Explicit and Implicit Self-Evaluations in Social Anxiety Disorder

Eva Gilboa-Schechtman, Hadar Keshet,
Tamar Livne, and Uri Berger
Bar-Ilan University

Reut Zabag
The Hebrew University

Haggai Hermesh and Sofi Marom
Geha Mental-Health Center, Israel

Cognitive models of social anxiety disorder (SAD) emphasize the role of explicit and implicit self-evaluations (SEs) in the etiology and maintenance of this condition. Whereas individuals with SAD consistently report lower explicit SEs as compared with nonanxious individuals, findings concerning implicit SEs are mixed. To gain a more nuanced understanding of the nature of SEs in SAD, we examined explicit and implicit SEs in two significant interpersonal domains: social rank and affiliation. Consistent with cognitive theorizing, we predicted that, compared to nonclinical controls (NCCs), individuals with SAD would exhibit lower explicit and implicit SEs in both domains. Guided by evolutionary theories we also predicted that the differences in SEs between the groups would be greater in the social rank, as compared to the affiliation, domain. Individuals diagnosed with SAD ($n = 38$) and NCCs) $n = 40$) performed two variants of the Self Implicit Association Test: one concerning social rank, and the other concerning affiliation. They also rated themselves on social-rank and affiliation traits. We found that, as compared to NCCs, individuals with SAD exhibited lower social-rank and affiliation SEs. Moreover, differences between the groups in social-rank SEs were greater than in affiliation SEs. Importantly, this pattern was evident in implicit SEs, as much as in explicit SEs. Our findings dovetail with evolutionary accounts highlighting the centrality of the social-rank system in SAD, and refine central tenets of cognitive theories of SAD. A multidomain, multimethod approach to the understanding of the self may broaden our conceptualization of SAD and related disorders.

General Scientific Summary
Negative self-beliefs are at the core of social anxiety disorder. On the basis of self-report and indirect (behavioral) measures, we found that individuals with social anxiety disorder perceived themselves as especially lacking in the domain of social rank.

Keywords: social anxiety, self-evaluations, self-esteem, social rank, IAT

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Social anxiety disorder (SAD) is a condition involving persistent anxiety of social or performance situations in which there is a potential of scrutiny by others (American Psychiatric Association, 2000). SAD is a common anxiety disorder (Kessler et al., 2005) and affects overall quality of life by impairing psychological,

interpersonal, and professional functioning (Alden & Taylor, 2004).

Cognitive models of SAD converge in emphasizing the importance of negative cognitions about the self in the etiology and maintenance of this disorder. According to these models, socially anxious individuals tend to interpret social signals as indicative of rejection or disapproval because of negative cognitions about the self and because of dysfunctional assumptions regarding others' expectations (e.g., Clark & Wells, 1995). Some of these cognitions are assumed to be explicit, open to introspection, and accessible through self-report (e.g., "I am boring"), whereas other self-cognitions are postulated to be latent (i.e., schemata; Beck, Emery, & Greenberg, 1985).

This distinction between explicit beliefs and implicit schemas is echoed by dual-process models of evaluation (e.g., Gawronski & Bodenhausen, 2006). Explicit and implicit self-evaluations (SEs) are hypothesized to stem from two separate processes that operate in distinct contexts and exert independent influence over cognition

and behavior (Schnabel & Asendorpf, 2010). Explicit SEs are postulated to be related to a reflective stance taken toward the self (e.g., Greenwald & Banaji, 1995), and to consciously held attitudes and deliberate behaviors (Asendorpf, Banse, & Mücke, 2002). In contrast, implicit SEs are thought to rely on nondeliberate associations of the self with valenced attributes (Greenwald & Farnham, 2000). Implicit SEs are believed to influence more automatic behaviors such as nonverbal expressions of anxiety (Huntjens, Rijkeboer, Krakau, & de Jong, 2014). According to dual-process models of anxiety, explicit self-beliefs interact with associative (implicit) processes, contributing to the development and maintenance of anxiety (Ouimet, Gawronski, & Dozois, 2009).

Empirical support for the association between social anxiety (SA) and global explicit SEs is robust (e.g., Stopa, Brown, Luke, & Hirsch, 2010; Tanner, Stopa, & De Houwer, 2006). In contrast, research on the association between SA and global implicit SEs, often assessed using the Self Implicit Associations Test (SIAT, Greenwald & Farnham, 2000), has generated conflicting findings. Whereas some researchers (e.g., de Jong, Sportel, De Hullu, & Nauta, 2012; Tanner et al., 2006) found that high-SA individuals and individuals with SAD displayed lower global implicit SEs as compared with low-SA individuals and to nonclinical controls (NCCs), others (e.g., de Jong, 2002; Schreiber, Bohn, Aderka, Stangier, & Steil, 2012) found that individuals high and low in SA were characterized by similar (and positive) levels of global implicit SEs.

The present investigation attempts to resolve these inconsistent findings by examining two distinct domains of SEs: social rank (i.e., power, dominance) and affiliation (i.e., warmth, communality). These domains map onto the Big Two personality framework, which emerged recently as effective in conceptualizing and organizing personality structure (Abele & Wojciszke, 2007). Furthermore, an investigation of these domains aligns with evolutionary models of SAD (e.g., Trower & Gilbert, 1989). These models suggest that individuals with SAD tend to be overly attuned to signals of social rank, frequently at the expense of the attunement to signals of affiliation. Evolutionary models also suggest that individuals with SAD tend to perceive themselves as low in social rank (Gilbert, 2000). Indeed, the association of SA with explicit social-rank SEs is strong in both analog and clinical populations (Aderka, Weisman, Shahar, & Gilboa-Schechtman, 2009; Berger, Keshet, & Gilboa-Schechtman, 2017; Weisman, Aderka, Marom, Hermesh, & Gilboa-Schechtman, 2011). However, association with explicit affiliation SEs (tested so far only in analogue populations) is either nonexistent or weak (Berger et al., 2017; Gilboa-Schechtman, Friedman, Helpman, & Kananov, 2013). A domain-specific investigation of implicit SEs may enhance our understanding of the nature of SEs in SAD.

Importantly, individuals with SAD may be motivated to represent themselves as lacking in the domain of social rank, in an attempt to avoid possible social repercussion (Weeks, Heimberg, Rodebaugh, & Norton, 2008). According to this reasoning, explicit social-rank SEs may be negatively biased, rendering the examination of implicit social-rank SEs particularly important. Indeed, in two recent studies, we have documented that SA in analogue populations was associated with lower implicit social-rank SEs (Berger et al., 2017; Gilboa-Schechtman et al., 2013). The main goal of the present study is to examine implicit social-rank SEs in clinically diagnosed SAD using an implicit measure focused specifically on the self.

The present study examines SEs in SAD differentiating between the two primary interpersonal domains—social rank and affiliation—and between explicit and implicit measures of SEs. In our analogue studies (Berger et al., 2017; Gilboa-Schechtman et al., 2013), implicit SEs were assessed using the popular self–other version of the SIAT, which assesses the relative strength of associations between valenced attributes and the concepts of *self* versus *other* (Greenwald & Farnham, 2000). An important limitation of this task is that it can only provide information about the relative strength of pairs of associations (comparing self to other). Such a design makes it difficult to determine to what extent the strength of the associations among self and attributes is biased by the strength of the associations among other and attributes. The single-category SIAT (SC-SIAT; Karpinski & Steinman, 2006) helps to eliminate this ambiguity in the interpretation of implicit SEs by using a single independent category, thus measuring the strength of associations of a single (self) concept with attributes.

Two predictions were tested. First, consistent with cognitive theories, we predicted that as compared to NCCs, individuals with SAD would exhibit lower explicit as well as implicit SEs in both domains of sociality (global impairment hypothesis). Because individuals with SAD report significant impairments in affiliative bonds, we expected SAD individuals to exhibit lower explicit and implicit SEs not only in social rank, but also in affiliation (Weisman et al., 2011). Second, guided by evolutionary theories and findings from analogue populations, we predicted that the difference between individuals with SAD and NCCs in social-rank SEs would be greater than the difference between these groups in affiliation SEs (social-rank impairment hypothesis). Importantly, we predicted that this social-rank impairment would be evident specifically in implicit SEs.

Method

Participants

Clinical participants ($n = 38$, 15 women) were individuals with a primary diagnosis of SAD who sought treatment at the Anxiety Disorders Unit at Geha Mental-Health Center during the years 2012 and 2013. NCCs ($n = 40$, 19 women) were recruited via web-based community bulletin board listings.

Inclusion criteria for the clinical group were a primary diagnosis of SAD and age between 18 and 50. Exclusion criteria were (a) past or current diagnosis of schizophrenia, (b) current diagnosis of substance dependence, and (c) scores below 30 on the Liebowitz Social Anxiety Scale, Self-Report version (LSAS-SR, Fresco et al., 2001; see Rytwinski et al., 2009).

NCCs were selected to match the participants with SAD in terms of gender, age, and years of education. Exclusion criteria for this group were history of any psychiatric problems as assessed by the SCID and scores above 50 on the LSAS-SR (Rytwinski et al., 2009).

Measures

The Structured Clinical Interview for *DSM–IV* (SCID; First, Spitzer, Gibbon, & Williams, 2002) is a well-established semi-

structured interview designed to diagnose *DSM–IV* disorders. The SCID has shown excellent interrater reliability in diagnosing SAD (Lobbestael, Leurgans, & Arntz, 2011). We used the Hebrew version of the SCID (Shalev, Sahar, & Abramovitz, 1996).

The Single-Category SIAT (SC-SIAT; Karpinski & Steinman, 2006). Two Hebrew-language variants of the SC-SIAT measured implicit social-rank and affiliation SEs. Both SIATs used the same six self words (e.g., participant's first name, *mine, myself*) but different attribute labels. The social-rank SIAT used 12 social-rank traits (six high and six low) with *dominant* and *submissive* as attribute labels. The affiliation SIAT used 12 affiliation traits (six high and six low) with *friendly* versus *hostile* as attribute labels. Selection and validation of stimuli are described in the online supplemental materials (see Section A).

The SC-SIATs consisted of four blocks (Karpinski & Steinman, 2006; see Figure 1). Participants were instructed to rapidly categorize each trait according to the relevant labels. Stimuli in each block were presented randomly with an intertrial interval of 500 ms. If an incorrect response was made, a red *X* appeared for 500 ms before the next trial began. *D* scores were computed based on the response times of Blocks 2 and 4, such that higher positive scores reflect higher implicit SEs. Full details about computation of *D* scores are described in the online supplemental materials (see Section B). In the present study, split-half reliabilities were .93 and .89 for the social-rank and affiliation SIATs, respectively.

Explicit Trait-rating Task. Participants were requested to indicate "to what extent this attribute applies to you." They rated the (randomly presented) social-rank and affiliation traits that were included in the SIATs on a visual analogue scale ranging from 0 (*not at all*) to 100 (*very much*). Social-rank and affiliation scores were computed as the mean of the high- and (reversed) low traits. Internal consistencies of the social-rank and affiliation scores were .94 and .81, respectively.

The LSAS-SR is a 48-item questionnaire assessing anxiety and avoidance in response to common interpersonal situations. LSAS-SR has shown strong convergent and discriminant validity (Fresco et al., 2001). We used the Hebrew version of the LSAS-SR, which has demonstrated high test–retest reliability, internal consistency, and strong convergent and discriminant validity

(Levin, Marom, Gur, Wechter, & Hermesh, 2002). Internal consistency in our sample was .97.

The Beck Depression Inventory (BDI-II; Beck, Steer, & Brown, 1996) is a 21-item measure of the severity of depression symptoms in the preceding 2 weeks. The BDI-II is a frequently used measure that is generally reported to have good construct validity (Dozois, Dobson, & Ahnberg, 1998). We used the Hebrew version of the BDI-II (Shalev et al., 1998). Internal consistency in our sample was .92.

Procedure

Participants were invited to take part in a study on their views of self and others. After providing informed consent, participants were interviewed using the SCID. Interviewers were clinical psychology graduate students, trained by a senior clinician (the first author). All diagnoses were supervised and reviewed by another senior clinician (the last author). Next, participants completed the two SIATs in a counterbalanced order. They then completed the ETraiT and filled out self-report measures. Finally, participants were debriefed and thanked. All instructions and measures were presented in Hebrew. The research was approved by the ethics committees of Bar-Ilan University and of Geha Mental-Health Center.

Results

Participants' Characteristics

Out of the 38 clinical participants, 12 individuals had a current diagnosis of major depressive disorder, 11 had generalized anxiety disorder, eight had a current dysthymic disorder, six had obsessive–compulsive disorder, five had specific phobia, one had posttraumatic stress disorder, and one had body dysmorphic disorder. Twelve individuals received medication.

Group comparisons in demographic characteristics and clinical measures were conducted using one-way analyses of variance (ANOVAs) with group as the between-subjects variable or chisquare tests. SAD and NCC participants were similar in demo-
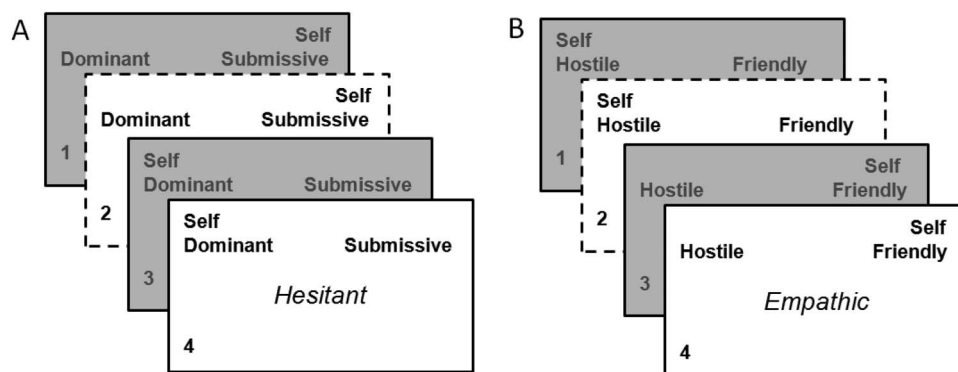

Figure 1. Design of the Self Implicit Association Tests assessing implicit Social-rank (A) and Affiliation (B) self-evaluations. Grey rectangles represent training blocks and White rectangles represent test blocks. Test blocks in dashed line represent "incongruent" (i.e., Self+Low-trait) combinations, and test blocks in full line represent "congruent" (i.e., Self+High-trait) combinations. The positions of blocks 1 and 2 were counterbalanced with those of blocks 3 and 4, respectively. The location of the target concept (*Self*) was counterbalanced.

graphic characteristics (all $ps > .70$). Individuals with SAD exhibited higher severity of symptoms than NCCs on both LSAS-SR, $F(1, 77) = 223.67$, $p < .001$, and BDI, $F(1, 77) = 46.58$, $p < .001$. See the online supplemental materials (Section C) for full demographic and symptom data.

Explicit and Implicit Social-Rank and Affiliation SEs

Means and standard deviations (in parentheses) of explicit and implicit SEs, as well as group-wise comparisons, are presented in Table 1. We examined explicit-implicit SEs correlations in affiliation and social rank. Both explicit SEs were uncorrelated with their respective implicit SEs (all $ps > .60$; see the online supplemental materials, Section D).

To test our hypotheses, we first computed Z scores for each of our dependent measures and then conducted a $2 \times 2 \times 2 \times 2$ repeated measures analysis of covariance with domain (social rank, affiliation) and measure type (explicit, implicit) as within-subject variables, group (SAD, NCC) and SIAT-Oorder (congruent-block first, incongruent-block first) as between-subjects variables, and BDI as a covariate. BDI and SIAT-Order had no main effects or interactions with the study variables and results with and without BDI were qualitatively identical; thus, BDI and SIAT-Order were omitted from the final analyses.

Consistent with our global impairment hypothesis, a significant group effect was obtained, $F(1, 75) = 63.72$, $p < .001$, $\eta^2 = .46$, such that SEs of SAD individuals were lower than those of NCCs. Group main effect was modified by two significant interactions: Group $\times$ Measure Type, $F(1, 75) = 7.36$, $p = .008$, $\eta^2 = .08$, and Group $\times$ Domain, $F(1, 75) = 24.82$, $p = .001$, $\eta^2 = .25$. To understand these interactions, we first analyzed the data separately by measure type. Results revealed a larger difference between SAD individuals and NCCs in explicit SEs, $F(1, 75) = 78.16$, $p < .001$, $\eta^2 = .51$, than in implicit SEs, $F(1, 75) = 12.71$, $p = .001$, $\eta^2 = .14$. Next, we analyzed the data separately by domain. Consistent with our social-rank impairment hypothesis, a larger difference between SAD individuals and NCCs was found in social-rank SEs, $F(1, 75) = 103.10$, $p < .001$, $\eta^2 = .58$, than in affiliation SEs, $F(1, 75) = 11.93$, $p = .001$, $\eta^2 = .14$. All other main effects and interactions did not reach significance (all $ps > .05$).

Consistent with our a priori hypothesis and with the main goal of this study (and despite the absence of the Measure Type $\times$ Domain $\times$ Group interaction), we examined our social-rank im-

pairment hypothesis focusing on implicit SEs. To this end, we conducted a 2×2 ANOVA with domain as a within-subject variable and group as a between-subjects variable. A significant Domain $\times$ Group interaction was found, $F(1, 76) = 12.20$, $p < .001$, $\eta^2 = .14$. Analysis of simple effects (see Table 1) indicated a larger difference between SAD individuals and NCCs in social-rank SEs than in affiliation SEs.

Discussion

We examined explicit and implicit SEs in clinical socially anxious and nonanxious individuals by assessing two central domains of interpersonal functioning. Consistent with the global impairment hypothesis, SAD individuals evidenced lower social-rank and affiliation SEs. Consistent with the social-rank impairment hypothesis, and with our findings from analog populations (Berger et al., 2017; Gilboa-Schechtman et al., 2013), differences between individuals with SAD and NCCs were greater in social-rank SEs than in the affiliation SEs. Importantly, this pattern was evident in implicit SEs as much as in explicit SEs. Our data dovetail with evolutionary accounts highlighting the centrality of the social-rank system in SAD.

According to cognitive theories (Beck et al., 1985; Clark & Wells, 1995), low explicit and implicit SEs are central to SAD. However, empirical tests yielded inconsistent findings with respect to global implicit SEs. To resolve this theory-data discrepancy, weaker effects in the implicit versus explicit SEs were attributed to self-presentation strategies. Bolstering the latent schema assumptions in cognitive models, our findings augment the support for low implicit SEs in SAD. Thus, self-presentation concerns may not be the sole reason for low SEs in SAD. Refining cognitive models, our results suggest that individuals with SAD have low SEs primarily in the domain of social rank.

In line with the findings of de Jong and colleagues (e.g., de Jong et al., 2012), lower implicit social-rank SEs were observed without social-stress activation. These findings suggest that in SAD, negative implicit SEs (at least in the domain of social rank) are chronically activated, rather than dormant until triggered by socially stressful events. This might be due to the early onset of SAD (Stein et al., 2001) and to the ubiquity of (self-perceived) social mishaps in the lives of many socially anxious individuals.

Several theory-driven methodological aspects of our study need to be highlighted. First, whereas previous SIATs conducted with high-SA individuals used global adjectives (*positive* and *negative*)

Table 1
Means and Standard Deviations of Explicit and Implicit Self-Evaluations as a Function of Group

Variable	SAD ($n = 38$) M (SD)	NCC ($n = 40$) M (SD)	F M (SD)	η^2 Effect size [95% CI]
Explicit				
Social rank	40.13 (16.10)	75.30 (12.38)	118.28**	.61 [.49–.69]
Affiliation	72.62 (11.39)	82.42 (10.42)	15.96**	.17 [.06–.29]
Implicit				
Social rank	.16 (.35)	.52 (.22)	28.69**	.27 [.14–.40]
Affiliation	.54 (.37)	.61 (.36)	<1	

Note. SAD = social anxiety disorder; NCC = nonclinical controls.
** $p < .01$.

as attribute labels, we used domain-specific trait-adjectives (*dominant*, *submissive* and *friendly*, *hostile*). IAT effects largely depend on the attribute labels used in the task, because they are critical for the interpretation of the word stimuli (De Houwer, 2001). Second, whereas past research used either global trait adjectives or a mixture of traits from multiple domains, our stimuli in each task consisted of personality traits from a single domain (e.g., *strong, weak*). Future research may explore further refinements and optimizations of implicit assessment procedures of the self.

Understanding the structure of SEs in SAD has several theoretical and clinical implications. Theoretically, the current study suggests that the combination of the Big Two framework with the dual-process model of SE is useful for understanding self-vulnerabilities in SA. Another study found a similar combination helpful for the understanding of narcissism (Campbell, Bosson, Goheen, Lakey, & Kernis, 2007). This combination may be extended to provide a comprehensive, yet parsimonious, examinations of self-vulnerabilities in additional disorders.

Clinically, using social-rank variants of the SIAT to evaluate and ascertain SAD diagnosis may circumvent self-presentation biases central to this disorder. Moreover, the concurrent examination of explicit and implicit SEs may improve our predictive power concerning real-life outcomes, such as nonverbal interpersonal behaviors (Asendorpf et al., 2002). With respect to treatment, our findings support the importance of interventions that target self-representations in SAD (as in imagery-rescripting; see Norton & Abbott, 2016). Moreover, experimental modifications of dysfunctional associations appear to have favorable impact on implicit cognitions, behavior, and symptoms (e.g., Clerkin & Teachman, 2010). Both imagery-rescripting and experimental interventions may benefit from focusing on social-rank SEs.

In closing, some limitations of our study need to be mentioned. First, future studies need to include additional clinical groups of individuals suffering from other disorders. Second, the cross-sectional nature of our design precludes inferences regarding the direction of the influence between SEs and SAD. Prospective longitudinal research to examine whether the identified explicit and implicit SEs patterns are symptoms or consequences of SAD, or premorbid features of this condition, is needed. Third, the SIAT addresses only a limited facet of implicit SEs. Additional implicit measures would greatly improve the generalizability of our findings.

Drawing on cognitive, interpersonal and evolutionary theories, we suggest that SAD is related to lower explicit and implicit SEs in the domain of social rank to a greater extent than in the domain of affiliation. These findings support and refine central tenets of cognitive theories of SAD. An examination of the structure of the self from a broad personality perspective may enhance our conceptualization of SAD as well as other disorders. Exploring emotional disorders within the context of the functioning of two basic psychological systems represents a shift toward a trans-diagnostic and theory-based, rather than a symptom-based, approach.

References

Abele, A. E., & Wojciszke, B. (2007). Agency and communion from the perspective of self versus others. *Journal of Personality and Social Psychology, 93,* 751–763. http://dx.doi.org/10.1037/0022-3514.93.5.751

Aderka, I. M., Weisman, O., Shahar, G., & Gilboa-Schechtman, E. (2009). The roles of the social-rank and attachment systems in social anxiety. *Personality and Individual Differences, 47,* 284–288. http://dx.doi.org/10.1016/j.paid.2009.03.014

Alden, L. E., & Taylor, C. T. (2004). Interpersonal processes in social phobia. *Clinical Psychology Review, 24,* 857–882. http://dx.doi.org/10.1016/j.cpr.2004.07.006

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.

Asendorpf, J. B., Banse, R., & Mücke, D. (2002). Double dissociation between implicit and explicit personality self-concept: The case of shy behavior. *Journal of Personality and Social Psychology, 83,* 380–393. http://dx.doi.org/10.1037/0022-3514.83.2.380

Beck, A. T., Emery, G., & Greenberg, R. L. (1985). *Anxiety disorders and phobias: A cognitive perspective*. New York, NY: Basic Books.

Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Beck Depression Inventory-II manual*. San Antonio, TX: Psychological Corporation.

Berger, U., Keshet, H., & Gilboa-Schechtman, E. (2017). Self-evaluations in social anxiety: The combined role of explicit and implicit social-rank. *Personality and Individual Differences, 104,* 368–373. http://dx.doi.org/10.1016/j.paid.2016.08.023

Campbell, W. K., Bosson, J. K., Goheen, T. W., Lakey, C. E., & Kernis, M. H. (2007). Do narcissists dislike themselves "deep down inside"? *Psychological Science, 18,* 227–229. http://dx.doi.org/10.1111/j.1467-9280.2007.01880.x

Cheng, J. T., Tracy, J. L., & Henrich, J. (2010). Pride, personality, and the evolutionary foundations of human social status. *Evolution and Human Behavior, 31,* 334–347. http://dx.doi.org/10.1016/j.evolhumbehav.2010.02.004

Clark, D. M., & Wells, A. (1995). A cognitive model of social phobia. In R. G. Heimberg, M. R. Liebowitz, D. A. Hope, & F. R. Schneier (Eds.), *Social phobia: Diagnosis, assessment, and treatment* (pp. 69–93). New York, NY: Guilford Press.

Clerkin, E. M., & Teachman, B. A. (2010). Training implicit social anxiety associations: An experimental intervention. *Journal of Anxiety Disorders, 24,* 300–308. http://dx.doi.org/10.1016/j.janxdis.2010.01.001

De Houwer, J. (2001). A structural and process analysis of the Implicit Association Test. *Journal of Experimental Social Psychology, 37,* 443–451. http://dx.doi.org/10.1006/jesp.2000.1464

de Jong, P. J. (2002). Implicit self-esteem and social anxiety: Differential self-favouring effects in high and low anxious individuals. *Behaviour Research and Therapy, 40,* 501–508. http://dx.doi.org/10.1016/S0005-7967(01)00022-5

de Jong, P. J., Sportel, B. E., de Hullu, E., & Nauta, M. H. (2012). Co-occurrence of social anxiety and depression symptoms in adolescence: Differential links with implicit and explicit self-esteem? *Psychological Medicine, 42,* 475–484. http://dx.doi.org/10.1017/S003329171100358

Dozois, D. J., Dobson, K. S., & Ahnberg, J. L. (1998). A psychometric evaluation of the Beck Depression Inventory–II. *Psychological Assessment, 10,* 83–89. http://dx.doi.org/10.1037/1040-3590.10.2.83

First, M. B., Spitzer, R. L., Gibbon, M., & Williams, J. B. W. (2002). *Structured Clinical Interview for DSM–IV–TR Axis I Disorders, Research version, non-patient ed. (SCID-I/NP)*. New York, NY: New York State Psychiatric Institute.

Fiske, S. T., Cuddy, A. J., Glick, P., & Xu, J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology, 82,* 878–902. http://dx.doi.org/10.1037/0022-3514.82.6.878

Fresco, D. M., Coles, M. E., Heimberg, R. G., Liebowitz, M. R., Hami, S., Stein, M. B., & Goetz, D. (2001). The Liebowitz Social Anxiety Scale: A comparison of the psychometric properties of self-report and clinician-administered formats. *Psychological Medicine, 31,* 1025–1035. http://dx.doi.org/10.1017/S0033291701004056

Gawronski, B., & Bodenhausen, G. V. (2006). Associative and propositional processes in evaluation: An integrative review of implicit and explicit attitude change. *Psychological Bulletin, 132,* 692–731. http://dx.doi.org/10.1037/0033-2909.132.5.692

Gilbert, P. (2000). The relationship of shame, social anxiety and depression: The role of the evaluation of social rank. *Clinical Psychology & Psychotherapy, 7,* 174–189. http://dx.doi.org/10.1002/1099-0879(200007)7:3<174::AID-CPP236>3.0.CO;2-U

Gilboa-Schechtman, E., Friedman, L., Helpman, L., & Kananov, J. (2013). Self-evaluations of social-rank and affiliation in social anxiety: Explicit and implicit measures. *International Journal of Cognitive Therapy, 6,* 208–220. http://dx.doi.org/10.1521/ijct.2013.6.3.208

Greenwald, A. G., & Banaji, M. R. (1995). Implicit social cognition: Attitudes, self-esteem, and stereotypes. *Psychological Review, 102,* 4–27. http://dx.doi.org/10.1037/0033-295X.102.1.4

Greenwald, A. G., & Farnham, S. D. (2000). Using the implicit association test to measure self-esteem and self-concept. *Journal of Personality and Social Psychology, 79,* 1022–1038. http://dx.doi.org/10.1037/0022-3514.79.6.1022

Huntjens, R. J., Rijkeboer, M. M., Krakau, A., & de Jong, P. J. (2014). Implicit versus explicit measures of self-concept of self-control and their differential predictive power for spontaneous trait-relevant behaviors. *Journal of Behavior Therapy and Experimental Psychiatry, 45,* 1–7. http://dx.doi.org/10.1016/j.jbtep.2013.07.001

Jackson, D. N. (1984). *Personality Research Form manual* (3rd ed.). Port Huron, MI: Research Psychologists Press.

Karpinski, A., & Steinman, R. B. (2006). The single category implicit association test as a measure of implicit social cognition. *Journal of Personality and Social Psychology, 91,* 16–32. http://dx.doi.org/10.1037/0022-3514.91.1.16

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of *DSM–IV* disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62,* 593–602. http://dx.doi.org/10.1001/archpsyc.62.6.593

Levin, J. B., Marom, S., Gur, S., Wechter, D., & Hermesh, H. (2002). Psychometric properties and three proposed subscales of a self-report version of the Liebowitz Social Anxiety Scale translated into Hebrew. *Depression and Anxiety, 16,* 143–151. http://dx.doi.org/10.1002/da.10064

Lobbestael, J., Leurgans, M., & Arntz, A. (2011). Inter-rater reliability of the Structured Clinical Interview for *DSM–IV* Axis I Disorders (SCID I) and Axis II Disorders (SCID II). *Clinical Psychology & Psychotherapy, 18,* 75–79. http://dx.doi.org/10.1002/cpp.693

Meng, X. L., Rosenthal, R., & Rubin, D. B. (1992). Comparing correlated correlation coefficients. *Psychological Bulletin, 111,* 172–175. http://dx.doi.org/10.1037/0033-2909.111.1.172

Norton, A. R., & Abbott, M. J. (2016). The efficacy of imagery rescripting compared to cognitive restructuring for social anxiety disorder. *Journal of Anxiety Disorders, 40,* 18–28. http://dx.doi.org/10.1016/j.janxdis.2016.03.009

Ouimet, A. J., Gawronski, B., & Dozois, D. J. (2009). Cognitive vulnerability to anxiety: A review and an integrative model. *Clinical Psychology Review, 29,* 459–470. http://dx.doi.org/10.1016/j.cpr.2009.05.004

Rytwinski, N. K., Fresco, D. M., Heimberg, R. G., Coles, M. E., Liebowitz, M. R., Cissell, S., . . . Hofmann, S. G. (2009). Screening for social anxiety disorder with the self-report version of the Liebowitz Social Anxiety Scale. *Depression and Anxiety, 26,* 34–38. http://dx.doi.org/10.1002/da.20503

Schnabel, K., & Asendorpf, J. B. (2010). The self-concept: New insights from implicit measurement procedures. In B. Gawronski & B. K. Payne (Eds.), *Handbook of implicit social cognition: Measurement, theory, and applications* (pp. 408–425). New York, NY: Guilford Press.

Schreiber, F., Bohn, C., Aderka, I. M., Stangier, U., & Steil, R. (2012). Discrepancies between implicit and explicit self-esteem among adolescents with social anxiety disorder. *Journal of Behavior Therapy and Experimental Psychiatry, 43,* 1074–1081. http://dx.doi.org/10.1016/j.jbtep.2012.05.003

Shalev, A. Y., Freedman, S., Peri, T., Brandes, D., Sahar, T., Orr, S. P., & Pitman, R. K. (1998). Prospective study of posttraumatic stress disorder and depression following trauma. *The American Journal of Psychiatry, 155,* 630–637. http://dx.doi.org/10.1176/ajp.155.5.630

Shalev, A., Sahar, T., & Abramovitz, M. (1996). *Hebrew version of the SCID (DSM–IV)*. Jerusalem, Israel: Department of Psychiatry, Hadassah University Hospital.

Stein, M. B., Fuetsch, M., Müller, N., Höfler, M., Lieb, R., & Wittchen, H. U. (2001). Social anxiety disorder and the risk of depression: A prospective community study of adolescents and young adults. *Archives of General Psychiatry, 58,* 251–256. http://dx.doi.org/10.1001/archpsyc.58.3.251

Stopa, L., Brown, M. A., Luke, M. A., & Hirsch, C. R. (2010). Constructing a self: The role of self-structure and self-certainty in social anxiety. *Behaviour Research and Therapy, 48,* 955–965. http://dx.doi.org/10.1016/j.brat.2010.05.028

Tanner, R. J., Stopa, L., & De Houwer, J. (2006). Implicit views of the self in social anxiety. *Behaviour Research and Therapy, 44,* 1397–1409. http://dx.doi.org/10.1016/j.brat.2005.10.007

Trower, P., & Gilbert, P. (1989). New theoretical conceptions of social anxiety and social phobia. *Clinical Psychology Review, 9,* 19–35. http://dx.doi.org/10.1016/0272-7358(89)90044-5

Weeks, J. W., Heimberg, R. G., Rodebaugh, T. L., & Norton, P. J. (2008). Exploring the relationship between fear of positive evaluation and social anxiety. *Journal of Anxiety Disorders, 22,* 386–400. http://dx.doi.org/10.1016/j.janxdis.2007.04.009

Weisman, O., Aderka, I. M., Marom, S., Hermesh, H., & Gilboa-Schechtman, E. (2011). Social rank and affiliation in social anxiety disorder. *Behaviour Research and Therapy, 49,* 399–405. http://dx.doi.org/10.1016/j.brat.2011.03.010

Wiggins, J. S. (1979). A psychological taxonomy of trait-descriptive terms: The interpersonal domain. *Journal of Personality and Social Psychology, 37,* 395–412. http://dx.doi.org/10.1037/0022-3514.37.3.395

Wiggins, J. S., & Broughton, R. (1991). A geometric taxonomy of personality scales. *European Journal of Personality, 5,* 343–365. http://dx.doi.org/10.1002/per.2410050503

Wojciszke, B., Baryla, W., Parzuchowski, M., Szymkow, A., & Abele, A. E. (2011). Self-esteem is dominated by agentic over communal information. *European Journal of Social Psychology, 41,* 617–627. http://dx.doi.org/10.1002/ejsp.791