Assessing Satisfaction with Differentiation of Self Through Circle Drawing (SFI): Development and Initial Validation of a Self-Report Instrument

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ABSTRACT | *The research aimed to build and validate an inventory of satisfaction with differentiation of self through circle drawing (SFI). It comprised two studies. Using a sample of 393 college students, Study 1 examined the psychometric properties of the SFI, assessing its associations with differentiation of self (DSI-R) and with self-efficacy. Results provided good reliability and partial construct validity for the inventory. In Study 2, using a sample of 300 college students, we again validated the SFI, this time vis-à-vis the DSI-R and family differentiation (DIFS). We also examined its associations with health anxiety and adjustment to college. Results yielded significant high correlations between the SFI and three of the DSI-R subscales (emotional reactivity, emotional cutoff and fusion with others), and between it and differentiation with mother and father (DIFS), as well as health anxiety, indicating that this instrument is reliable and valid.*

KEYWORDS : Emotional reactivity, I-position, emotional cutoff, fusion with others, satisfaction with differentiation of self, circle drawing

Differentiation of self is a complex amalgamation of emotional maturity, the ability to think rationally in the midst of an emotional situation, and the ability to maintain close emotional relationships (Bowen, 1978; Kerr & Bowen, 1988). Over the last decade, differentiation has become a topic of considerable interest to researchers, psychologists and family therapists. Given the increasing importance of the concept, it is not surprising that several self-report and forced-choice measures have been attempted and applied. In particular, the *Differentiation of Self Inventory* (DSI: Skowron& Friedlander, 1998; DSI-R: Skowron& Schmitt, 2003) and the *Inclusion of Other in the Self Scale* (IOS: Aron, Aron &Smollan,1992) have attracted considerable attention.

According to Bowen (1978; Kerr & Bowen, 1988), family processes should be examined by systemic and multiple tools, and not only by self-report and forced-choice questionnaires. Furthermore, existing measures do not reflect how individuals feel about relationships with their parents, and whether they would like to change them. The aim of the current research, therefore, was to build an instrument that assesses satisfaction with differentiation of self through circle drawing (SFI) and to examine its psychometric properties.

The research comprised two studies. The purpose of Study 1 was to examine the psychometric properties of the newly developed SFI, looking at its associations with a well-known existing measure of differentiation of self (DSI-R), as well as its ability to predict self-efficacy. Based on these results, Study 2 aimed at revalidating the SFI by verifying its associations with differentiation of self (DSI-R) and family differentiation (DIFS), as well as testing whether is associated withhealth anxiety and adjustment to college.

Differentiation of self
Bowen theory (Bowen, 1976, 1978; Kerr & Bowen, 1988) is considered one of the few comprehensive explanations of psychological development from a systemic and multigenerational perspective (Nichols & Schwartz, 1998; Skowron& Friedlander, 1998). According to Family Systems Theory, differentiation of self is the personality variable most critical to mature development and the attainment of psychological and physical health. People who are more differentiated tend to have greater autonomy in their relationships without feeling smothered or experiencing debilitating fear and anxiety of abandonment (Bowen, 1978; Kerr & Bowen, 1988). Furthermore, it has been argued that differentiation of self greatly influences how the individual and his or her family deal with stress and anxiety (Skowron, Kozlowski &Pincus, 2010).

According to this theory, at least four factors are indicative of a person's level of differentiation of self: emotional reactivity, the ability

to take an I-position, emotional cutoff and fusion with others (Kerr & Bowen, 1988; Skowron& Friedlander, 1998; Titelman, 2008). Poorly differentiated persons are not capable of maintaining stable relationships, taking an I-position in relationships or coping with stressful situations, whereas highly differentiated people tend to be more calm, to create balanced (rather than fused) relationships and to be independent. They can feel or act for themselves, and they find it easy to assert their ideas and principles and stick to their positions. As a result, these patterns may lead to higher levels of adjustment and coping during periods of stress (Kerr & Bowen, 1988; Titelman, 2008).

Differentiation of self in relation to other constructs
Bowen hypothesized that higher levels of differentiation of self would be associated with higher levels of overall functioning, both psychological and physiological, including increased ability to navigate complex emotional relationships and to cope with stressful situations and adversity in various domains of human functioning (Kerr & Bowen, 1988). He contended that highly differentiated individuals are likely to feel self-confident, satisfied with their life, to believe in their ability to cope with stress, and to be equipped to invest effort in difficult tasks, whereas poorly differentiated individuals are likely to experience higher levels of anxiety and somatic symptoms and may find it difficult to deal with tension and recover from disease and somatic syndromes (Kerr & Bowen, 1988).

Research has supported Bowen's (1978) theoretical assumption that highly differentiated individuals enjoy good psychological and physical health (Skowron, 2004a; Tuason& Friedlander, 2000), are more satisfied with their life (Biadsy-Ashkar& Peleg, 2013; Manzi, Vignoles, Regalia &Scabini, 2006) and marital relations (Peleg & Yitzhak, 2010), report higher levels of adjustment (Chung & Gale, 2006), and feel more efficacious (Peleg, In Press). Differentiation of self has been found to be negatively associated with psychological and physiological symptoms (Peleg & Rahal, 2012; Peleg-Popko, 2002; Skowron& Friedlander, 1998), social anxiety (Peleg, 2005; Peleg-Popko, 2002), separation anxiety (Peleg & Yitzhak, 2010) and trait anxiety (Skowron& Friedlander, 1998), and to be positively correlated with well-being, psychological adjustment and self-confidence (Chung & Gale, 2006, 2009; Skowron, Holmes &Sabatelli, 2003; Skowron, Stanley & Shapiro, 2009).

Measuring differentiation of self
Differentiation of self has been measured in individuals and families, parsed into individuation or emotional regulation, and assessed using qualitative and quantitative methods. A common method of measurement is various self-report questionnaires. Traditionally, differentiation of self has been measured primarily by one of the following instruments: *Differentiation of Self Inventory* (DSI: Skowron& Friedlander, 1998; DSI-R: Skowron& Schmitt, 2003), *Differentiation in*

the *Family System Scale* (DIFS: Anderson &Sabatelli, 1992), *Level of Differentiation of Self Scale* (LDSS: Haber, 2003) and *Emotional Cutoff Scale* (McCollum, 1986, 1991). According to Miller, Anderson and Keala (2004), the DSI and LDSS are the two scales most often used to assess this construct.

The DSI and its derivatives (Skowron& Friedlander, 1998; Skowron& Schmitt, 2003) have been used extensively to study differentiation of self because of the multiple facets they assess and because of their psychometric properties. This self-report questionnaire is aimed at examining the ability to balance intimacy with autonomy, as well as one's thoughts with one's emotions. It focuses on adults, their significant relationships and current relations with family of origin. The instrument is composed of four subscales: emotional reactivity, I-position, emotional cutoff and fusion with others, where the latter two refer to interpersonal relationships in the family.

Confirmatory factor analyses have demonstrated support for the DSI subscales as empirically distinct dimensions of the single construct of differentiation of self. As the fusion subscale was found to be psychometrically lacking, it was revised and reconstructed. Results yielded a 12-item revised fusion subscale with improved internal consistency, reliability and construct validity (Skowron& Schmitt, 2003).

The DIFS scale (Anderson &Sabatelli, 1992), also a self-report questionnaire, is used to assess levels of differentiation in reciprocal relationships, namely, the triad of a given individual and both his/her parents. Each family member is asked to respond to 11 Likert-type items in regard to relationships with parents. Anderson and Sabatelli (1992) reported internal consistency reliabilities for the DIFS subscales ranging from .83 to .93. They demonstrated a positive relationship between higher levels of differentiation (based on DIFS scores) and personal adjustment.

Haber's (2003) LDSS is a re-evaluation of the *Differentiation of Self Scale* (DOSS; Kear, 1978). The LDSS uses both positively and negatively scored items to measure differentiation of self from one's family of origin. It consists of three factors: separation of thinking and feeling, emotional maturity and emotional autonomy. However, items reflect only interpersonal components of differentiation and ignore the quality of relations with a partner. Though adequate at the time of its creation, the LDSS is not as complete as the DSI-R. It has also been challenged in terms of structural validity and has had limited empirical use since the development of the DSI-R (Haber, 2003; Licht& Chabot, 2006).

Finally, McCollum's (1986, 1991) *Emotional Cutoff Scale* is a good measure of the degree to which respondents manage their emotional attachment to each parent through cutoff. The shortcoming of this questionnaire is its focus on child-parent interactions and disregard of other significant relationships.

All the above instruments suffer from mono-method bias, as all are self-reported in nature. Moreover, individuals have to choose from among a range of responses, limiting their ability to express their feelings and desires. Therefore, these measures may be unable to reflect a profound personal point of view. Our goal was to address this lacuna by integrating a creative tool, using circle drawing to identify patterns of differentiation, as well as satisfaction with differentiation of self.

One attempt to apply another tool to the measurement of interpersonal relationships was Aron et al.'s (1992) questionnaire, the *Inclusion of Other in the Self Scale* or IOS, a semi-projective instrument, based on diagrams representing the self and others, intended to measure closeness (see also Aron, Aron, Tudor & Nelson, 1991). This single-item pictorial measure aims to directly tap people's sense of interpersonal interconnectedness. Respondents select the picture that best describes their relationship from a set of Venn-like diagrams, each representing different degrees of overlap of two circles. The figures are designed so that (a) the total area of each is constant (as the overlap of the circles increases, so does the diameter), and (b) the degree of overlap progresses linearly, creating a seven-step, interval-level scale. A more complex version was proposed earlier by Lewin (1948, p. 90), who diagrammed relationships within the life space in terms of differing degrees of overlap between the differentiated region that represents the self and the region that represents the other

to the individual. The main limitation of the IOS tool is the inability to freely express one's relationships with significant others because of the instruction to choose one option out of seven.

The current study aimed to improve the examination of differentiation of self through the design of a new instrument that enables participants to express differentiation of self through free drawing of closeness and distance. This newly developed instrument, *Satisfaction withDifferentiation of Self Instrument–Circle Drawing* (SFI) improves upon the IOS in that: (a) it is comprised of multiple items that assess multiple family interactions; (b) it enables examination of the gap between real and ideal differentiation of self, thus reflecting family members' levels of satisfaction with their relationships; and (c) it is based upon people's free drawing of representations, thus enabling self-expression. The new measure is expected to tap people's sense of being interconnected with each other. That sense may arise from a variety of processes, conscious or unconscious, which the scale is intended to capture.

Study 1
Summary and hypotheses
The purpose of the current research was to build an instrument to assess satisfaction with differentiation of self, providing evidence for its reliability and validity, and to analyze the association between this instrument, on the one hand, and family and individual patterns, on the other hand. Much research has supported Bowen's (1978) claims that differentiation of self is associated with higher levels of overall functioning, and that highly differentiated individuals are likely to feel self-confident, satisfied with their life, and to believe in their ability to cope with stressful situations. Therefore, in Study 1, we examined the reliability of the inventory with the aim of providing exploratory evidence of its construct validity. Reliability was assessed by internal consistency tests that examined correlations between the items and the total score. Construct validity was measured by comparing the SFI with the *Differentiation of Self Inventory-Revised* (DSI-R, Skowron& Friedlander, 1998; Skowron& Schmitt, 2003), because in the SFI participants are required to describe closeness/distance between family members, and the drawings move from fusion with others to emotional cutoff (two dimension of the DSI-R), as well as their satisfaction with these patterns. We also examined the association between the SFI and self-efficacy (Schwarzer& Jerusalem, 1995), because perceived self-efficacy is a belief that one can perform various difficult tasks. It is a resource factor, facilitating goal-setting, effort investment, persistence in the face of barriers and recovery from setbacks (Schwarzer& Jerusalem, 1995). All these characteristics reflect the behavior of highly differentiated people.

The following hypotheses were tested in Study 1:

Hypothesis 1. Satisfaction with differentiation of self (SFI) will be positively correlated with differentiation of self (DSI-R: emotional reactivity, I-position, emotional cutoff, fusion with others).

Hypothesis 2. Satisfaction with differentiation of self (SFI) will be positively correlated with self-efficacy (SEQ).

Method
Participants
We used two-stage cluster sampling for the study. After choosing a college in northern Israel, we recruited all first-year students at the faculties of Communication, Nursing, Health Care, Psychology and Economics. Of 462 students who received the questionnaires, 402 returned them completed, of which 60 were excluded for not meeting the inclusion criteria of being part of an intact family with two biological parents living in the home (whether the participant was currently living at home or not). The final sample was of 393 Israeli students (aged 18-43, mean age 23.89, SD = 4.49), all living in northern Israel. Of these, 140 were males (35.62%) and 253 females (64.37%); 9 did not specify gender. In socio-economic terms, the sample represented a middle-class population. Of all participants, 88.8% (n = 341) were single, 11.2% (n = 44) were married, and 2.1% (n = 8) were divorced, separated or widowed.

Instruments
The *Differentiation of Self Inventory-Revised (DSI-R*;Skowron& Friedlander, 1998; Skowron& Schmitt, 2003), translated to Hebrew (Peleg,

2008; Peleg-Popko, 2002), was used to assess levels of differentiation of self. The DSI-R consists of 46 items divided into four subscales: emotional reactivity, I-position, emotional cutoff and fusion with others. A sample item is: "I'm overly sensitive to criticism." Participants rate each item on a scale from 1 (not at all like me) to 6 (very much like me). Subscale scores were calculated by averaging the mean scores of the items in each category. Higher differentiation of self is indicated by lower scores for emotional reactivity, emotional cutoff and fusion withothers, and by higher scores for I-position. Internal consistency (Cronbach's alpha) was 0.88 for the total score in the original sample. Reliability for the present research was 0.70 for the total score, 0.84 for emotional reactivity, 0.68 for I-position, 0.75 for emotional cutoff and 0.71 for fusion with others.

In terms of construct validity, Knauth and Skowron (2004) documented that higher values on the DSI-R are related to lower levels of chronic anxiety. This relationship is consistent with prediction from theory and was established in research using other measures of differentiation. Skowron (2004a, 2004b)found the DSI-R to be positively related to psychological functioning. Other researchers have offered evidence supporting the structural validity of the scale (e.g., Chung & Gale, 2006; Peleg, 2008; Skowron 2004a, 2004b). It should be noted that while Skowron and colleagues (Skowron& Friedlander, 1998; Skowron and Schmitt, 2003) hypothesized that individuals older than 25 have a fully formed and stabilized sense of differentiation of self, several studies have since used the DSI-R in college-aged populations.

The *Self-Efficacy Questionnaire*(*SEQ*; Schwarzer and Jerusalem, 1995), translated to Hebrew, abridged and adapted by Zeidner (in Tzibolsky, 1997), consists of 10 items reflecting the belief that one can perform a novel or difficult task or cope with adversity in various domains of human functioning. Each item refers to successful coping and implies a stable internal attribution of success. Perceived self-efficacy is an operative construct, i.e., it is related to subsequent behavior and behavior change and, therefore, is relevant for clinical practice and behavior change. The inventory examines internal positive beliefs (optimism) which help in coping with a variety of difficult life demands. A sample item is: "I am confident that I could deal efficiently with unexpected events." For each item, respondents rate themselves on a 4-point scale, where 1 = does not describe me at all and 4 = describes me to a great extent. A final score is obtained by averaging item scores; thus, higher scores indicate higher self-efficacy.

Internal consistency (Cronbach's alpha) was 0.80 for the total score in the original sample and 0.85 for the present sample. Criterion-related validity is documented in numerous correlation studies where positive coefficients were found with favorable emotions, dispositional optimism and work satisfaction. Negative coefficients were found with depression, anxiety and stress.

The *Satisfaction withDifferentiation of Self Instrument–Circle Drawing* (*SFI;*see Table 3), created specifically for the present study, aims at measuring the individual's satisfaction with his/her differentiation of self. The inventory consists of 14 items intended to directly tap the individual's sense of interpersonal interconnectedness. By drawing two circles, respondents indicate the degree of closeness between their self and a significant other (partner, parent), as well as between their parents. The drawings tap different degrees of overlap between the two circles. Items involving relationships with parents refer both to childhood and to current interactions. Items with respect to a partner refer to spouse or boyfriend/girlfriend and were skipped by participants not currently in a relationship.

In each item, respondents are asked to draw two circles expressing closeness/distance between themselves and others (mother, father, partner), or between their parents, now and in the past, both in terms of the actual relationship and in terms of the ideal relationship. Sample items are: "Please draw two circles that describe the closeness/distance between you and your mother currently." "Please draw two circles that describe closeness/distance between you and your mother, as you would like it to be." In 8 of these items, the first circle represents the respondent; in 4 items, the circles represent the respondent's parents; and in the remaining 2 items, the first circle represents the respondent and the second circle represents his/her partner. Scores are obtained by calculating the gap between real and ideal closeness drawings as an absolute value. Thus, the greater the

gap, the lower the satisfaction. The direction of item scores is then reversed by subtracting them from the maximum score, so that the higher the final score, the greater the satisfaction and the greater the differentiation.

Procedure
After receiving approval for the study from the college's Committee of Ethics, a request was submitted to all lecturers teaching in the above-mentioned faculties for permission to conduct the research. Upon receipt of permission and coordination with teachers, questionnaires were administered to the students during class-time in the classroom by an assistant. Students were told that participation was voluntary; they did not have to answer the questions and could leave the room at any time. They also received assurances of anonymity and discretion. The completed questionnaires were collected after 30 minutes.

Results: Psychometric properties of the SFI (Reliability, validity)
Cronbach's alpha for the SFI was 0.74, pointing to good internal consistency reliability. Regarding construct validity, Campbell and Fiske (1959) argued that a "novel" measure should correlate highly with other measures of the same construct that use different methods (convergent validity). Bivariate Pearson correlations were used to assess convergent validity by measuring the relationship between scores on the SFI subscales and the DSI-R subscales (Table 1). We used an alpha level of .01 to test the significance of the beta coefficients, in order to control for inflation of Type I error rate. Eight (15%) of the 15 correlations were significant, and after the application of the Bonferroni principle, two correlations remained significant.Means, standard deviations, ranges and inter-correlations for all the key variables are presented in Table 1.

Table 1.
Means, Standard Deviations, Ranges and Pearson Correlations for Study 1 Measures

		M (SD) Range	2.	3.	4.	5.	6.
SFI	1. Satisfaction with differentiation of self	15.18 (0.92) 9.38-15.90 n = 386	-.14*	.06	-.20**	.01	.16*
DSI-R	2. Emotional reactivity	3.83 (0.92) 1.55-6.00 n = 393		-.41**	.20**	.66**	-.27**
	3. I-position	4.07 (0.66) 2.09-6.00 n = 393			-.03	-.31**	.50**
	4. Emotional cutoff	2.64 (0.76) 1.00-5.50 n = 393				.15**	-.10
	5. Fusion with others	3.96 (0.67) 1.83-5.83 n = 393					-.17**
SEQ	6. Self-efficacy	3.19 (0.48) 1.40-4.00 n = 391					

*p<.01, **p<.001
SFI = Satisfaction with Differentiation of Self Instrument–Circle Drawing

DSI-R = Differentiation of Self Inventory–Revised

SEQ = Self-Efficacy Questionnaire

Higher scores represent higher levels of each variable.

(*N*= 393)

As the table shows, the SFI was negatively correlated with emotional reactivity and emotional cutoff, both of which reflect lower differentiation. In other words, higher SFI scores were related to higher differentiation of self. Moreover, a significant positive relationship was found between satisfaction with differentiation of self (SFI) and self-efficacy.

Correlations between the DSI-R subscales yielded positive relationships between emotional reactivity, emotional cutoff and fusion with others. Negative relationships emerged between I-position, on the one hand, and emotional reactivity and fusion with others, on the other hand. In addition, self-efficacy was correlated with most of the DSI-R subscales: it was strongly and positively related to I-position, and negatively related to emotional reactivity and fusion with others.

To examine the contribution of family variables to self-efficacy, we opted for a series of hierarchical regression analyses. We used an alpha level of .01 to test the significance of the beta coefficients, in order to control for inflation of Type I error rate (Table 2). In the first step, ethnicity and gender were entered as dummy variables to control for their effects. In the second step, family variables (DSI-R, SFI) were entered. The regression analyses yielded significant results. Specifically, the research variables explained 30% of the variance in self-efficacy. The control variable of ethnicity was found positively associated with self-efficacy, pointing to higher levels among Jewish than Arab college students. The family variables contributed 27% to the variance in self-efficacy when ethnicity and gender were controlled. Specifically, I-position level was found positively correlated with self-efficacy, suggesting that the higher one's ability to be assertive and stick to one's position and beliefs, the higher the level of self-efficacy.

Table 2.
Multiple Hierarchical Regression Analyses Predicting Self-Efficacy, with DSI-R, and SFI

		B	S.E.	β	t
Step 1	Ethnicity	0.21	0.07	.16	3.05**
	Gender	0.01	0.06	.01	0.19
	R^2=.03, p<.01				
Step 2	Ethnicity	0.28	0.06	.21	4.32***
	Gender	-0.08	0.06	-.07	-1.43
	DSI-R				
	Emotional reactivity	-0.05	0.04	-.10	-1.51
	I-position	0.36	0.04	.49	9.87***
	Emotional cutoff	0.02	0.03	.04	0.71
	Fusion with others	0.03	0.05	.04	0.67
	SFI				
	Satisfaction with differentiation of self	-0.01	0.04	.21	-4.16**
	ΔR^2=.27, p<.001				
	Total model	R^2=.30, p<.001, $F(10,351)$=15.13			

**p<.01, ***p<.001

DSI-R = Differentiation of Self Inventory–Revised

SFI = Satisfaction with Differentiation of Self – A Projective Instrument

(N=362)

In order to examine gender differences, a *t-test* analysis was run for levels of self-efficacy and a series of one-way*ANOVA* and *MANOVA* analyses were used for levels of differentiation of self (DSI-R) andsatisfaction with differentiation of self (SFI).Women reported higher levels of emotional reactivity [F (1,382) = 27.83, p < .001], fusion with others [F (1,382) = 20.04, p < .001] and satisfaction with differentiation of self (SFI) [F (1,382) = 26.81, p < .001] than men. No significant gender differences were found in levels of self-efficacy, I-position (DSI-R), or emotional cutoff (DSI-R).

Discussion
The primary aim of Study 1 was to develop and validate the SFI, a projective instrument measuring satisfaction with differentiation of self, and to gather evidence of reliability and construct validity. This aim was partially realized. The good internal consistency results obtained with respect to the SFI point to the reliability of the instrument. More-

over, correlations between the SFI and certain subscales of the DSI-R – an existing measure of the same construct of family patterns (convergent validity) – provide partial construct validity for this newly developed instrument.

The revealed negative association between satisfaction with differentiation of self (SFI), on the one hand, and emotional reactivity and emotional cutoff (DSI-R), on the other, partially supports hypothesis 1.These results are in accordance with previous studies showing positive relationships between satisfaction with family, marriage and life, on the one hand, and differentiation of self, on the other hand (e.g., Biadsy-Ashkar& Peleg, 2013; Peleg &Yizhak, 2010; Skowron& Friedlander, 1998; Wang & Crane, 2001).

No significant associations with satisfaction with differentiation of self were found for I-position or fusion with others. It is possible that the issues tapped by these two DSI-R subscales are related to other family (e.g., family coalitions) or individual patterns (e.g., such as assertiveness).

Finally, a positive association was found between satisfaction with differentiation of self and self-efficacy, supporting hypothesis 2 and suggesting that the SFIis associated with self-efficacy. This implies that well-differentiated people, and those who are satisfied with their differentiation of self, are likely to believe in their ability to cope with stressful situations efficiently.

Study 2
Summary and hypotheses
In Study 1, we examined the reliability of the inventory with the aim of providing exploratory evidence of its construct validity. Reliability was assessed by internal consistency tests that examined correlations between the items and the total score, as well as by test-retest .To verify the construct validity of the SFI, we examined relations between the SFI and a series of additional instruments. First, we verified associations between the SFI, differentiation of self (DSI-R) and family differentiation (DIFS). DIFS was added because it also examines dyadic interactions in the family (with fathers and mothers), thus affording a broader perspective. We then examined the associations between satisfaction with differentiation of self (SFI), on the one hand, and health anxiety and adjustment to college, on the other, to see if the new instrument could predict anxiety and well-being. These dimensions were selected because highly differentiated people cope better with difficult situations and adapt more easily to college, whereas poorly differentiated individuals are likely to report higher levels of anxiety and to suffer from physiological symptoms (e.g., Chung & Gale, 2006; Peleg & Yitzhak, 2010; Skowron et al., 2003; Skowron& Schmitt, 2003; Drake & Murdock, 2008).

The following hypotheses were tested in Study 2:

Hypothesis 1. Satisfaction with differentiation of self (SFI) will be positively correlated with differentiation of self (DSI-R: emotional reactivity, I-position, emotional cutoff, fusion with others).

Hypothesis 2. Satisfaction with differentiation of self (SFI) will be positively correlated with family differentiation (DIFS; differentiation from mother, differentiation from father).

Hypothesis 3. Satisfaction with differentiation of self (SFI) will be negatively correlated with health anxiety (HAQ).

Hypothesis 4. Satisfaction with differentiation of self (SFI) will be positively correlated with adjustment to college (SACQ: academic adjustment, social adjustment, emotional adjustment).

Method
Participants
Study 2 was conducted 10 months after Study 1 (in the following academic year). We again used two-stage cluster sampling. After choosing a college in northern Israel, we recruited all first-year students at the faculties of Communication, Nursing, Health Care, Psychology and Economics. Of 332 students who received the questionnaires, 300 returned them completed (ages 18-46, mean age 26.88, SD = 6.84). All participants lived in northern Israel. Of them, 180 were females (60%), and 120 were males (40%). In socio-economic terms, the sample rep-

resented a middle-class population. Of the respondents, 209 (69.66%) were single, 66 (22.00%) were married, and 25 (8.33%) were separated, divorced or widowed.

Instruments

The *Differentiation in the Family System Scale* (*DIFS*; Anderson &Sabatelli, 1992), translated into Hebrew (Peleg, 2005), was used to assess the levels of differentiation in reciprocal relationships: the triad of the participant and each of his/her parents. A sample item is: "My father respects my privacy." Possible responses range from 1 (never) to 5 (always). Scoring is for each parent separately. Means were calculated for the total scale and for relations with each parent, with high scores indicating higher differentiation. Internal consistency reliabilities for the DIFS subscales are .83 for differentiation from mother (DIFS-M), and .78 for differentiation from father (DIFS-F).

The *Health Anxiety Questionnaire* (*HAQ*; Lucock& Morley, 1996) was translated to Hebrew and adapted for the purpose of this research. Two translators, fluent in Hebrew and English and knowledgeable in psychology and education, performed the translation, and two additional translators, also fluent in both languages, performed a back translation. Comparison of the translated and original versions revealed inconsistencies in a number of items, which led to a discussion with two additional translators, also fluent in Hebrew and English, who made further revisions.

This 21-item questionnaire examines concern and preoccupation with health, fear of illness and fear of death. A sample item is: "Are you concerned about your health?" For each item, respondents rate themselves on a 4-point Likert-type scale, where 0 = never, and 3 = very often. A final score is obtained by summing up the item scores; thus, the range of scores 0-21 indicates less health anxiety, 22-41 signifies a medium level of health anxiety, and 42-63 reflects a high level of health anxiety. Internal consistency (Cronbach's alpha) was 0.82 for the present study.

The *Student Adaptation to College Questionnaire* (*SACQ*; Baker &Siryk, 1986), translated to Hebrew, abridged and adapted for the purpose of the present study, consists of 67 items examining adjustment to college. The questionnaire includes four subscales: academic adjustment, social adjustment, emotional adjustment and adjustment to the institution. Due to lack of relevance, the last subscale (adjustment to institution) was not included in the present research. A sample item is (academic adjustment): "I feel like I fit in well in college." For each item, respondents rate themselves on a 9-point scale, where 1 = describes me to a great extent and 9 = does not describe me at all. A final score is obtained by averaging item scores; thus, higher scores indicate higher adjustment to college. Internal consistencies (Cronbach's alpha) were 0.87 for academic adjustment, 0.88 for social adjustment and 0.82 for emotional adjustment.

Procedure

The procedure in Study 2 was identical to that of Study 1.

Results: Revalidating the SFI

As in Study 1, internal consistency reliability (Cronbach's alpha) for the Satisfaction with Differentiation of Self Instrument-Circle Drawing (SFI) was high: 0.79. In addition, the test retest reliability was high too: 0.83.

Convergent validity was assessed by measuring the relationship between satisfaction with differentiation of self (SFI), the DSI-R subscales and DIFS. Means, standard deviations, ranges and inter-correlations for all key variables are presented in Table 3.

Table 3.
Means, Standard Deviations, Ranges and Pearson Correlations for Study 2 Measures

		M (SD) Range	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
SFI	1. Satisfaction with differentia-tion of self	14.98 (0.84) 10.22-15.95	-.21**	.08	-.24**	-.25**	.40**	.30**	-.28**	-.08	.20*	.07
DSI-R	2. Emotional reactivity	3.35 (0.93) 1.00-5.00		-.22**	.28**	.68**	-.34**	-.28**	.27**	-.19*	-.22**	-.30*
	3. I-position	3.90 (0.90) 1.00-5.00			-.05	-.15*	.22**	.21**	-.17*	.18*	.23**	.18*
	4.Emotional cutoff	3.82 (0.45) 1.00-4.00				.25**	-.26**	-.25**	.24**	-.17*	-.25**	-.20**
	5. Fusion with others	3.48 (0.69) 1.63-5.46					-.29**	-.27**	.28**	-.08	-.07	-.21**
DIFS	6. DIFS-M	4.33 (0.72) 1.05-4.87						.72**	-.26**	.29**	.32**	.31**
	7. DIFS-F	4.06 (0.55) 1.03-4.72							-.24**	.25**	.29*	.30**
HAQ	8. Health anxiety	0.84 (0.62) 0.00-3.38								-.11	-.02	-.15*
SACQ	9. Academic adjustment to college	5.87 (0.80) 2.92-7.88									.37**	.39**
	10. Social adjustment to college	6.41 (0.95) 4.00-8.20										.46**
	11. Emotional adjustment to college	6.24 (0.70) 3.76-8.47			(N = 300)							

*p<.01, **p<.001
SFI = Satisfaction with Differentiation of Self Instrument–Circle Drawing

DSI-R = Differentiation of Self Inventory–Revised

DIFS = Differentiation in the Family System Scale

DIFS-M = Differentiation from mother

DIFS-F = Differentiation from father

HAQ = Health Anxiety Questionnaire

SACQ = Student Adaptation to College Questionnaire

As shown in the table, significant correlations emerged between satisfaction with differentiation of self (SFI) and three subscales of the DSI-R (emotional reactivity, emotional cutoff and fusion with others), as well as with DIFS-M (differentiation from mother) and DIFS-F (differentiation from father). It seems, then, that the SFI was validated by most of the DSI-R and by DIFS, providing partial construct validity for this projective instrument.

In addition, a negative correlation was found between SFI and health anxiety (HAQ), showing the ability of the SFI to predict anxiety. No significant correlations were found between it and any of the SACQ subscales, suggesting that the SFI does not predict adjustment to college.

Correlations between the DSI-R subscales yielded positive relationships between emotional reactivity, fusion with others and emotion-

al cutoff. Negative relationships emerged between I-position, on the one hand, and emotional reactivity and fusion with others, on the other hand.

Emotional reactivity (DSI-R) was positively correlated with health anxiety, and negatively correlated with DIFS-M, DIFS-F, SFI, and all three subscales of adjustment to college. I-position (DSI-R) was negatively associated with health anxiety and positively associated with the three subscales of adjustment to college and with both DIFS scores. Associations between I-position and SFI did not reach significance. Emotional cutoff (DSI-R) was positively related to health anxiety and negatively related to satisfaction with differentiation of self (SFI) and to all three subscales of adjustment to college and both DIFS scores. Fusion with others (DSI-R) was positively correlated with health anxiety and negatively correlated with satisfaction with differentiation of self (SFI), emotional adjustment to college and both DIFS scores.

Health anxiety was found to be negatively related to satisfaction with differentiation of self (SFI), I-position (DSI-R), emotional adjustment to college, DIFS-M and DIFS-F, and positively related to the DSI-R subscales of emotional reactivity, emotional cutoff and fusion with others. Correlations between health anxiety, on the one hand, and academic adjustment to college, social adjustment to college and satisfaction with differentiation of self (SFI), on the other hand, did not reach significance.

We examined the factor structure of the SFI (exploratory factor analyses). Results appear in Table 3, which lists the SFI items. As the table shows, 12 items loaded primarily on the first factor (relationships with parents), two items loaded on the second factor (spousal relationships). In other words, two factors were yielded: (1) family interactions; (2) spousal relationships.

Table 3 about here

In addition, we examined the ability of SFI, DSI-R and DIFS to predict health anxiety and adjustment to college. To examine the contribution of family variables to health anxiety and adjustment to college, we opted for a series of hierarchical regression analyses. Again, we used an alpha level of .01 to test the significance of the beta coefficients, in order to control for inflation of Type I error rate. In these analyses, differentiation of self, family differentiation, and satisfaction with differentiation of self, served as independent variables. Participants' levels of health anxiety and adjustment to college served as dependent variables; Regressions analyses included the control variables of gender and ethnicity at step 1 and the subscale scores of family variables at step 2.

Background variables and accounted for 3% of the variance in health anxiety and adjustment to college. Health anxiety was positively predicted by emotional reactivity (t = 11.23, p < .001), emotional cut-off (t = 8.54, p < .001), fusion with others (t = 10.52, p < .001), and negatively predicted by I-position (t = -8.51, p < .001), differentiation from father (t = -12.62, p < .001), differentiation from mother (t = -14.89, p < .001), and satisfaction with differentiation of self (t = -5.11, p < .05).

Academic adjustment to college was negatively predicted by emotional reactivity (t = -13.42, p < .001), emotional cut-off (t =- 8.54, p < .01), and positively predicted by I-position (t = 9.23, p < .01), differentiation from father (t = -14.12, p < .001) and differentiation from mother (t = -14. 34, p < .001).

In order to examine gender differences, a series of t-test analyses was run for all study variables. Women reported higher levels of emotional reactivity [t (296) = -3.58, p < .001], fusion with others [t (296) = -2.65, p < .01], differentiation from father [t (296) = -4.98, p < .001], satisfaction with differentiation of self [t (294) = -2.35, p < .01] and health anxiety [t (296) = -4.76, p < .001]   than men. Men reported higher levels of differentiation from mother [t (296) = 2.77, p < .01]. No significant gender differences were found in levels of I-position (DSI-R), emotional cutoff (DSI-R), or adaptation to college (SACQ).

Discussion
The aim of Study 2 was to revalidate the SFI. The good internal consistency and test-retest results point to the reliability of this instrument. Construct validity was examined by running correlations with

two existing measures of the same construct of family patterns: the DSI-R and DIFS (convergent validity). Results showed significant correlations between satisfaction with differentiation of self (SFI) and three of the DSI-R subscales (emotional reactivity, emotional cutoff and fusion with others), partially supporting hypothesis1, and between it and differentiation from mother and father (DIFS), fully supporting hypothesis 2.

The negative correlation yielded between the SFI and health anxiety (HAQ) supports hypothesis 3., strengthening Bowen's (Kerr & Bowen, 1988) theoretical assumptions and previous findings regarding the association between differentiation of self and anxiety (e.g., Skowron& Friedlander, 1998). The current findings show that satisfaction with differentiation of self is likely to predict anxiety, and specifically health anxiety, which has never been examined before in this regard.The lack of correlation of SFI with the SACQ, rejecting hypothesis 4, suggests that adjustment to college may be influenced by other variables and more complex interactions (e.g., intelligence, motivation, grades, language skills) beyond the measure of closeness and distance in the family.

Research Limitations and Implications
The SFI instrument introduced here requires further empirical validation and psychometric revision. More work needs to be done to strengthen this projective tool and to reevaluate its psychometric properties, using different scoring (e.g., a Likert-type 5-point scale). Replication of these findings with a variety of samples and ages are needed to clarify the populations to which results may be generalized.

Notwithstanding the above limitations, there is evidence supporting consistency in the SFI measure, suggesting that it can be utilized to explore satisfaction with differentiation of self in clinics and in research. The SFI provides researchers seeking to study Bowen's Family System Theory with a tool that may add information to the DSI-R and DIFS. The use of a circle drawing technique (free drawing) enables participants to express their feelings and family relationships freely without external guidance.

The study findings have important clinical implications. The SFI is an efficient and convenient instrument which diagnoses family interactions in a short time, and it can be administered to children (items 1-12) as well as adults. It is thus useful for school counselors, psychologists, family therapists and researchers alike.

Table 4.
Factor Structure of the Satisfaction with Differentiation of Self Scale-Circle Drawing (SFI)
You are requested to describe the closeness/distance between people, using a drawing of two circles.

For example:

	Factor Loading		
	I		II
Please draw two circles that describe the closeness/distance between you and your mother currently.	,82		
Please draw two circles that describe the closeness/distance between you and your mother currently, as you would like it.	.81		
Please draw two circles that describe the closeness/distance between you and your mother during your childhood and adolescence	.72		
Please draw two circles that describe the closeness/distance between you and your mother during your childhood and adolescence, as you would like it.	.70		
Please draw two circles that describe the closeness/distance between you and your father currently.	.69		

Please draw two circles that describe the closeness/distance between you and your father currently, as you would like it.	.68		
Please draw two circles that describe the closeness/distance between you and your father during your childhood and adolescence.	.66		
Please draw two circles that describe the closeness/distance between you and your father during your childhood and adolescence, as you would like it.	.64		
Please draw two circles that describe the closeness/distance between your parents currently.	.59		
.Please draw two circles that describe the closeness/distance between your parents currently as you would like it.	.57		
Please draw two circles that describe the closeness/distance between your parents during your childhood and adolescence.	.56		
Please draw two circles that describe the closeness/distance between your parents during your childhood and adolescence as you would like it.	.54		
Please draw two circles that describe the closeness/distance between you and your partner currently.			.53
Please draw two circles that describe the closeness/distance between you and your partner currently as you would like it.			.52

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