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The relations between social anxiety and social intelligence: A latent variable analysis

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ABSTRACT

Social anxiety has been associated with biases in cognitive processing and deficits in social performances. Yet, it remains unclear if these variations may be partly attributable to deficits in fundamental social abilities: for example, social intelligence (SI). Using the Magdeburg Test of Social Intelligence (MTSI) as an objective and performance based SI measure, we examined the relationship between social anxiety and SI in a general population sample ($N = 110$) using Structural Equation Modeling. Dimensions of social anxiety as postulated by Clark and Wells (1995) and facets of SI (social understanding, social memory, and social perception), were negatively correlated. Use of safety-behavior in particular was related to deficits in social understanding ($r = -0.25$; $p < 0.05$) and social perception and memory ($r = -0.24$; $p < 0.05$). Results suggest small to medium sized relationships between specific facets of social anxiety and certain domains of SI. Therapeutic implications for socially anxious individuals concerning SI are discussed.

1. Introduction

Social anxiety is defined as "a marked and persistent fear of one or more social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny by others. The individual fears that he or she will act in a way (or show anxiety symptoms) that will be humiliating or embarrassing" (American Psychiatric Association, 1994, p. 416). Based on Beck's cognitive model of anxiety disorders, Clark and Wells (1995) suggest that social anxiety is maintained by several cognitive and behavioral mechanisms, for example the biased evaluation of one's own social performance (Clark, 1999; Clark & McManus, 2002). In line with this suggestion, there is evidence that socially anxious people judge their own performance in a negative fashion, emphasizing their shortcomings and underestimating their behavioral skills relative to the evaluation of their conversational partner (Hirsch, Meynen, & Clark, 2004), in comparison to a non-clinical control group (Alden & Wallace, 1995; Moscovitch & Hofmann, 2006; Rapee & Lim, 1992; Stopa & Clark, 1993; Taylor & Alden, 2005; Voncken & Bögels, 2008), or compared to participants with low levels of social anxiety (Ashbaugh, Antony, McCabe, Schmidt, & Swinson, 2005).

Moreover, there is evidence that socially anxious individuals perform worse in social interactions compared to non-anxious control participants (Baker & Edelmann, 2002; Beidel, Turner, & Dancu, 1985; Stangier, Heidenreich, & Schermelleh-Engel, 2006; Voncken, Alden, Bögels, & Roelofs, 2008) or persons with low levels of social anxiety (Ashbaugh et al., 2005; Thompson & Rapee, 2002). These results have been found in patients with social phobia (Baker & Edelmann, 2002; Stangier et al., 2006; Voncken et al., 2008) as well as in non-clinical samples (Ashbaugh et al., 2005). However, overall evidence for a social performance deficit in patients with social phobia or people with elevated social anxiety is equivocal. Several studies did not find socially anxious individuals to perform worse in social situations (Rapee & Lim, 1992; Strahen & Conger, 1998).

Even though research findings are equivocal, socially anxious people seem to have some deficits in social performance skills. It remains unclear if these shortcomings only appear in stressful social situations (e.g., due to a strong internal focus on symptoms of anxiety and dysfunctional thoughts and beliefs) or if they are the result of an actual cognitive deficit. The latter point would suggest that these skill deficits should be observable not only in stressful social situations but also under optimal testing conditions. According to the integrative framework of social competences (Süß, Weis, & Seidel, 2005), social intelligence (SI) is a relevant component for socially competent behavior. Social competence is defined as the potential of a person and is therefore a required ability for appropriate social performance. The model proposes SI to lead to socially intelligent or competent behavior. Socially competent behavior is further affected by emotional and practical intelligence, several moderator variables (e.g., altruism, agreeableness of a person) and the social context.

The concept of SI was first described by Thorndike (1920), who defined it as "the ability to understand and manage men and women, boys and girls – to act wisely in human relations" (p. 228).

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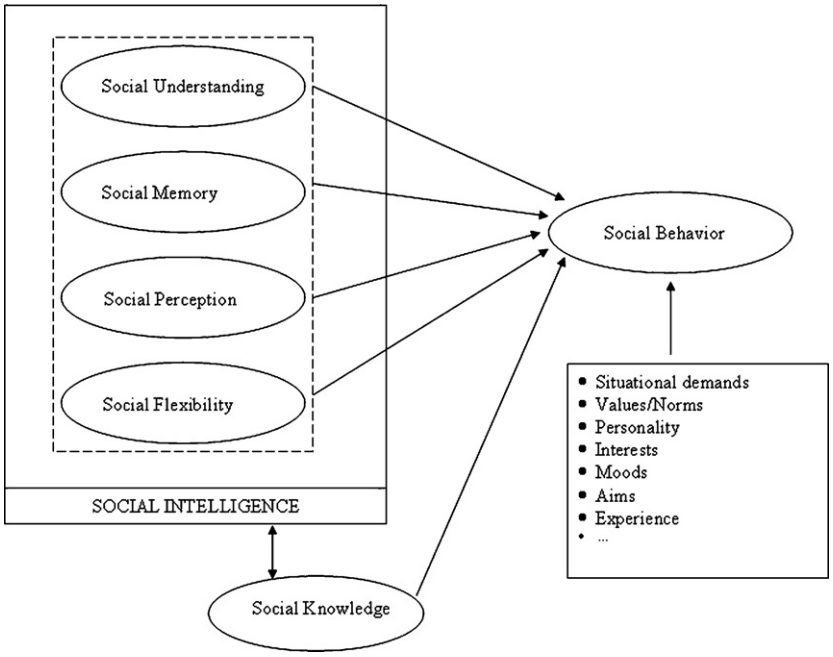

Fig. 1. The structural model of social intelligence.

Based on the concept behind faceted intelligence models (Süß & Beauducel, 2005), Weis and Süß (2005; see also Weis, Seidel, & Süß, 2006) developed an integrative model of SI, characterizing it as a multidimensional performance construct (see Fig. 1). Faceted models of intelligence provide a description and classification of ability traits or tests (Süß & Beauducel, 2005). In accordance with the Berlin Intelligence Structure Model (Jäger, 1982), Weis et al. (2006) postulated two facets. The first is an operative facet containing the five cognitive abilities of social understanding, social memory, social perception, social flexibility, and social knowledge. The second facet arises from the four material linked content domains (written and spoken language, pictures and videos). Social understanding is the pivotal area of SI. In a recent version of the model, the authors excluded social knowledge from the core cognitive ability construct as it does not meet the demands of universal validity and context independence. Nevertheless, social knowledge should still be positively related to the other four cognitive ability domains of SI.

Using a multitrait–multimethod-design, confirmatory factor analysis supported the multidimensional structure of SI for the domains social understanding, social memory, and social knowledge (Weis & Süß, 2007). This investigation further demonstrated that SI can be differentiated from academic intelligence as assessed by the Berlin Intelligence Structure Test (BIS; Jäger, Süß, & Beauducel, 1997). Based on the model of SI (Weis & Süß, 2005; Weis et al., 2006), Süß, Seidel, and Weis (2007, 2008) developed the Magdeburg Test of Social Intelligence (MTSI) which assesses three ability facets of SI (social understanding, social perception, and social memory). Development of tasks measuring social flexibility has not yet been completed; therefore this dimension is not included in the present investigation. Each assessed ability facet is measured using four material linked content domains (written and spoken language, pictures, and video recording). The four content domains depict realistic social situations that have taken place in real life and as a result the different tasks of the MTSI possess a high degree of external and ecological validity.

Given relevance of SI for social competence and successful social behavior, it seems possible that the deficits in social performance observed in people with high levels of social anxiety depend at least partly upon deficits in SI. Surprisingly, there are currently no studies that have considered the relationship between social anxiety and SI. Only two articles have been published which address possible relations between social anxiety and emotional intelligence (EI). Using Structural Equation Modeling techniques, Summerfeldt, Kloosterman, Antony, and Parker (2006) revealed a strong negative relationship between EI and social interaction anxiety. The authors further demonstrated EI to be the prevalent predictor of interpersonal adjustment. The other investigation, carried out by Jacobs et al. (2008), found evidence for a strong negative relationship between the severity of social anxiety and experiential EI; but social anxiety was not found to be related to strategic EI. The study further demonstrated that reduced EI is not associated with the presentation of social anxiety. The two studies used different instruments to measure EI. Summerfeldt et al. (2006) used the short form of the Bar-On Emotional Quotient Inventory (Bar-On, 2002), which measures four abilities: intrapersonal, interpersonal, stress management, adaptability and general mood. Jacobs et al. (2008) used the Mayer–Salovey–Caruso Emotional Intelligence Test (MSCEIT; Mayer, Salovey, & Caruso, 2002). The MSCEIT is intended to measure four skills of EI: facilitating thought, perceiving, understanding, and managing of emotions – which result in two main areas: strategic and experiential intelligence (Mayer, Salovey, Caruso, & Sitarenios, 2003). The MSCEIT is a performance based instrument but it appears to have some methodological and structural difficulties (Day & Carroll, 2004; Gignac, 2005; Rode et al., 2008; Rossen, Kranzler, & Algina, 2008). Furthermore, the scoring system of the MSCEIT is based on group consensus which has been criticized as not being an objective form of testing. The Bar-On Emotional Quotient Inventory is a self-report questionnaire and therefore also does not contain objective performance based data.

Up until now, data concerning the relationship between SI and EI has been equivocal. Some researchers have found empirical evidence for SI and EI being independent of each other (Davies, Stankov, & Roberts, 1998), whereas others have found evidence for two overlapping constructs (Barchard, 2003; Kang, Day, & Meara, 2005; Kobe, Reiter-Palmon, & Rickers, 2001; Salovey & Mayer, 1990; Weis & Süß, 2007; Weis et al., 2006). According to Salovey