

Is Bowen Theory Universal? Differentiation of Self among Jordanian Male and Female College Students and between them and A Sample of American Students through Bowen's Propositions

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ABSTRACT

This study tested the cross-cultural validity of Bowen family systems theory's (M. Bowen, 1978) several propositions, namely differentiation of self and the relations between differentiation of self, social anxiety, and physical symptoms related to psychological and physical health well being, among Jordanian male and female college students. Results indicated that differentiation predicted both social anxiety and symptomatology, and that male and female students' total differentiation scores varied significantly in Differentiation. On the other hand, compared with U.S. sample (N=126), the Jordanian participants (N = 225) except in fusion with others [FO], reported more emotional reactivity, less emotional cutoff, and less ability to take an "I-position," total differentiation scores, differ significantly. Taken together, the results suggest that differentiation is a meaningful construct for Jordanian youth, but the lack of support for the universality hypotheses casts doubt on Bowen's theory about no culture and gender differences in differentiation of self. Implications for counseling, limitations, and directions for further research are discussed.

Keywords: Murray Bowen Theory, Family Systems Theory, Differentiation of Self, Social Anxiety, Symptomatology, Cross-Cultural Study, Family Counseling.

1. INTRODUCTION

Study replication is one of the recommended strategies to safeguard against unintended biases in research, they are cognitive strategy-based errors or motive-driven cognition errors (MacCoun, 1998). When replication occurs in a context different from a previous study, it can improve model internal validity and generalization of findings. Results are always subject to sampling or selection methods, and in a single study conclusions may be limited to that particular sample, or at best to a particular population (MacCallum and Austin, 2000). In utilizing the norms developed in one context to measure the behavior in another culture, we may draw erroneous conclusions if the two cultures are dissimilar (Straus, 1969).

Thus, comparative research helps shape our theories and tests the generalizability of knowledge derived from hypotheses tested in one context to other dissimilar

contexts (Lee and Haas, 1993). To contribute to the generalization of theories more studies are needed either in different cultures or in different contexts (Siu, 2002; Spector, Cooper, and Aguilar-Vafaie, 2002). The purpose of this study is to extend previous findings from American society regarding the predictive relationship between levels of differentiation and levels of trait anxiety and personal adjustment in college students and adults (e.g., Skowron and Friedlander, 1998; Skowron, Wester, and Azen, 2004) to an Arab Jordanian cultural context.

The study also sought to replicate Skowron and Friedlander's (1998) findings about the relationship between differentiation and psychological distress in order to test the cross-cultural applicability of Bowen's theory. In Jordanian culture, almost all activities are centered in the family. Typically, it is the family, not its individual members, that takes steps to resolve important concerns; many psychologists emphasize the Arab collectivist tradition, a tradition that is seemingly contradictory to Bowen's (1978) construct of differentiation. Thus, if collectivism is valued over

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autonomy, differentiation of self may not be related to social anxiety and symptomatology in this culture as it is in the United States.

Within the field of counseling, there has been growing interest in the theories and practice of family systems therapy (e.g., Gelso and Fretz, 1992; Schneider, Watkins, and Gelso, 1988). According to family systems theories (Bowen, 1976; Kerr and Bowen, 1988; Minuchin, 1984), individuals define themselves and function not in isolation, but rather in the context of significant relationships with family, friends, and loved ones. Likewise, systemic theories, with their emphasis on the interrelated and socially imbedded nature of individual life, provide promising conceptual frameworks for understanding individual functioning from a variety of cultures (e.g., Carter and McGoldrick, 1999; Gushue, 1993; McGoldrick, Giordano, and Pearce, 1996; Neville and Mobley, 2001; Skowron, 2004).

Although the role of family is central, most major approaches to family systems therapy tend to overlook the implications of cultural diversity in their theories (Minuchin, 1984; Nichols and Schwartz, 2000). However, in recent decades, efforts have progressed in the field, resulting in seminal theoretical (e.g., Berg and Jaya, 1993; Gushue, 1993; Lee, 1997; McGoldrick et al., 1996) and empirical (e.g., Szapocznik and Kurtines, 1993) developments regarding the role of the family in diverse cultural groups.

Nonetheless, examination of the cross-cultural validity of many basic constructs in family systems theories has been scarce. Consequently, counselors who use a family systems framework in therapy with diverse clients will find little empirical guidance for tailoring and evaluating their approaches to conceptualizing and treating Arab clients. Research is needed to evaluate the validity of family systems theories for counseling researchers and practitioners investigating and treating diverse client populations. The purpose of this study is to determine whether Bowen family systems theory (Bowen, 1976, 1978; Kerr and Bowen, 1988) is relevant for Arab individuals.

Carter and McGoldrick (1999) argued that Bowen family systems theory is a powerful theoretical framework for use among diverse cultural groups because the "increasing multiculturalism in the United States makes the work of emotional connectedness and social inclusiveness more important than ever" (p. 436). Indeed, the continuum of individualism and collectivism is

considered the most salient dimension along which cultures differ (Kagitcibasi, 1996). Individualist cultures such as the United States and Western Europe tend to emphasize and respect independence, whereas non-Western societies or Eastern collectivist cultures of Arab, Asian and African societies emphasize and value interdependence (Ben-Arie and Lavee, 2004; Dwairy, 2004; Haj-Yahia, 1997; Kao and Sinha, 1997; Markus and Kitayama, 1991; Tamura, and Lau, 1992). Culture may play an important role in every component of the stress process- that leads to constant anxiety- , including the occurrence of events, the appraisal of events and coping options, the coping strategies used, and adaptational outcomes (Slavin, Rainer, McCreary, and Gowda, 1991).

The most prominent framework used to examine cultural variations of stress and its emotional consequences is based on Hofstede's (1980) and Triandis's (1995) distinction between individualistic and collectivist cultures. In individualistic cultures, often associated with Western, industrialized, modern societies, there is a strong, commonly shared belief in the independence of self from others. The self is made meaningful primarily through a set of internal attributes, such as goals, desires, abilities, talents, and personality traits, and the highest priority is accorded to actualizing individual potential and fulfilling one's roles. As such, individualistic cultures tend to view behavior as a function of these personal attributes and to emphasize values that promote individual goals (Kitayama, Markus, and Lieberman, 1995).

In contrast, collectivist cultures, often associated with non-Western societies, do not value such separation and independence of the self but rather believe in the fundamental connection or interdependence among those within an in-group (Dwairy, 2004). In these cultures, the self is made meaningful through the relationships of which the self is a part. The major task for members of collectivist cultures is to fit in with and adjust to the relationships of their in-group while constraining their own personal desires. Thus, collectivist cultures view situational factors, such as norms, roles, and obligations, as the major determinants of behavior and emphasize values that promote the welfare of their in-group (Hofstede, 1980; Kitayama et al., 1995; Smith and Bond, 1993).

In an effort to explain individual functioning from a systemic perspective, Bowen (e.g., 1978) was unique

among family systems theorists in asserting that both the capacity for autonomy and emotional connection are necessary for maturity and optimal personal adjustment (Carter and McGoldrick, 1999; Kerr and Bowen, 1988). Bowen developed the concept of differentiation of self--thought to embody the dialectic between two life forces of togetherness/ connection and independence/autonomy--defined as the ability to balance achieving an autonomous sense of self and maintaining close connections with important others, most notably with one's family.

Some have argued (e.g., Essandoh, 1995; Rothbaum, Weisz, Port, Miyake, and Morelli, 2000) that the concept of differentiation of self betrays an overemphasis on Western values of independence, while neglecting to adequately attend to the importance of interrelatedness observed in collectivist cultures. Others have disagreed (e.g., Carter and McGoldrick, 1999; Skowron, 2004), maintaining that Bowen family systems theory is one of the few personality theories that adequately elevates the role of healthy connections with others to one of central importance for maturity and health. Indeed, the primary goal of Bowen therapy is to increase differentiation of self by "grounding oneself emotionally and learning to connect emotionally by developing a personal relationship with every member of one's family" (Carter and McGoldrick, 1999, p. 439). Nonetheless, many characteristics that describe differentiation of self (e.g., taking an "I" position in relationships, developing person-to-person relationships, "detriangling") are proscribed for individuals in eastern (i.e., Arab) societies, while generally supported for western societies (Carter and McGoldrick, 1999). As such, controversy exists as to whether the concept of differentiation of self, specifically, and the central tenets of Bowen family systems theory, more generally, are relevant for persons from non-western cultures (Skowron, 2004). Therefore, this study tested the validity of Bowen's theory construct differentiation of self and the relations between differentiation of self, social anxiety, and physical symptoms (e.g., Murdock and Gore, 2004; Skowron and Friedlander, 1998) related to psychological and physical health well being, among Arab persons.

2. BOWEN THEORY

Differentiation of Self

In describing the functioning of individuals in relation

to their families, Bowen proposed the construct of differentiation of self from the family of origin (Bowen, 1978; Kerr and Bowen, 1988). Defined as the ability to function autonomously as an individual without being emotionally dependent upon or attached to the family process, differentiation of self is thought to be associated with a wide range of human functioning, including both psychological and physical symptoms (Kerr and Bowen, 1988; Murdock and Gore, 2004).

The Differentiation of Self construct (Skowron and Friedlander, 1998) is based on the assumption that differentiation is the personality variable most critical for mature development and the attainment of psychological health. The concept of differentiation has been used to describe the manner in which family patterns affect the trajectory of individual health and development and influence the extent to which individuals are able to act with an age-appropriate degree of autonomy, take personal responsibility for age-appropriate tasks, and experience strong connections with important others (e.g., Bowen, 1978; Skowron, Holmes, and Sabatelli, 2003).

Theoretically, four factors are related to a person's level of differentiation: emotional reactivity, the ability to take an I-position, emotional cutoff, and fusion with others (Kerr and Bowen, 1988, p. 252; Tuason and Friedlander, 2000). First, poorly differentiated people are said to be emotionally reactive. Highly differentiated people, on the other hand, are not overwhelmed by their strong emotions. Second, more differentiated individuals are able to take an I-position and to own their thoughts and feelings without the need to conform to others' expectations. Third, when interpersonal experiences are too intense, poorly differentiated individuals isolate themselves from others as well as from their emotions, whereas highly differentiated individuals do not feel the need to cut off emotionally. Fourth, highly differentiated people are able to maintain well-defined relationships, while low differentiation leads to over-involvement or "fusion" with others in most of their close relationships (Peleg, 2005). Bowen's 'differentiated self' is not simply an 'autonomous self', proudly independent, or even dismissive of, its relationships with intimates; instead, Bowen made it clear that the differentiated individual was able to maintain selfhood while simultaneously maintaining relationships with family, work colleagues and others, even in the face of powerful emotional forces that invite either enmeshment (Fusion) or 'cut-off' (Gray, 2004).

Because of the complexity of Bowen's concepts and the inherent challenges in accurately operationalizing them (Gurman and Kniskern, 1991), the development of psychometrically sound measures of concepts central to Bowen theory has lagged behind theoretical advances. Yet recently, several systematic efforts have been underway to operationalize one of the central constructs in Bowen theory—differentiation of self—opening the way for more empirical research investigating the role of differentiation in health and functioning of families and their members. Differentiation is a multidimensional construct that consists of an intrapsychic ability to distinguish between the feeling process and intellectual thinking process, and an interpersonal ability to maintain connections with others while achieving an autonomous self (Bowen, 1978; Kerr and Bowen, 1988).

These four constructs underlie the Differentiation of Self Inventory (DSI; Skowron and Friedlander, 1998), the self-report measure used in the present study. The Differentiation of Self Inventory (DSI; Skowron and Friedlander, 1998) is one relatively new self-report measure of differentiation derived from Bowen theory, developed to assess emotional functioning, intimacy, and autonomy in interpersonal relationships. Its subscales are designed to assess both interpersonal (i.e., fusion and emotional cutoff) and intrapsychic dimensions of differentiation problems (i.e., emotional reactivity and difficulty taking an "I" position) (Skowron and Schmitt, 2003). Subsequent research has found that the DSI is not affected by current levels of environmental stress (Tuason and Friedlander, 2000), which Bowen theorized can cause changes in functional, or observed, levels of differentiation. These results suggest that the DSI measures levels of basic differentiation, which is at the core of Bowen theory (Miller, Anderson, and Keala, 2004).

Universality of Bowen Theory

Bowen (1978) argued that his theory was universal. He stated that it applied "in all families and in all cultures" (Kerr and Bowen, 1988, p. 202). Two main issues of universality are the ability of the theory to explain family emotional processes that are appropriate for both males and females from cross-cultural perspective (Miller et al., 2004).

Although others have criticized his theory for "overvaluing stereotypically male characteristics" (Knudson-Martin, 1994, p. 35) and ignoring the processes

by which women define themselves (Ault-Riehe, 1986), Bowen (1978) maintained that his theory was universal. Several studies have compared men's and women's levels of differentiation, but the results have been inconsistent. Haber (1993) and Maynard (1997), found no gender differences in mean levels of differentiation. Research examining gender differences with the DSI also found no differences in the overall level of differentiation (Elieson and Rubin, 2001; Skowron and Friedlander, 1998), but women had higher levels on the emotional reactivity subscale (Kosek, 1998; Skowron and Friedlander, 1998; Skowron and Schmitt, 2003), and the "I" position subscale (Kosek, 1998; Skowron and Schmitt, 2003). There were mixed results on the fusion subscale, with one study finding gender differences (Kosek, 1998) and another study reporting no significant differences (Skowron and Schmitt, 2003). These results provide preliminary evidence that, although there are gender differences in some components of differentiation, there are no differences in the overall levels of differentiation, as measured by the DSI.

As Bowen predicted, both males and females with low levels of differentiation are more likely to experience psychological problems. Several studies have found that the influence of differentiation on distress is significant for males and females (Richards, 1989; Haber, 1984; Skowron, 2000). Likewise, the psychological well-being of males and females is affected by levels of differentiation (Skowron and Friedlander, 1998). For example, J. Bohlander (1995) studied an all-female sample and R. Bohlander (1999) surveyed an all-male sample using similar research designs. They independently found that differentiation of self had a significant impact on psychological well-being on females and males, respectively.

The only study that has examined the effect of differentiation on physical health found gender differences. Weiner (1989) found that differentiation had a significant relationship on women's health, but not on men's.

In an attempt to understand how Bowen's theory propositions may apply to different cultures, Khisty (2001) proposes a model of 'transcultural differentiation', drawing on Western notions of differentiation of self (Bowen), but arguing that this concept may have equivalent within non-Western philosophies (e.g. Hindu culture). The model suggests that families co-existing with both a culture of origin and an adoptive culture must

inevitably change, and that in this process, they necessarily evolve into entities which transcend both culture of origin and adoptive culture. Although to date very little research has examined Bowen theory from a cross-cultural perspective. In their Philippine study, Tuason and Friedlander (2000) found no differences in levels of differentiation between the Philippine sample and a U.S. sample. Moreover, they reported a significant influence of differentiation on psychological well-being and anxiety, similar to the results from U.S. samples.

Only two studies have looked at cultural differences within the United States, and they found inconsistent results. Skowron and Schmitt (2003), in their study of 225 U.S. adults, reported that ethnicity and income did not have significant effects on levels of differentiation. However, they found that education was significant, with more educated people having higher levels of differentiation. To examine the similarity of differentiation of self levels between ethnic minorities and White college students, Skowron (2004) found also no significant differences.

In sum, there is a lack of research testing Bowen's claim that his theory is universal. The limited numbers of studies that have been conducted have found few gender differences. Although there were a few differences in the differentiation subscales, there were no differences in the overall levels of differentiation. Moreover, differentiation had a significant impact on differentiation and psychological distress for both males and females. Little research has examined the cross-cultural applicability of Bowen theory. The only evidence is that the theory was supported with a Philippine sample (Tuason and Friedlander, 2000).

Chronic Anxiety

Another principal concept of Bowen theory that explains level of functioning is chronic anxiety. Chronic anxiety is defined as the response of a person to imagined threats, is not experienced as time limited, it flows through the family emotion system and influences the emotional responses of family members (Knauth and Skowron, 2004). "The principal generators of chronic anxiety are people's reactions to the disturbance in the balance of a relation system" (Kerr and Bowen, 1988, p.113). A primary result of low levels of differentiation is the experience of chronic anxiety by family members. Bowen stated, "chronic anxiety increases as level of differentiation decreases" (Kerr and Bowen, 1988, p. 117)

and indicated that levels of chronic anxiety and differentiation are negatively correlated. At one point, he even stated that the two terms could be used interchangeably (Kerr and Bowen, 1988, p. 164).

One reason for the connection between chronic anxiety and differentiation is that poorly differentiated people have more anxiety about leaving their family of origin and assuming responsibility for themselves. They lack confidence in their ability to manage their own lives and take care of themselves. Also, people with lower levels of differentiation are less adaptable to stress, which creates constant anxiety about future stressful events (Kerr, 1988). Murdock and Gore (2004) found support for the Bowen's hypothesis that differentiation of self moderates the relationship between perceived stress and psychological functioning among a sample of college students.

Thus, Bowen proposed that the level of differentiation significantly correlates with chronic anxiety. Several studies have examined this proposition by measuring anxiety as a trait, reflecting the chronic aspect of Bowen's conceptualization of anxiety in his theory.

Consistent with the theory, research supports the proposition that differentiation is negatively associated with trait anxiety (Miller et al., 2004). In her study of 372 volunteer subjects who were at least 21 years old, Haber (1993) found a significant negative relationship between differentiation and trait anxiety, with a correlation of $-.56$ between the differentiation, measure and the State-Trait Anxiety Inventory. Using the DSI to measure differentiation, Skowron and Friedlander (1998) also tested the relationship between differentiation and chronic anxiety. Based on a sample of 313 people in the U.S. who had an average age of 36, they found a correlation of $-.67$ between differentiation and trait anxiety. Finally, in a study of 102 Filipino triads consisting of middle-aged mothers and fathers and an adult children, Tuason and Friedlander (2000) reported that the regression coefficient of trait anxiety was $-.39$, when controlling for other psychological symptoms.

Psychological and Physical Symptoms

Because of elevated levels of chronic anxiety, Bowen theorized that people with lower levels of differentiation are at higher risk for psychological and physical health problems (Bowen, 1976, 1978; Kerr and Bowen, 1988). He theorized that psychological and physical health problems serve the function of "binding" chronic anxiety. For example, Kerr (1988) who worked with Bowen

(1978) in his later years to help explicate Bowen theory, stated that eating disorders are "manifestations and binders of anxiety," and the "preoccupation with physical health and physical symptoms can be another anxiety binder" (Kerr, 1988, p. 48).

Thus, Bowen theory hypothesizes that levels of differentiation will be inversely associated with psychological and physical health problems. Research generally supports the link between differentiation and psychological well-being. Several studies have been conducted using the Differentiation of Self Inventory (DSI; Skowron and Friedlander, 1998) to examine the relationship between differentiation and psychological distress, with all of these studies supporting the hypothesized relationship.

Skowron and Friedlander (1998) found a significant relationship between differentiation and psychological symptomatology as measured by the Hopkins Symptoms Checklist. They reported that the DSI explained 42% of the variance in psychological distress. In their Philippine study, Tuason and Friedlander (2000) found that the DSI was significantly correlated with the Global Severity Index of the SCL-90. Skowron, Homes, and Sabatelli (2003) surveyed 221 adults and found that differentiation was significantly related to psychological well-being as measured by the Life Satisfaction Index. Using separate analyses, they found that the relationship was significant for both males and females. Finally, a study (Elieson and Rubin, 2001) of 301 people in the U.S. between the ages of 21 and 60 examined the relationship between the DSI and scores on the Beck Depression Inventory and found a significant correlation of $-.59$ (Miller et al., 2004).

Differentiation of Self, Social Anxiety, and Physical Symptoms

Theoretically, one's level of differentiation has a number of important consequences for an individual. Foremost, Bowen (1978) proposed that less differentiated individuals experience greater chronic anxiety: "The average level of chronic anxiety of a person and of a family parallels the basic level of differentiation of that individual and family [and] the lower the level of basic differentiation, the higher the average level of chronic anxiety" (Kerr and Bowen, 1988, p. 115). According to Bowen (1976, 1978; Kerr and Bowen (1988), less differentiated individuals also become dysfunctional under stress more easily and thus suffer more psychological and physical symptoms (e.g., anxiety,

somatization, depression, alcoholism, and psychoticism). Conversely, highly differentiated individuals are thought to demonstrate better psychological adjustment. Some evidence has emerged in support of these notions. Greene, Hamilton, and Rolling (1986) discovered that inpatient and outpatient participants, regardless of diagnosis, reported significantly lower levels of differentiation than did those in a nonclinical control group. Likewise, adults who report less fusion in their significant relationships have been shown to experience fewer self-reported health problems (Bray, Harvey, and Williamson, 1987).

Research conducted with samples of European and American persons has corroborated Bowen's (1978) assertions that individuals who are more differentiated enjoy better personal adjustment, fewer psychological and physical health problems (Harvey, Curry and Bray, 1991; Skowron and Friedlander, 1998), and are better problem solvers (Murdock and Gore, 2004). In addition, well-differentiated adults seem to cope better with stress (Skowron, Wester, and Azen, 2004) and develop healthier, more satisfying relationships with others (Kosek, 1998; Skowron, 2000). In contrast, few studies have directly examined relations between differentiation of self and psychological and physical health problems within diverse eastern cultural groups.

One notable exception involved the study conducted in the Philippines in which Tuason and Friedlander (2000) found support for the cross-cultural applicability of Bowen theory in a sample of 306 Filipino adults. Specifically, theoretically expected links were observed between greater differentiation scores and lower anxiety and general symptomatology scores. Contrary to the authors' predictions that self-assertion in relationships would predict maladjustment in this non-western collectivist, family-oriented culture, greater ability to take "I" positions in relationships predicted lower levels of anxiety and better adjustment, as proposed by Bowen theory. In another cross-cultural investigation conducted in Taiwan (Yang, 1999), family differentiation was found to predict greater self-esteem and interpersonal competence and lower depression among young adult women, and greater self-esteem among young adult men. The only cross-cultural test of Bowen theory conducted in the United States (Murphy, 1999) revealed no support for the relationship between differentiation of self and marital satisfaction among 32 married, acculturated Asian Americans.

Although there were no other studies that directly examined the concept of differentiation of self in non-Western or Eastern different cultures, the author reviewed related studies (e.g., Kenny and Perez, 1996; Lin and Fu, 1990; Lopez, Melendez, and Rice, 2000) documenting the role of interdependence, parental support, and encouragement of autonomy in the health and well-being of ethnic minority families and their members. With respect to psychological adjustment, Kenny and Perez (1996) found that parental attachment characterized by both the experience of positive affect and sufficient support for autonomy predicted fewer psychological symptoms in African, Asian, and Latino/a American college students. Lopez, Melendez, and Rice (2000) observed that African American college students who were more anxious in their intimate adult relationships recalled that their mothers were more overprotective and their fathers indifferent and uninvolved in their lives. Likewise, secure parent-child attachment and support for identity corresponded with lower risk of delinquency among African Americans (Smith and Krohn, 1995) and ethnic minority late adolescents (Cernkovich and Giordano, 1987) from a low socioeconomic status (SES).

In addition, some variation has been reported across ethnic minority and White cultural groups regarding the relative balance of intimacy and autonomy among late adolescents' relations with their parents. For instance, African American late adolescents reported higher levels of intimacy with their parents than did their White peers (Cernkovich and Giordano, 1987). Autonomy expectations among Asian adolescents and their mothers residing in China appeared much later than did those of mother-adolescent pairs who were White Europeans and Americans (Stewart, Bond, Deeds, and Chung, 1999). Ying, Coombs, and Lee (1999) also observed that most Asian American adolescents in their sample continued to value deference and respect toward their parents over separation and individuation strivings.

Finally, although research on the role of family relatedness and autonomy on physical health status among different cultural groups is noticeably lacking, studies using primarily European American samples have found that persons with insecure (anxious) family attachments exhibited more negative emotionality and physical health symptoms and less frequent use of health care service than did securely attached individuals (Feeney and Ryan, 1994). Likewise, a lack of closeness with parents in early adulthood has been linked to

development of, or greater proneness to health complications such as cancer (Shaffer, Duszynski, and Thomas, 1982).

Highlighting parallels between Differentiation of Self, social anxiety and physical symptoms emergence and Bowen family systems theory, Skowron and Friedlander (1998), asserted that despite the importance of Bowen theory (Bowen, 1976, 1978; Kerr and Bowen, 1988) in the field of family therapy, there have been relatively few studies to date examining its constructs or propositions. Because this family systems theory had not yet been empirically examined in Arab society, the author is interested in determining whether the ability to maintain close emotional ties with one's family and important others and establish a solid sense of self would go hand in hand with the coping better with anxiety and accordingly less physical symptoms and complaints. The study hypothesized that Arab college students who reported high differentiated marked by fewer emotional cutoff, more independence and I Positions statements, and less emotional reactivity, would also report lower levels of social anxiety and physical symptoms. Alternatively, those who report high sense of social anxiety and physical symptoms would also report lower levels of differentiation of self. On the other hand, individuals with a lower experience of social anxiety and physical symptoms were expected to report greater differentiation of self.

Study Questions: This study examined the relationship between differentiation of self and social anxiety and physical symptoms among Jordanian male and female college students to evaluate the cross-cultural applicability of Bowen family systems theory (Bowen, 1976, 1978). Three questions were addressed:

First, would the theoretical relationship between differentiation of self and social anxiety and physical symptoms observed in previous research among various European American samples also be observed among a sample of Arab individuals? In other words, are individuals with lower feelings of Social Anxiety and fewer Physical Symptoms will report greater differentiation of self?

Second, will significant differences be reported between males and females in differentiation of self, social anxiety and physical symptoms scores among Arab individuals?

Third, were levels differentiations of self will be similar between European American and Arab individuals?

Initial support for the validity of Bowen theory among Arab individuals would emerge if:

(a) Greater differentiation of self was associated with greater psychological adjustment (less Social Anxiety), and fewer physical health symptoms, among Arab individuals or Individuals with lower Social Anxiety and fewer Physical Symptoms report greater differentiation of self; (b) Male and female individuals will/or will not report gender differences in differentiation of self.; and (c) No differences in differentiation of self scores were observed between the current sample and a previously sampled comparison group of European Americans. These results will integrate the validity process of Bowen's proposition that his ideas are valid in all cultures for men and women alike. Significant findings in the posited directions would suggest that differentiation of self may function in similar ways among persons from different Western and Eastern cultures. Alternately, the competing hypothesis presumed that Bowen family systems theory was culturally bound and thus posited no relationship (or a negative relationship) between differentiation of self and personal adjustment among Arab individuals.

The author reasoned that if differentiation of self proved relevant to personal adjustment (Social Anxiety and Physical Symptoms) in a different sample (Jordanian persons), then follow-up research on the cross-cultural validity of Bowen family systems theory with individuals from specific cultural groups would be warranted (Skowron, 2004).

3. METHOD

Participants

The study's sample participants included (225) undergraduate students enrolled in psychology classes- university compulsory course- at Hashemite University (all students from different majors are required to study). There were 136 (60 %) females and 89 (40%) males. Participants consisted of seniors (34%), juniors (32%), sophomores (20%), and freshmen (14%). Their ages ranged from 18 to 25 ($M = 20.41$, $SD = 1.31$). Moreover, in terms of current relationship status, almost all the participants (93%) were single and the rest (7%) were engaged or married. Additionally, in terms of current work status, most of the respondents (87%) were not working, while the remaining 13% were employed in full- time or part -time jobs. Of the respondents, 89%

were from intact families (their biological parents were still alive and married to each other), while the remaining 11% were from households that had been disrupted by divorce or death of a parent. The majority (87%) of the students also received financial support from outside sources, with 70.60% of those reporting receiving financial support from parents and 29.40% from government student grants. With respect to parent's levels of education, participants reported half (50.6%) of mothers did not finish high school, 34.1% were high school graduates, 14.1% had received some college or technical training, 1.2% had obtained a college degree (community college or bachelor). Of the participants' fathers, 45% had high school degrees, 10.3% were high school dropouts, 25.0% had some college or technical training, and 19.7% had college degrees. Five percent (5.0%) of mothers were employed, while 94.0% of the participants' fathers were employed. T-test analyses showed no significant differences between respondents from intact and non-intact families on any of the measures used in the present study.

Instruments

Differentiation of Self Inventory-Revised (DSI-R): levels of self- differentiation were assessed by means of the Differentiation of Self Inventory -Revised (DSI-R; Skowron and Platt, 2005; Skowron and Schmitt, 2003) (Appendix -A), that appeared originally in English was translated into Arabic and adapted specifically for the present study to students, approximately 20 years old. The author initially accomplished translation of this instrument, and then back was translated from Arabic to English. Equivalence between the original scales' language, was verified by a professional translator. The DSI-R, Inventory is a 46-item self-report instrument grounded in Bowen family systems theory (Bowen, 1978; Kerr and Bowen, 1988) that focuses on individuals, their significant relationships and their current relations with family of origin. The DSI-R, contains four sub-scales: Emotional Reactivity (**ER**, 11 Items): emotional flooding, emotional liability, or hypersensitivity), I Position (**IP**, 11 Items): clearly defined sense of self and ability to thoughtfully adhere to one's convictions under outside pressure), Emotional Cutoff (**EC**,12 Items]: threatened by intimacy, feeling excessive vulnerability in relationships, defensive over-functioning, distancing, or denial), and Fusion with Others (**FO**,12 Items) : emotional over-involvement and over-identification with parents and

significant others). Respectively, sample items are, “I wish that I weren’t so emotional”. “I tend to remain pretty calm even under stress”. “I have difficulty expressing my feelings to people I care for”. “I want to live up to my parents’ expectations of me”.

Respondents rate each item with a 6-point Likert scale in which 1 = not at all true to 6 = very true of him or her. To compute subscale scores, raw scores on all items on the ER, EC, and FO subscales reversed; all items are then summed and divided by the total number of items on the subscale, such that scores range from 1 to 6. Higher scores reflect less emotional reactivity, cutoff, or fusion with others, and greater ability to take an “I”- position in relationships, or greater differentiation of self. The DSI-R, full-scale score was calculated by reversing raw scores on all items on ER, EC, and FO subscales and one item (35) on the IP sub-scale and totalling them, so that higher scores reflected greater differentiation (less emotional reactivity, less difficulty in maintaining I-positions, less emotional cut-off and less fusion). Internal consistency reliabilities of the DSI-R subscales based on Cronbach’s alpha were ER=0.89, IP=0.81, EC=0.84, FO=0.86, and full scale = .092 (Skowron and Schmitt, 2003, Skowron and Platt, 2005). In the present study, the Arabic version of the DSI-R, Internal consistency reliabilities calculated for the purposes of this study, were almost similar: ER=0.83, IP=0.80, EC=0.81, FO=0.77 and full scale = .089. Theoretically based relationships between higher DSI-R, scores and less chronic anxiety, less symptomatology (Peleg-Popko, 2002; Skowron and Friedlander, 1998; Skowron and Platt, 2005), lower stress, and better adjustment (Skowron, Wester, and Azen, 2004) provide evidence for the construct validity of the DSI-R. Evidence supporting the DSI-R’S cross-cultural validity is based on significant observed relationships between DSI-R scores and better psychological adjustment, physical health, and social problem-solving skills among persons of color (Skowron, 2004; Skowron and Platt, 2005).

The Social Anxiety Scale -Adolescents (SAS-A):

The Social Anxiety Scale - Adolescents (SAS-A; La Greca and Lopez, 1998) has been developed from the Social Anxiety Scale for Children (SASC; La Greca et al., 1988), and the Social Anxiety Scale for Children – Revised (SASC-R; La Greca and Stone, 1993) (Appendix -B). SAS-A that appeared originally in English was translated into Arabic and adapted specifically for the present study. The author initially accomplished

translation of this instrument, and then back was translated from Arabic to English. Equivalence between the original scales’ language, was verified by a professional translator. SAS-A (La Greca and Stone, 1993; La Greca and Lopez, 1998) consists of 18 descriptive self-statements and 4 filler items. The students responded to each item using a 5-point Likert type scale ranging from 1 (not at all) to 5 (all the time). Factor analysis has revealed three distinct factors: Fear of Negative Evaluation (FNE; 8 items), Social Avoidance and Distress-New Situations (SAD-New; 6 items) and General Social Avoidance and Distress (SAD-General; 4 items). Subscale scores are obtained by summing the ratings for the items constituting each subscale; higher scores reflect greater anxiety. The SAS-A has been used with adolescents (La Greca and Lopez, 1998). The psychometric properties of this scale with adolescents students samples provided good support (La Greca and Lopez, 1998).

Factor analysis in the original study (La Greca and Stone, 1993) revealed three distinct factors. The first, Social Avoidance and Distress-New Situations (SAD-N; 6 Items), reflects social avoidance, distress, or inhibition specific to situations with new or unfamiliar peers. It includes such items as “I feel shy around people I don’t know”. The second factor, General Social Avoidance and Distress (SAD-G; 4 Items), reflects more generalized social avoidance, distress or inhibition, as exemplified by the item” It’s hard for me to ask others to do things with me”. The third factor, fear of Negative Evaluation (FNE; 8 Items), included items such as “I worry about what others think of me”. In addition, there were four filler items (i.e., I like to play sports”) which didn’t contribute to any specific factor scores (La Greca and Lopez, 1998) and were not included in the present study. Responses were along a five-point scale, with the anchors of (1) =not at all, (2) =hardly ever, (3) = sometimes, (4) = most of the time, and (5) = all the time. Subscale scores were calculated as the sum of all items in that scale.

Psychometric support for the SAS-A has been strong. For example, internal consistencies for the three subscales were (0.76) for (SAD-General), (0.83) for (SAD-New), and (0.91) for (FNE) (La Greca and Lopez, 1998). In addition, interscale correlations revealed that the SAS-A subscales were significantly interrelated, but distinct. These correlations were .52 (FNE and SAD-General), .55 (SAD-General and SAD-New), and .67 (between FNE and SAD-New) (all p’s [less than] .001),

therefor SAS-A appears to be a promising instrument to examine with students with anxiety disorders (La Greca and Lopez, 1998). The Arabic version of the SAS-A, which was developed in the present study, also had a good internal consistency: Cronbach alphas in the present study were (0.87) for the total score, (0.77) for SAD-N, (0.74) for SAD-G, and (0.89) for FNE. Pearson correlations were conducted to assess intercorrelations among three sub-scales in the Arabic version. All correlation between FNE and SAD-N, was (0.60); between FNE and SAD-G it was (0.55); and between SAD-N and SAD-G, it was (0.58).

Physical Symptoms Scale [PSS]: The Questionnaire of Physical Manifestations (QPM) (Ribeiro, 2000) was used to assess physiological symptoms, and was translated to Arabic specifically for the purposes of the present study. This is a self-report inventory that refers to 19 psychosomatic complaints (Muscular pains; stomach burn etc...). These symptoms can be expression of pressure of the day to day life or of life events. It can be manifestations of personal concerns, or any characteristic of personality, etc. The (QPM), that goes to be used in the present study, is based totally on *Psychosomatic Symptom Checklist* (Attanasio, Andrasik, Blanchard, and Arena, 1984), which had good internal consistency and reliability. Cronbach alphas for the total score was 0.084, Reliability coefficients across retest intervals were $r=0.84$ after four weeks, and $r=0.80$, after eight weeks. A sample item is: "For each of the symptoms listed below, please indicate how frequently it occurs and how intensely bothersome it is: (1) Muscular pains. The individuals answer in a scale of six points for frequency (5- occurs daily; 4- it occurs sometimes per week; 3- it occurs about a time per month; 2- it occurs less of one time per month; 1-Does not occurs), and in one of five for intensity (5- Is extremely bother when it occurs; 4- Much bother when it occurs; 3- Moderately bother when it occurs; 2- Slightly bother when it occurs; 1- It is not a problem). The internal consistency Cronbach alphas for the total score was 0,083. Validity coefficients for (QPM), with mental health scales showed significant validity ($p > 0,05$) (Ribeiro, 2000). The Arabic version of (QPM), called in this study (Physical Symptoms scale [PSS] (Appendix-C) also had good internal consistency . In the present study Cronbach alpha for the total score was 0.87. Reliability coefficients across retest intervals were $r=0.83$ after four weeks, and $r=0.79$, after eight weeks.

Validity of the Study's Measures: To verify the validity of the three inventories (DS, SAS and PSS) first we asked a group of students (20 students, male and female) to report about the clarity of the statements of the three instruments. In addition, content validity was supported by a panel of judges (10 of Psychology and Educational Psychology college teachers from Hashemite University) to rate the appropriateness of the study's instruments after they were provided with the operational definition for each study variables (Differentiation of self, social anxiety and Physical symptoms) The final English and Arabic forms of the three instruments used in the present study were shown in study's Appendixes (A, B, and C), respectively.

Procedures

The study's questionnaires were administrated in one setting by trained research assistant under the supervision of the author at the end of the first semester, 2005-2006 school year, to the participated students in their formal classrooms, under neutral, un-timed conditions. The participants were told, "The present study is related to close relationships and emotions." It took about 20 -25 minutes to complete the entire packet of instruments. No personal identifying information was included in the questionnaires. Participants were guaranteed anonymity of their responses and confidentiality of the data. Participants received credit toward their course grade for agreeing to participate in this study. Each student received a packet containing the three inventories, accompanied by a cover letter requesting his or her participation and explaining its voluntary and anonymous nature, and requesting some information about their family status. Statistical analyses in this study were conducted by using SPSS-Package for Windows Version (13.0).

4. RESULTS

To test the study hypotheses, a series of Correlations, Independent sample T-test, Analysis of Variance [ANOVA], and Multiple Regression analyses were conducted. Levels of differentiation of self served as independent variables and levels of social anxiety and physical symptoms were the dependent variables.

In order to examine the study's **first question** "would the theoretical relationship between differentiation of self and social anxiety and physical symptoms observed in previous research among various European American

samples also be observed among a sample of Arab individuals? or, are individuals with lower feelings of Social Anxiety and fewer Physical Symptoms will report greater differentiation of self?", **Table (1)** displays means and standard deviations, for total sample and for males (N.89) and females (N.136) in all the study's variables.

Multiple regression analysis was used to control for (a) experiment-wise error and (b) inter-correlations between the predictor variables: ER = Emotional Reactivity; IP = I-Position; EC = Emotional Cutoff; FO = Fusion with Others; and D-TOT = Total Score of Differentiation of Self-Inventory . Table (2) shows the inter-correlations among the DSI subscales, Social Anxiety, and Physical Symptoms indices.

Supporting Bowen's propositions, all differentiation variables were inversely correlated with social anxiety and physical symptoms, so that higher differentiation was correlated with lower social anxiety (SAD-N, SAD-G, FNE, SAS-TOT) and less physiological Symptoms (PSS). Table (2) presents the intercorrelations among the DSI full scale and four DSI subscales, and between the

DSI full scale and four DSI subscales, social anxiety and physical symptoms scales. Intercorrelations among the subscales were low to moderate, ranging from .39 to .73 (all $p < .01$). Subscale-full scale correlations were moderate to high, ranging from .74 (IP) to .88 (EC, FO). As shown in Table (1), there were low to moderate negative correlations between DSI full scale and social anxiety and physical symptoms, ranging from .15 (PSS), to .40 (SAS) (all $p < .01$).

The contribution of differentiation levels to social anxiety [SAS] and physical symptoms [PSS] was examined by a set of multiple regressions (see Table 3). An alpha level of .01 was used to test the significance of the beta coefficients, in order to control for inflation of Type I error rate.

To test the relation between differentiation of self and Social Anxiety, Physical Symptoms, the (SAD-N, SAD-G, and FNE,) and physical symptoms scale (PSS) scores were regressed onto the four DSI scores (ER, IP, EC, and FO) simultaneously, and D-TOT separately (Table 3).

Table 1. Total Means [Ms] and Standard Deviations[SDs] for the total college sample (N.225), and among male (n.89) and female (n.136) study participants, on the Differentiation of Self Inventory (DSI) Subscales, Social Anxiety (SAS) Subscales, and Physical symptoms[PSS].

Scale	Total (N.225)		Male (N.89)		Female (N.136)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
ER	28.72	9.57	30.85	9.29	27.33	9.52
IP	39.62	10.79	41.21	9.05	38.58	11.70
EC	40.24	12.26	41.78	11.18	39.22	12.86
FO	33.80	10.89	35.43	9.80	32.72	11.46
DSI-TOT	142.38	36.08	149.29	29.85	137.86	39.07
FNE	22.16	6.66	21.91	6.62	22.53	6.75
SAD-N	17.01	5.35	16.83	5.40	17.29	5.31
SAD-G	10.44	3.24	9.97	3.10	11.16	3.33
SAS-TOT	49.62	12.65	48.72	12.62	51.00	12.63
PSS	77.61	40.06	72.40	36.34	81.03	42.09

Notes: ER = Emotional Reactivity; IP = I-Position; EC = Emotional Cutoff; FO = Fusion with Others; D-TOT = Total Score of Differentiation of Self Inventory. SAD-N = Social Avoidance and Distress-New Situation; SAD-G = Generalized Social Avoidance and Distress; FNE = Fear of Negative Evaluation; SA-TOT = Total Score of Social Anxiety Inventory. PSS = Physical Symptoms scale.

Table 2. Inter-correlations among Differentiation of Self Inventory (DSI) Subscales, Social Anxiety(SA), and Physical Symptoms scale(PSS).

Instrument	1 (ER)	2 (IP)	3 (EC)	4 (FO)	5 (DSI-TOT)	6 (FNE)	7 (SAD-N)	8 (SAD-G)	9 (SAS-TOT)	10 (PSS)
1. Emotional Reactivity (ER)	----									
2. I Position (IP)	.39**	----								
3. Emotional Cutoff (EC)	.61**	.55**	----							
4. Fusion With Others (FO)	.73**	.49**	.70**	----						
5. Total Differentiation of self (DSI-TOT)	.81**	.74**	.88**	.88**	----					
6. Fear of Negative Evaluation (FNE)	-.39**	-.35**	-.35**	-.40**	-.45**	----				
7. Social Avoidance and Distress in New Situations/with strangers (SAD-N)	-.25**	-.28**	-.32**	-.21**	-.32**	.62**	----			
8. Social Avoidance and Distress experienced Generally/with acquaintances (SAD-G)	-.057	-.06	-.17*	-.10	-.12	.37**	.45**	----		
9. Total Social Anxiety (SAS-TOT)	-.33**	-.32**	-.36**	-.32**	-.40**	.89**	.87**	.65**	----	
10. Physical Symptoms (PSS)	-.21**	-.03	-.15**	-.14**	-.15**	.16*	.26**	.07	.18**	----

Note. Higher scores on the Emotional Reactivity, “I” Position, Emotional Cutoff, and Fusion With Others DSI subscales indicate less emotional reactivity, greater ability to take the “I” position, less emotional cutoff, and less fusion with others, respectively, or greater differentiation of self. Higher Social Anxiety and Physical Symptoms scale scores denote weaker psychological well-being. Higher scores on Social Anxiety Scale [SAS] and Physical Symptoms scale [PSS) indicate greater psychological and physical symptoms, respectively.

* $p < .05$. ** $p < .01$.

Table 3. Multiple Regression Analyses, with Social Anxiety and Physical Symptoms as Dependent Variables and Differentiation of Self-Levels as Independent Variables (N = 225)

Dependent Variables	Predictor	β	t	p
FNE (R2 = .21)	ER	-.200	-2.23	.027*
	IP	-.190	-2.60	.010**
	FO	-.141	-1.40	.162
	EC	-.020	-.221	.825
	D-TOT	-6.35	-2.60	0.01**
	F(4, 220)=14.37, p<0001			
SAD-N (R2 = .13)	ER	-.148	-1.57	.118
	IP	-.155	-2.03	.044*
	FO	.149	1.40	.161
	EC	-.250	-2.63	.009**
	D-TOT	-4.14	-3.55	0001***
	F(4, 220)=8.16, p<0001			
SAD-G (R2 = .033)	ER	.085	.857	.392
	IP	.039	.479	.632
	FO	-.028	-.255	.799
	EC	-.223	-2.22	.027*

Dependent Variables	Predictor	β	t	p
	D-TOT	-0.656	-2.22	.044*
	F(4,220)=1.903, p>.111			
SAS-TOT (R2 = .17)	ER	-.146	1.59	.113
	IP	-.156	-2.08	.038*
	FO	-.019	-.183	.855
	EC	-.174	-1.86	.063
	D-TOT	-3.91	-3.39	000**
	F(4,220)=10.97, p<.0001			
PSS (R2 = .06)	ER	-.223	-2.28	.023*
	IP	.127	1.59	.111
	FO	.041	.370	.712
	EC	-.115	-1.163	.246
	D-TOT	-0.74	-2.63	.022**
	F(4,220)=3.48, p<.009			

* $p < .05$. ** $p < .01$. *** $p < .0001$.

Supporting Bowen’s propositions, all differentiation variables were inversely correlated with social anxiety and physical symptoms, so that higher differentiation was correlated with lower social anxiety (SAD-N, SAD-G, FNE, SAS-TOT) and less physiological Symptoms (PSS). Table (2) presents the intercorrelations among the DSI full scale and four DSI subscales, and between the DSI full scale and four DSI subscales, social anxiety and physical symptoms scales. Intercorrelations among the subscales were low to moderate, ranging from .39 to .73 (all $p < .01$). Subscale-full scale correlations were moderate to high, ranging from .74 (IP) to .88 (EC, FO). As shown in Table (1), there were low to moderate negative correlations between DSI full scale and social anxiety and physical symptoms, ranging from .15 (PSS), to .40 (SAS) (all $p < .01$).

The contribution of differentiation levels to social anxiety [SAS] and physical symptoms [PSS] was examined by a set of multiple regressions (see Table 3). An alpha level of .01 was used to test the significance of the beta coefficients, in order to control for inflation of Type I error rate.

To test the relation between differentiation of self and Social Anxiety, Physical Symptoms, the (SAD-N, SAD-G, and FNE,) and physical symptoms scale (PSS) scores were regressed onto the four DSI scores (ER, IP, EC, and FO) simultaneously, and D-TOT separately (Table 3).

First, the relationship between DSI scores and the three SAD-N = Social Avoidance and Distress-New Situation; SAD-G = Generalized Social Avoidance and Distress; FNE = Fear of Negative Evaluation; SA-TOT = Total Score of Social Anxiety Inventory, was examined using three multiple regression analyses. Separate

regression analyses were conducted to predict the three criterion variables (SAD-N, SAD-G, and FNE) separately from the set of four DSI subscales: ER = Emotional Reactivity; IP = I-Position; EC = Emotional Cutoff; FO = Fusion with Others; and D-TOT = Total Score of Differentiation of Self Inventory.

As shown in Table (3), the greatest correlations were found between differentiation of self and fear of negative evaluation [FNE] ($R = .21$): ER, $\beta = -.200$, $p < .01$; IP, $\beta = -.190$, $p < .01$; D-TOT, $\beta = -6.35$, $p < .001$.

As shown in Table (3), A significant relationship was observed between the DSI subscales, taken together, and the [SAS] scores, $F(4, 220) = 10.97$, $p < .0001$, $R = .41$, $[R_{sup.2}] = .17$, indicating that 17 % of the variability in Social Anxiety scores was accounted for by participants' differentiation of self scores. Specifically, less emotional reactivity, emotional cutoff, and fusion with others and greater ability to take an "I" position in relationships were associated with less Social anxiety (better psychological adjustment). As shown in Table (3), IP scores significantly explained unique variance in [social anxiety-SA] scores: $t(224) = -2.08$, $p < .05$, [beta] $\beta = -.16$, semi-partial $r = -.14$. Thus, 14 % of the variability in social anxiety could be understood as a function of "I" Position, with lower "I" Position associated with more social anxiety (see Skowron, 2004).

Secondly, The next set of multiple regression analyses (bottom of Table 3) indicated that physical symptoms (PSS) were negatively related to differentiation levels. An additional correlation analysis found PSS to be positively correlated with social anxiety levels (SAD-N: .26, $p < .01$; SAD-G: .07; FNE: .16, $p < .05$).

.05; SA-TOT: .17, $p < .01$).

As shown in **Table (3)**, a significant relationship was observed between the DSI subscales, taken together, and the [PSS] scores, $F(4, 220) = 3.48$, $p < .009$, $R = .36$, $[R.\text{sup}.2] = .13$, indicating that 13 % of the variability in physical symptom scores was accounted for by participants' differentiation of self scores. Specifically, less emotional reactivity, emotional cutoff, and fusion with others and greater ability to take an "I" position in relationships were associated with better physical health. As shown in Table 3, **ER** scores significantly explained unique variance in **PSS** scores: $t(224) = -2.28$, $p < .05$, $[\text{beta}] \beta = -.223$, semi-partial $r = -.18$. Thus, 18% of the variability in psychological symptoms could be understood as a function of emotional cutoff, with lower emotional cutoff associated with fewer symptoms. This primary dimension of differentiation of self-low ER-is thought to enable individuals to self-soothe when anxious while staying engaged in important relationships (Skowron and

Dendy, 2004; Skowron and Friedlander, 1998). This result goes in line with Skowron and Friedlander's (1998) study which showed that Emotional Reactivity made significant unique contribution, $\beta = -.45$, $t(1, 104) = -4.07$, $p < .001$, to physical symptoms scores. Valences of these beta weights indicated that greater emotional reactivity predicted greater symptomatic distress.

The **second study's** question "Will significant differences be reported between males and females in differentiation of self (DSI; ER, IP, EC, FO), social anxiety, and physical symptoms among Arab individuals?". Gender differences were tested, by using a series of two-tail, independent-sample t-tests, and one-way ANOVA, each by an alpha of .01 (see table 1 for descriptive data). **Table (4)** displays Means (*M*) and Standard Deviations (*SD*), and Standard Deviation Error (*Std.E*) for the three study scales (DSI), (SAS), and (PSS). In addition, t- and F Values, for the Two Groups (Male; Female) on Differentiation of Self [DSI], (SAS), and (PSS).

Table 4. Means (*M*) and Standard Deviations (*SD*), and Standard Deviation Error (*Std.E*) for the three study scales (DSI), (SAS), and (PSS). In addition, t- and F Values, for the Two Groups (Male; Female) on Differentiation of Self [DSI], (SAS), and (PSS).

Scale	No. of Participants	M	SD	Std.E	t	F	p
(DSI)							
Males	89	149.29	29.85	3.16	2.34*	5.50*	.02
Females	136	137.86	39.07	3.35			
(ER)							
Males	89	30.85	9.29	.98	2.74**	7.49**	.007
Females	136	27.33	9.52	.81			
(IP)							
Males	89	41.21	9.05	.96			
Females	136	38.58	11.70	1.00	1.80	3.23	.07
(FO)							
Males	89	35.43	9.80	1.03			
Females	136	32.72	11.46	.98	1.83	3.36	.06
(EC)							
Males	89	41.78	11.18	1.18	1.53		
Females	136	39.22	12.86	1.10		2.35	.126
SAS							
Males	89	48.72	12.62	1.08	1.32		
Females	136	51.00	12.63	1.33		1.75	.187
PSS							
Males	89	72.40	36.34	3.85	-1.58		
Females	136	81.03	42.09	3.60		2.25	.114

* $p < .05$, ** $p < .01$.

With t-test criterion, as shown in table (5), gender differences were statistically significant in differentiation of self (DSI and ER). Significant relations emerged only between gender and DSI, $t(223) = 2.34, p < .05$; and ER, $t(223) = 2.74, p < .01$. Whereas IP, $t(223) = 1.80, p < .07$; FO, $t(223) = 1.83, p < .06$, and emotional cutoff (EC) $t(223) = 1.53, p < .126$, were not significant. These results indicate that men reported higher Differentiation of self [DSI] and greater emotional reactivity [ER] scores than did women. In addition, no gender significant differences were found in SAS, and PSS.

Additionally, a one-way ANOVA yielded statistically significant gender differences on DSI- and [ER], $F(1,223) = 5.50, p < .05$, and $F(1,223) = 7.49, p < .001$, respectively. Gender differences on the IP and FO scales merely approached significance, $F(1,223) = 3.23, p = .07$; $F(1,223) = 3.36, p = .06$, respectively (Table 4). These results show that Men reported more differentiation of self ($M = 149.29, SD = 29.85$), less emotional reactivity [ER] ($M = 30.85, SD = 9.29$), more ability to take "I" positions [IP] ($M=41.21, SD=9.05$), and less Fusion with others [FO], ($M=35.43, SD=9.80$) than did women (DSI: $M = 137.86, SD = 39.07$; ER: $M = 27.33, SD = 9.52$; 'IP': $M=38.58, SD=11.70$; FO: $32.72, DS=11.46$) (Recall that because higher subscale scores reflect greater differentiation, a lower Emotional Reactivity score signifies greater emotional reactivity and so on for the rest of subscales), whereas no differences were observed on the EC subscale, $F(1,223) = .235, p = .126$. Also, no age differences on the DSI-R subscales were observed, $F(3,221) = .63, p = .59$. Likewise, no significant relationships emerged between participants' DSI scores and personal or household income levels, marital status, or experience in work (Skowron and Schmitt, 2003; Skowron, Wester, and Azen, 2004).

The **third study's** question "Were levels of differentiation of self similar between European Americans and Arab individuals? ". To examine the similarity or diversity, of levels of differentiation of self between Jordanian college students and American participants, mean scores of current college student participants on the DSI full scale and four subscales were contrasted with the DSI scores of a college student sample of American participants that was reported by Skowron, Wester, and Azen (2004). Following procedures of some authors (e.g., Tuason and

Friedlander, 2000) who seek to conduct cross-culture studies by using samples and findings from other studies. Skowron et al. (2004) full sample was drawn from an urban, midwestern university. The comparison group ($n = 126$) comprised 23.8% (31) men and 75.4% (95) women, ranging from 18 to 50 years of age, mean age = 22.25 years ($SD = 5.98$).

The majority of students were in a committed relationship (45.4%) or married (12.2%), whereas 42.4% were single. Only 9.8% of participants had children. In terms of college standing, 29.6% were freshmen, 28.8% were sophomores, 22.4% were juniors, 13.6% were seniors, and 5.6% were graduate students. Ethnicity of the sample was predominantly European American (84.8%), with 7.2% African American, 2.4% Asian American, 0.8% Native American, and 4.8% biracial students. Most students were working part-time (73.6%), 5.6% held full-time jobs, and 20.8% were not employed. The majority (89.6%) of students also received financial support from outside sources, with 58.60% of those reporting financial support from parents and 61.9% from government student loans. With respect to parent's levels of education, participants reported one third (33.3%) of mothers were high school graduates, 4.1% did not finish high school, 30.9% had received some college or technical training, 25.2% had obtained a college degree (associates or bachelors), and 6.5% had obtained an advanced degree. Of the participants' fathers, 30.3% had high school degrees, 8.2% were high school dropouts, 25.0% had some college or technical training, 19.7% had a college degree, and 14.7 % had obtained an advanced degree. Eighty percent (80.0%) of mothers were employed, while 89.0% of the participants' fathers were working (Skowron, Wester, and Azen, 2004).

To test for equivalence in differentiation of self levels across the two samples, five independent sample t- tests were conducted on the DSI full scale and subscale scores (e.g., DSI-total, ER, IP, EC, and FO) by group (Jordanian vs. American). As shown in **Table (5)** there were significant sample differences on DSI subscale scores across this Arab college student sample and Skowron et al.'s (2004) American sample: t-s (349) ranged from: (FO) 2.25, $p < .02$ (for Jordanian students reported less fusion with others than American students) ; (IP) -4.44, $p < .01$, (ER)-4.96, $p < .10$, to -5.10 (DSI-total), $p < .07$; (EC)-10.31, $p < .03$, respectively, all significant.

Table 5. Total Means [Ms]and Standard Deviations[SDs] for the total Jordanian college students sample (N.225), and for the total American college students sample (n.126), In addition, t-Value and significance P, for the Two Groups on the Differentiation of Self Inventory (DSI) Subscales.

Scale	Jordanian Students(n. 225)		American Students (No.126)		t	p
	Mean	St. Deviation	Mean	St. Deviation		
ER	28.72	9.57	34.21	10.56	-4.96	0.10***
IP	39.62	10.79	44.66	9.02	-4.44	0.01**
EC	40.24	12.26	53.64	10.56	-10.31	0.03**
FO	33.80	10.89	31.2	10.08	2.25	0.02**
DSI-TOT	142.38	36.08	163.76	40.25	-5.10	0.07***

*** $p < 0.001$, ** $p < .01$.

Although caution is advised in interpreting these results, since the two groups are not similar in many demographic variables. The author was encouraged by Skowron, Wester, and Azen (2004) study findings regarding the lack of age differences observed in their study sample. This no age difference in DSI was consistent with prior research (e.g., Skowron and Friedlander, 1998; Tuason and Friedlander, 2000) and suggests that younger adults may be just as capable of defining self and achieving a healthy balance of autonomy and intimacy as their older counterparts. In spite the American sample doesn't represent well-suited controlled comparison group, thus by indicating significant differences between the two samples, the preliminary results show that except in the dimension of interpersonal fusion [FO] in which Jordanian students were less fused than U.S. students, the American sample was more differentiated of self [in all other variables] as compared to the Jordanian sample.

These results go contrary to Bowen's assumption that his theory is widely universal, and that his theory constructs (i.e., Differentiation of Self) are not bound to cultures, but certainly affected by the family parenting and socialization practices. These findings assert the significant different effects of cultural differences (collectivist vs. individualist cultures) on families and their off springs from different countries.

5. DISCUSSION

This study examined the cross-cultural validity of Murray Bowen's Family Systems theory that is considered one of the most comprehensive theories in family therapy (Nichols and Schwartz, 1991), by studying the reliability of the theory's one important construct, differentiation of self, for Arab persons. The

DSI scores of Jordanian college students obtained in this study were low comparing to those of a European American sample, similar in terms of gender and educational status. In support of Bowen family systems theory (Bowen, 1978; Kerr and Bowen, 1988), greater differentiation of self among Jordanian college students predicted greater psychological adjustment (Social Anxiety and Physical Symptoms). Specifically, the greatest correlations were found between differentiation of self and fear of negative evaluation [FNE] ($R = .21$) (Peleg-Popko, 2002). As hypothesized, differentiation of self correlated significantly with social anxiety and symptom development ($p < .001$), indicating that greater differentiation of self predicted less anxiety and fewer symptoms, and lending support to the construct validity of the DSI in adolescent populations (e.g., Knauth, and Skowron, 2004).

In addition, we must consider that although collectivist cultures may be more concerned with family-related issues, they may be also reluctant to define them as a source of difference of opinion inside their families because sharing family difficulties with others is not within their accepted norms (e.g., Haj-Yahia, 1997). At the same time, this finding corroborates the observation that the family plays a central role in the lives of all people in Arabs and Americans alike, regardless of their cultural orientation.

The present finding that students' lower differentiation levels were significantly associated with greater social anxiety matches similar relationships reported between differentiation and severity levels of adolescents' problems (Gavazzi, Anderson, and Sabatelli, 1993), personal adjustment (Gavazzi and Sabatelli, 1990), depression and anxiety levels (Anderson and Sabatelli, 1992), and an array of presenting problem categories (Gavazzi, 1993). These results lend support to Bowen's

(1976, 1978; Kerr and Bowen, 1988) contention that differentiation is an important aspect of psychological well-being and that lack of differentiation is closely equated with chronic anxiety. All scores on the DSI subscales-which reflect different aspects of differentiation-were found to be related to the students' social anxiety. These results are consistent with those of Skowron (2000), who also found a relation between differentiation and anxiety. They suggest that the dynamics of "fused" families, which are characterized by emotional dependence, lack of autonomy, and intensive closeness (overprotection), may induce a sense of confusion, stress, and anxiety in family members. The contribution of the present study is the finding that anxiety extended to other social network dynamics, suggesting that offspring were "taught" to be anxious not only within their own family, but also with other people in other social situations.

Jordanian college students' differentiation-of-self scores accounted for 17% of the variability in social anxiety scores and about 13 % of the variability in physical symptom scores was accounted for by participants' differentiation of self-scores. Specifically, less emotional reactivity, emotional cutoff, and fusion with others and greater ability to take an "I" position in relationships were associated with better psychological and physical health (Skowron and Friedlander, 1998). These results lend support to the Bowen family systems notion that an individuals' ability to be intimately connected with others and still maintain their individuality is an important component of mental health (Skowron, 2000). This result is in contrary of Skowron (2004) findings no significant association between differentiation of self and physical health among college student.

Moreover, Jordanian college students with the greatest psychological adjustment (less Social Anxiety) were more able to take I positions in important relationships--in other words, those who were to engage in self-directed behavior and acknowledge ownership of their own thoughts and feelings--reported better psychological adjustment (less Social Anxiety and Physical Symptoms).

IP scores significantly explained unique variance in [social anxiety- SA] scores: $t(224) = -2.08, p < .05$, [beta] $\beta = -.16$, semi-partial $r = -.14$. Thus, 14 % of the variability in social anxiety could be understood as a function of "I" Position, with lower "I" Position associated with more social anxiety. Recent research (Skowron and Dendy, 2004) showed that dimensions of

self-differentiation characterized by greater ability to take an 'I' position in one's relationships predicted greater self-regulation, or greater ability to actively modulate arousal and emotional feelings (Derryberry and Rothbart, 1988; Rothbart, Ahadi, and Evans, 2000). Individuals who are capable of self-regulation can engage in conscious effortful control of their attention (i.e., flexibly shift and focus attention), emotion feelings (i.e., downregulate negative emotions such as fear and anger, or optimize positive emotions such as interest and joy), and behavior (i.e., engage in adaptive approach behaviors or inhibit maladaptive behavioral responses) (Derryberry and Rothbart, 1988, 1997; Rothbart et al., 2000; Skowron and Dendy, 2004). Greater ability to take an "I" position in relationships is uniquely associated with better social problem-solving skills.

ER scores significantly explained unique variance in **PSS** scores, thus 18% of the variability in psychological symptoms could be understood as a function of emotional reactivity, with lower emotional reactivity associated with fewer symptoms. This primary dimension of differentiation of self -low ER- is thought to enable individuals to self-soothe when anxious while staying engaged in important relationships. This result goes in line with Skowron and Friedlander's (1998) study which showed that Emotional Reactivity made significant unique contribution, $\beta = -.45, t(1, 104) = -4.07, p < .001$, to physical symptoms scores. Valences of these beta weights indicated that greater emotional reactivity predicted greater symptomatic distress.

Recent research (Skowron and Dendy, 2004) showed that dimensions of self-differentiation characterized by less emotional reactivity (**ER**) and greater ability to take an 'I' position in one's relationships predicted greater ability to adapt successfully to life stressors. We conclude that the only unique relations observed in this study were between these two intra-psychoic dimensions of self-differentiation and social anxiety, and physical symptoms.

It is worth noting that although the relationship between differentiation of self and psychological adjustment (less Social Anxiety and Physical Symptoms) was observed in a diverse sample of Middle Eastern college students, these findings lend initial support to the cross-cultural relevance of Bowen family systems theory and support a growing body of literature (e.g., Campbell, Adams, and Dobson, 1984; Grotevant and Cooper, 1985; Kenny and Perez, 1996; Tuason and Friedlander, 2000)

demonstrating that a capacity for self-definition and relatedness, together, is associated with health and maturity among individuals from non-western cultural groups. Although preliminary in nature, these findings seem to pave the way for further research clarifying the relevance, roles, and/or functions of differentiation of self within specific cultural groups.

Moreover, this study reports gender differences in differentiation of self, emotional reactivity. Male students were significantly higher in pronouncing their selves, identities, and less emotionally reactive in relationships with others, indicating fewer problems with emotional reactivity than did women. These results are consistent with previous research (e.g., Schultheiss and Blustein, 1994; Skowron, 2000; Skowron and Dendy, 2004; Skowron and Friedlander, 1998; Skowron and Schmitt, 2003; Skowron, Wester, and Azen, 2004) and attest to gender differences in the expression of differentiation.

Contrast to these result, Skowron and Schmitt (2003), found no gender differences in their study of differentiation of self among college students, but they mentioned preliminarily that females compared to males, reported relatively more emotional reactivity (ER) ($M = 3.04$, $SD = 1.05$) than men (ER) $M = 3.52$, SD). Thus, our gender comparison indicates that the hypothesized stereotype of women being more relations-oriented in their attachment style than men is supported for the samples of males and females at college years. Research findings (e.g., Kosek, 1998; Skowron, 2000; Skowron and Platt, 2005) provide empirical evidence that is consistent with Bowen's (1978) notion that level of differentiation of self in a family may be "expressed" through the level of functioning of its members. Likewise, previous studies also have documented similar gender differences along the emotional reactivity dimension (e.g., Skowron and Friedlander, 1998; Skowron, 2000; Skowron et al., 2004). Viewed within the frameworks of sex-role socialization and self-in-relation theories (Chodorow, 1978; Josselson, 1988), the gender differences observed herein further confirm previous research (e.g., Kosek, 1998; Skowron and Friedlander, 1998), documenting gender differences in the ways that differentiation problems are expressed (Skowron and Schmitt, 2004).

These results indicate that females poorly differentiated were emotionally reactive. Much of their energy is directed toward the experience, expression, and intensity of their feelings. While males highly

differentiated, on the other hand, experience strong emotions but are not consumed by them. When necessary, they are able to generate alternative ways of thinking and being. Highly differentiated individuals, being more inwardly directed, are capable of "owning" their thoughts and feelings and do not need to conform to others' expectations. In sum, they are secure in their sense of self (Tuason and Friedlander, 2000).

These results may be further understood through Object-relations feminist theorists who believe that patriarchal influences lead to women being the primary care-givers to young children. Thus young girls experience a connectedness and lack of individuation in their relationship with their mothers whereas boys eventually renounce their primary love-object in order to identify with older males (Chodorow, 1978).

In addition, results of the t-test for social anxiety and physical symptoms indicate that male and female students did *not* differ significantly. Thus, gender does not appear to be an important variable in determining scores on these two variables, contrary to the hypothesized stereotype of women being more anxious and depressed than men, and the previous research (Costa, Terracciano, and McCrae, 2001; Feingold, 1994; Maccoby and Jacklin, 1974; Nolen-Hoeksema, 1987) that argued women compared to men report higher levels of anxiety. This maybe due to the social role differences (Geary, 1999) or stereotyping (Guimond, Chatard, Martinot, and Crisp, 2006).

Finally, results indicted significant differences between the two Jordanian and American samples. The preliminary results show that except in the dimension of interpersonal fusion [FO], in which Jordanian students were less fused than U.S. students, the American sample was more differentiated of self [in all other variables] as compared to the Jordanian sample. This [FO] result may be due to DSI-R- fusion subscale properties, which were slightly different from the one used in U.S. sample, in the items numbers. Accordingly, this point needs further investigation. Although this [FO] result is worthy since we are talking about data inspired from two different cultures, with one collectivist encouraging the blurring of boundaries between individuals or family members, or the borrowing and trading of "self" in relationships (Bowen, 1978), and in contrast, the other individualist not promoting overinvolvement with significant others in decision making and in formulating opinions or perspectives dependent on one's parents or significant others.

In sum, this investigation represents an initial effort to

explore the cross-cultural validity of Bowen family systems theory (Skowron, 2004) among Jordanian college students, and caution should be exercised when generalizing these findings. Given the modest sample size and homogeneity of participants' demographic characteristics, these results cannot be generalized to individuals from specific cultural groups, non-college-bound individuals, or persons residing in countries other than Jordan. Rather, the cross-cultural implications of these findings should be considered preliminary and will possibly inspire further work in this area. For instance, because of the difficulty in locating a suitable comparison group with enough data that could be used to compare the Jordanian sample with, the author was unable to evaluate precisely the possible bias in comparison results that may affect the findings of this study comparison.

This result might add some support to the notion that Bowen (1978) theory is free from cultural effect. According to Bowen theory (1978), interpersonal patterns of fusion with others represent behavioral mechanisms for distance regulation, enacted to manage emotional overwhelm or perceived threats to safety. Interpersonal fusion leads to greater role constraint, difficulty tolerating differences of opinion, and difficulty making one's own decisions. Fusion is characterized by taking in others' beliefs and values in their entirety, without undertaking a thoughtful examination to determine their relative fit with one's personal life principles (Bowen, 1978; Friedman, 1991; Kerr, 1984; Kerr and Bowen, 1988; Skowron and Schmitt, 2004).

Limitations

This study has several limitations that should be noted. First, the gender composition of the sample represents one limitation. Study sample, however, was predominately female in that relatively more women than men elected to respond to the survey.

Although cross-culture validation of results using a U.S. college students sample yielded essentially different findings, indicating that the sample's levels of differentiation of self were significantly higher than the Jordanian one (except in fusion with others), we should consider that gender composition was not included in validity procedures. The results might be different if we examine the comparison after excluding gender effects, specially that the U.S. sample yielded no gender effect in differentiation, although the number of males participants was small, which may account for the lack of gender

differences in DSI. Further replications of these findings with a variety of samples of men and women are needed to clarify the populations to which these findings may generalize. Moreover, the study suffers from monomethod bias in that all measures employed were retrospective self-report in nature. Also, Bowen never intended for his differentiation of self scale to be a paper-pencil inventory (Kerr and Bowen, 1988). In fact, he clearly stated that his scale was hypothetical (Bowen, 1985). It is the contention of Kerr (1981) and others that in order to obtain one's true level of differentiation one must accumulate a large amount of historical information, which would necessitate lengthy personal interviews. Such interviews with college students and their nuclear and family-of-origin would provide more accurate details about the family systemic emotional processes. However, it is recommended that instruments such as the DSI-R should only be used as one part of a complete assessment of family functioning vis-à-vis Bowen theory, which may include family histories, family map (genogram) construction, and time-lines (Murray, Daniels, and Murray, 2006).

Future investigations may sample indicators of differentiation subscales like fusion in adult child-parent interactions directly through use of observational coding strategies, such as the Resonance scale of the Structural Family Systems Rating Scale (Szapocznik, Hervis, Rio, and Mitrani, 1991) to determine whether self-report DSI scores would correspond in meaningful ways to observational indicators of differentiation of self in relationships. Likewise, use of such multi-method strategies would provide an important test of the DSI scale's construct-related validity.

The results also suggested that males are more capable than females of achieving self-differentiation. Given that Bowen (1978) posited no relationship between gender and capacity for differentiation, the finding that men reported higher differentiation and greater emotional reactivity and ability to recognize between thinking and feeling in interpersonal situations bears careful attention. One possible explanation is that such a relationship is merely a sampling artifact (Skowron and Schmitt, 2003). In other words, the positive relationship between gender and emotional reactivity may be something unique to this college student sample. Subsequent studies are needed to test these findings carefully.

Further research using the DSI is needed to clarify the cross-cultural validity of Bowen's theory, and

psychological and health problems associated with self-differentiation in general, and with its' subscales in particular. Future investigations may build on this study by establishing a unified work in a cross-culture study with some researchers from Western culture, or by replicating this study in another Middle Eastern society. Such work is necessary for defining the extent of and limits to generalizability of Bowen family systems theory.

Although these findings lend preliminary support for the cross-cultural relevance of Bowen theory, given the modest sample size and heterogeneity along dimensions of family composition, generalizability of these results is limited. However, the cross-cultural implications of these findings should be considered preliminary and will hopefully fuel further work in this area. Though preliminary, these findings may pave the way for future research clarifying the role and function of differentiation of self in diverse Middle Eastern culture family systems. Finally, In spite of these important limitations, this work represents an initial effort to understand the relationship between differentiation of self, social anxiety and physical symptoms among college students from Arab culture using a family systems framework.

Counseling Implications

These results also raise several issues related to prevention of psychological disorders and retention among college students. Levels of differentiation of self for students who present adjustment difficulties to university counseling centers could be assessed to identify possible emotional isolation from family and important others and/or difficulties establishing a sense of inner directedness.

Because isolation, loneliness (Rotenberg and Morrison, 1993), and lack of self-assertion (Bean and Covert, 1973) have been linked to greater risk of school failure and dropout among college students, early identification of at-risk students may facilitate successful preventive interventions. For example, campus outreach programs that are designed to strengthen student competence might be used to strengthen levels of differentiation of self and coping skills with social situations might trigger social anxiety, thus decreasing feelings of isolation and enhancing positive self-definition and resulting in higher retention rates for students. Family-of-origin therapy (Framo, 1992) or reattachment therapy (Diamond and Siqueland, 1995)

may also be used to assist the emotionally cutoff individuals to reconnect with parents and facilitate the establishment, expansion, or strengthening of support systems within their family and on campus. Group counseling and theme-centered interactions groups that promote social engagement and provide the therapeutic experience of universality (Yalom, 1985) may also be useful in this regard. Of course, program evaluation would be necessary to determine the effectiveness of such interventions for reducing emotional cutoff and enhancing capacity for self-definition among college students and, ultimately, to determine whether associated decreases in symptomatology are observed as well.

In conclusion, it is expected that the results of this study may contribute to research and practice in family therapy. The psychometric validity of the DSI scale reported herein will enable researchers to use the DSI to formulate and test questions about relational anxiety expressed via emotional reactivity, I position, fusion with others or emotional cutoff with greater confidence. Likewise, given the links observed between emotional reactivity, future family systems research may be conducted to help clarify the ways in which family relational experiences in childhood and adolescence shape the construction of relations with one's parents and one's intimate relationships in adulthood.

In terms of practice, family therapists may find the DSI more useful in supplementing their assessment efforts with individuals and families. Likewise, future studies of individual, couple, and family therapies may use the DSI-R to test Bowen's proposition that therapy produces moderate increases in one's level of differentiation. Past correlational research has found that experience in therapy was associated with higher levels of differentiation and less emotional reactivity (e.g., Skowron and Friedlander, 1998); however, treatment effectiveness research is needed to ascertain whether therapy can produce systematic changes in self-differentiation. Of particular importance is whether the DSI subscales are sensitive to changes in client differentiation over the course of therapy. In sum, there is still much to be learned about the role of family systems in one's relational development. Family researchers are encouraged to employ the DSI among other measures of the multidimensional construct of differentiation in order to better understand and evaluate dimensions of Bowen family systems theory.

The results of this study support the use of the DSI

with college students. Future longitudinal studies are needed for definitive causal conclusions regarding the role that differentiation of self plays as a mediator between the relation of social anxiety and symptom development. Moreover, this study stirs up, but does not resolve, an important issue. Are differentiation constructs like fusion with others quantitatively different, but comparable, for each culture or are they qualitatively different for each culture, and hence incomparable? Do

some constructs have a "common core" across cultures, while others like "connectedness or closeness with family" are unique and healthy to a culture? These issues are worth pursuing. Further refinement of the instruments, particularly the use of item analysis for the SDI, could result in the creation of scales that are culturally specific, somewhat different from each other, and achieve conceptual equivalence.

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Appendix-A

DSI-R (Skowron and Schmitt, 2003)

These are questions concerning your thoughts and feelings about yourself and relationships with others. Please read each statement carefully and decide how much the statement is *generally true* of you on a 1 (not at all) to 6 (very) scale. If you believe that an item does not pertain to you (e.g., you are not currently married or in a committed relationship, or one or both of your parents are deceased), please answer the item according to your best guess about what your thoughts and feelings would be in that situation. Be sure to answer every item and try to be as honest and accurate as possible in your responses.

Items	NOT AT ALL			TRUE OF		
	True			ME OF ME		
	1	2	3	4	5	6
1. People have remarked that I'm overly emotional						
2. I have difficulty expressing my feelings to people I care for.						
3. I often feel inhibited around my family.						
4. I tend to remain pretty calm even under stress.						
5. I usually need a lot of encouragement from others when starting a big job or task.						
6. When someone close to me disappoints me, I withdraw from him/her for a time.						
7. No matter what happens in my life, I know that I'll never lose my sense of who I am.						
8. I tend to distance myself when people get too close to me.						
9. I want to live up to my parents' expectations of me.						
10. I wish that I weren't so emotional.						
11. I usually do not change my behavior simply to please another person.						
12. My spouse/partner could not tolerate it if I were to express to him/her my true feelings about some things.						
13. When my spouse/partner criticizes me, it bothers me for days.						
14. At times my feelings get the best of me and I have trouble thinking clearly.						
15. When I am having an argument with someone, I can separate my thoughts about the issue from my feelings about the person.						
16. I'm often uncomfortable when people get too close to me.						
17. I feel a need for approval from virtually everyone in my life.						
18. At times I feel as if I'm riding an emotional roller-coaster.						
19. There's no point in getting upset about things I cannot change.						
20. I'm concerned about losing my independence in intimate relationships.						
21. I'm overly sensitive to criticism.						
22. I try to live up to my parents' expectations.						
23. I'm fairly self-accepting.						
24. I often feel that my spouse/partner wants too much from me.						
25. I often agree with others just to appease them.						
26. If I have had an argument with my spouse/partner, I tend to think about it all day.						
27. I am able to say "no" to others even when I feel pressured by them.						
28. When one of my relationships becomes very intense, I feel the urge to run away from it.						
29. Arguments with my parent(s) or sibling(s) can still make me feel awful.						
30. If someone is upset with me, I can't seem to let it go easily.						
31. I'm less concerned that others approve of me than I am in doing what I think is right.						
32. I would never consider turning to any of my family members for emotional support.						
33. I often feel unsure when others are not around to help me make a decision.						
34. I'm very sensitive to being hurt by others.						
35. My self-esteem really depends on how others think of me.						
36. When I'm with my spouse/partner, I often feel smothered.						
37. When making decisions, I seldom worry about what others will think.						
38. I often wonder about the kind of impression I create.						
39. When things go wrong, talking about them usually makes it worse.						

- 40. I feel things more intensely than others do.
- 41. I usually do what I believe is right regardless of what others say.
- 42. Our relationship might be better if my spouse/partner would give me the space I need.
- 43. I tend to feel pretty stable under stress.
- 44. Sometimes I feel sick after arguing with my spouse/partner.
- 45. I feel it's important to hear my parents' opinions before making decisions.
- 46. I worry about people close to me getting sick, hurt, or upset.

DSI-R Subscale Composition: (underlined means reverse scored)

Emotional reactivity: 1, 6, 10, 14, 18, 21, 26, 30, 34, 38, 40;

"I" Position: 4, 7, 11, 15, 19, 23, 27, 31, 35, 41, 43;

Emotional cutoff: 2, 3, 8, 12, 16, 20, 24, 28, 32, 36, 39, 42;

Fusion with others: 5, 9, 13, 17, 22, 25, 29, 33, 37, 44, 45, 46.

Note. The items for all of the subscales except the revised Fusion with Others subscale are from "The Differentiation of Self Inventory: Development and initial validation," by E. A. Skowron and M. L. Friedlander, 1998, *Journal of Counseling Psychology*, 45, p. 246. Copyright 1998 by the American Psychological Association. Reprinted with permission. (Skowron and Schmitt, 2003).

Appendix-B

Social Anxiety Scale for Adolescents (SAS-A). (La Greca and Lopez, 1998; Olivares et al., 2005)

Items	how much the item «is true for you»				
	NOT at ALL TRUE			All the Time TRUE	
	1	2	3	4	5
1. I worry about doing something new in front of others.					
2. I worry about being teased.					
3. I feel shy around people I don't know.					
4. I only talk to people I know really well.					
5. I feel that my peers talk about me behind my back.					
6. I worry about what others think of me.					
7. I'm afraid that that others will not like me.					
8. I get nervous when I talk to peers I don't know very well.					
9. I worry about what others say about me.					
10. I get nervous when I meet new people.					
11. I'm afraid that that others will not like me.					
12. I'm quiet when I'm with a group of people.					
13. I feel that others make fun of me.					
14. If I get into an argument, I worry that the other person will not like me.					
15. I'm afraid to invite others to do things with me because they might say no.					
16. I feel nervous when I'm around certain people.					
17. I feel shy even with peers I know well.					
18. It's hard for me to ask others to do things with me.					

Fear of Negative Evaluation (FNE) (8-Items): 2-5-6-7-9-11-13-14.

Social Avoidance and Distress in New Situations/with strangers (SAD-N) (6- Items): 1-3-4 -8-10-16

Social Avoidance and Distress experienced Generally/with acquaintances (SAD-G) (4Items): 12- 15-17-18.

Four Filler Items: I like to play sports; were omitted since it didn't contribute to any specific factor scores (Pelg-Popko, 2002). Resource : Olivares, J., Ruiz, J., Hidalgo, M.D., Garcia- Lpez , L. J., Rosa , A. I., and Piqueras, J. A. (2005).Social Anxiety Scale for Adolescents (SAS-A): Psychometric properties in a Spanish-speaking population. *International Journal of Clinical and Health Psychology*, 5, 85-97.

Appendix-C

Physical Symptoms Scale (PSS) (Ribeiro, 1999)

Below it finds a set of symptoms that many people feel with frequency in their life of day-by-day. It designates **the frequency and the intensity** with that these symptoms affect the scale in accordance with that presented as followed:

Value of Frequency		Value of Intensity	
5	It occurs <i>daily</i>	5	It is <i>Extremely bother</i> when it occurs
4	It occurs <i>some times per week</i>	4	It is <i>More bother</i> when it occurs
3	It occurs about <i>a time per week</i>	3	<i>Much bother</i> when it occurs
2	It occurs about <i>a time per month</i>	2	<i>Moderately bother</i> when it occurs
1	It occurs <i>less of one time per month</i>	1	<i>Slightly bother</i> when it occurs
0	<i>It never occurs</i>	0	<i>It is not problem</i>

	Value of Frequency	Value of Intensity
1-General Muscular Pains. Neck; Arms; Legs.		
2- Back Muscular Pains.		
3. Pain in Stomach.		
4-Insomnia.		
5-Fatigue.		
6-Depressed.		
7.Vemotting.		
8- Palpitations.		
9-Constipation, Diarrhea.		
10.Dizziness, Nausea.		
11. Chest Pain.		
12-Throat Pain.		
13-Cough		
14-Allergies.		
15- Skin blotches.		
16- Headache.		
17- Catch cold easily.		
18- Blurring in Vision.		
19- Covered Nose		

Ribeiro, J. L. P. (1999). Questinaire of physical manifestations of badyly being. Retrived December, 22, 2005, from <http://www.fpce.up.pt/docentes/paisribeiro/testes/manual.htm>

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