchers in this study are Dr. John Thomas and Mr. Joongkeun Yoo. If you have any questions or comments regarding this study, please feel free to contact us at 434-237-2937 or jkyoo@liberty.edu.

Please give us your permission to conduct this survey in your facility. Thank you for your help.

Sincerely yours,

Joongkeun Joseph Yoo

Appendix B: Informed Consent Form

You are invited to participate in a research study about the relationship among insecure attachment, self-discrepancy, and suicidal tendency by completing a series of questionnaires. Your participation is completely voluntary. You may choose to withdraw from participation at any time and you do not need to explain your reasons for doing so.

Your participation is also anonymous and secure. Records of the survey will be securely and privately maintained and stored during and after the course of the research. In case of publication of this study, only statistical data will be reported or cited; and no raw data or the original copy will be circulated for any purpose.

The researchers of this study are Dr. John Thomas and Mr. Joongkeun Yoo. If you have any questions or comments regarding this study, please feel free to contact us at 434-237-2937 or jkyoo@liberty.edu.

Statement of Consent:

☐ **By checking in the box on the left**, I agree to anonymous participation in this study, and to honestly respond to the questionnaires for accurate research.

Date: _____

*Do not write your name or personal information.

Appendix C: Demographic Questionnaire

1. Age: _____ Years Old (Reminder: You must be at least 20 years of age to participate in this survey.)

2. What is your gender?
   1) Male 2) Female

3. What is your marital status?
   1) Single
   2) Married
   3) Separated
   4) Divorced
   5) Widowed
   6) Remarried
   7) Other

4. In which area do you live?
   1) Seoul Area
   2) Chungnam Area
   3) Virginia
   4) Maryland

5. What is your primary religious affiliation?
   1) Protestant
   2) Catholic
   3) Buddhist
   4) Confucian
   5) Non-religious
   6) None of these

6. What is the total income of your household monthly?
   1) Less than US$1000.00/1,000,000won
   2) US$1001.00 ~ 2000.00/1,000,000 ~ 2,000,000won
   3) US$2001.00 ~ 5000.00/2,000,000 ~ 3,000,000won
   4) US$5001.00 ~ 8000.00/3,000,000 ~ 5,000,000won
   5) US$8001.00 ~ 10,000.00/5,000,000 ~ 8,000,000won
   6) US$10,001.00 and more/8,000,000won and more

7. What is your highest level of education completed?
    1) Elementary school
    2) Middle school
    3) High school
    4) 2-year College
    5) 4-year College
    6) Graduate school

8. What is your occupation?
    1) Health Professionals
    2) Non-Health Professionals
    3) Business Manager (own)
    4) Salesclerk
    5) Student
    6) Unemployed
    7) Others ( )

9. Are you currently receiving psychiatric or psychological care in a mental health facility?
    1) Yes, I am 2) No

10. If yes, what is your problem?
    1) Depression
    2) Anxiety
    3) Bipolar
    4) Substance dependence
    5) Others ( )
    6) No problems

11. If you are suicidal, which statement is best described?
    1) I have suicide ideation, but I have never attempted so far.
    2) I have suicide ideation, and I have attempted once.
    3) I have attempted suicide twice and more.
    4) None of these

12. Have you ever experienced having a family member or a relative or a friend attempted a suicide?
    1) Yes (family member) 2) Yes (relative/friend) 3) No

Appendix D: The Integrated Self-Discrepancy Index

Word List for ISDI

Cultured	Competent	Helpful	Erudite	Ambitious
Artistic	Candid	Obedient	Adventurous	Forgiving
Creative	Self-sufficient	Respectful	Responsible	Upright
Kind	Perfectionistic	Discriminating	Rational	Entertaining
Witty	Good-Humored	Clever	Earnest	Warm
Inquisitive	Quick	Wise	Sentimental	Aggressive
Gentle	Brilliant	Careful	Considerate	Well-mannered
Cheerful	Enthusiastic	Amiable	Friendly	Popular
Persuasive	Trustworthy	Reasonable	Understanding	Consistent
Humble	Admirable	Thorough	Intelligent	Optimistic
Self-possessed	High-Spirited	Relaxed	Mature	Moral
Punctual	Valuable	Gracious	Independent	Skilled

You do not need to limit yourself only to these words – if reading these words make you think of other words you would like to list, please feel free to make any additions or changed you want.

The Integrated Self-Discrepancy Index

Direction: Please list qualities that you might apply to yourself. List five traits that you would **IDEALLY** like to possess; the type of person you wish, desire, or hope to be. You can use any adjective to answer; also you can use the list of words on the next page.

"I hope I am an *artistic* person."

Later, you will be asked to write something in each of these boxes. Until then, please just ignore these boxes for now.

☐ Own Ideal 1: _____

☐ Own Ideal 2: _____

☐ Own Ideal 3: _____

☐ Own Ideal 4: _____

☐ Own Ideal 5: _____

Direction: Please list qualities that you might apply to yourself. List five traits that your significant person believes you **SHOULD or OUGHT** to be. You can use any adjective to answer; also you can use the list of words on the next page.

"My *father* thinks I should be a *moral* person."

Later, you will be asked to write something in each of these boxes. Until then, please just ignore these boxes for now.

☐ Other Should 1: _____

☐ Other Should 2: _____

☐ Other Should 3: _____

☐ Other Should 4: _____

☐ Other Should 5: _____

Go to page 8 and read scoring instructions carefully after completing this page.

Directions: Please read the following examples carefully, and answer the questions about each of the traits you have listed on the previous page by indicating how much you think each of the words actually describes or applies to you at this time. Please write the appropriate number IN THE BOX next to each word.

- **If there is no number in the box, this questionnaire cannot be used for the study.**

1	2	3	4	5
Does not describes me at all	Describes me slightly	Describes me somewhat	Describes me well	Completely Describes me

For example, suppose you chose "artistic" among your chosen adjectives. How much do you think you are actually artistic? If you feel you are not artistic at all, place the score 1 in the box. If you feel you are very artistic, place the score 5 in the box as the following example shows.

In the same way, please place the number in the box in the other-should adjectives section. For example, if you feel you are completely moral as your father believes you should be moral, place the score 5 in the box. If you feel "somewhat," write the number 3; if "not at all," please place the score 1 in the box as the following example shows.

Examples:

1	Own Ideal 1:	artistic

5	Other Should 1:	moral

Appendix E: The Experiences in Close Relationships Scale-Short Form

Instruction: The following statements concern how you feel in romantic relationships. We are interested in how you generally experience relationships, not just in what is happening in a current relationship. Respond to each statement by indicating how much you agree or disagree with it. Mark your answer using the following rating scale:

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree

1. _____ It helps to turn to my romantic partner in times of need.
2. _____ I need a lot of reassurance that I am loved by my partner.
3. _____ I want to get close to my partner, but I keep pulling back.
4. _____ I find that my partner(s) don't want to get as close as I would like.
5. _____ I turn to my partner for many things, including comfort and reassurance.
6. _____ My desire to be very close sometimes scares people away.
7. _____ I try to avoid getting too close to my partner.
8. _____ I do not often worry about being abandoned.
9. _____ I usually discuss my problems and concerns with my partner.
10. _____ I get frustrated if romantic partners are not available when I need them.
11. _____ I am nervous when partners get too close to me.
12. _____ I worry that romantic partners won't care about me as much as I care about them.

Appendix F: The Positive and Negative Suicide Ideation Inventory

Instruction: Below is a list of statements that may or may not apply to you. Please read each statement carefully and then place your answer in the space to the left of that statement. Use the five-point scale as follows.

1	2	3	4	5
None of the time	Very rarely	Some of the time	A good part of the time	Most of the time

1. _____ Seriously considered killing yourself because you could not live up to the expectations of other people?
2. _____ Felt that you were in control of most situations in your life?
3. _____ Felt hopeless about the future and you wondered if you should kill yourself?
4. _____ Felt so unhappy about your relationship with someone you wished you were dead?
5. _____ Thought about killing yourself because you could not accomplish something important in your life?
6. _____ Felt hopeful about the future because thing were working out well for you?
7. _____ Thought about killing yourself because you could not find a solution to a personal problem?
8. _____ Felt excited because you were doing well at school or at work?
9. _____ Thought about killing yourself because you felt like a failure in life?
10. _____ Thought that your problems were so overwhelming that suicide was seen as the only option to you?
11. _____ Felt so lonely or sad you wanted to kill yourself so that you could end your pain?
12. _____ Felt confident about your ability to cope with most of the problems in your life?
13. _____ Felt that life was worth living?
14. _____ Felt confident about your plans for the future?