Relation of self-talk frequency to loneliness, need to belong, and health in German adults

Corinna Reichl *, Johann F. Schneider, Frank M. Spinath

Saarland University, POB 151150, 66123 Saarbruecken, Germany

ABSTRACT

This study examined whether individuals with a high need to belong and feelings of loneliness tend to compensate for a lack of social contact by self-talk and whether self-talk prevents negative consequences on their physical and mental health. The sample consisted of 559 adults drawn from the German Sozioland Panel Project. The results of SEM analyses revealed evidence for significant relations of the need to belong and loneliness with the frequency of self-talk. Moreover, the need to belong and loneliness were significantly related to mental and physical health, but loneliness was shown to be more important for the prediction of both health outcomes. Results of moderator analyses indicate that self-talk might be a risk factor for an increased negative correlation between loneliness and mental health. Self-talk, which is supposed to be related to self-awareness, might reinforce the subjective feeling of loneliness and hence have a negative impact on psychological well-being.

© 2012 Elsevier Ltd. All rights reserved.

1. Introduction

Human beings rely on social interactions with other people to maintain a lasting state of physical and psychological well-being (Baumeister & Leary, 1995). When an individual's need to belong cannot be satisfied, a feeling of loneliness occurs (Mellor, Stokes, Firth, Hayashi, & Cummins, 2008); this in turn has grave implications for people's health (Heinrich & Gullone, 2006). In such cases in which real social bonds are lacking, people might indirectly satisfy their need to belong by simulating social interaction via self-talk (Jonason, Webster, & Lindsey, 2008). Most research on the effects of self-talk has focused on directed self-talk or inner speech within applied sport psychology or clinical settings where it is often included as an integral component of intervention programs (Hardy, 2006). By contrast, the present study aims to investigate the self-regulatory functionality of non-instructed self-talk in relation to an individual's need to belong and perceived loneliness. A deep understanding of the processes underlying non-instructed self-talk is important not only for the refinement of intervention programs but also for an appropriate application that takes interindividual differences into account.

1.1. The need to belong and loneliness

Baumeister and Leary (1995) were the first to formulate a need to belong theory that was built upon empirical research. Within their framework, they defined the belongingness hypothesis, assuming "that human beings have a pervasive drive to form and maintain at least a minimum quantity of lasting, positive, and significant interpersonal relationships" (p. 497). Empirical research on the need to belong expanded rapidly, yielding evidence that a failure to meet one's need to belong may cause health problems, such as functional limitations in old age or high blood pressure (Hawkley, Thisted, Masi, & Cacioppo, 2010; see Gere & MacDonald, 2010, for an overview). The failure to satisfy one's need to belong and its associated dysfunctionality are at risk of manifesting themselves in loneliness (Jonason et al., 2008; Mellor et al., 2008). Loneliness has been defined as "the unpleasant experience that occurs when a person's network of social relationships is significantly deficient in either quality or quantity" (Perlman & Peplau, 1982, p. 15). A large body of research has demonstrated that solitude and loneliness are associated with negative consequences on indicators of well-being such as life satisfaction (Goodwin, Cook, & Yung, 2001; Mellor et al., 2008), depressive symptoms (Cacioppo, Hawkley, & Thisted, 2010), and even suicidal ideation (see Heinrich & Gullone, 2006, for an overview).

When the need to belong cannot be met, mechanisms might be applied to monitor the environment and guide information processing in order to overcome or diminish feelings of loneliness. This process is described by the Model of Belonging Regulation (Gardner, Pickett, & Knowles, 2005). At first, individuals seek to identify environmental cues that allow for the engagement in social interaction. In line with this assumption, Pickett, Gardner, and Knowles (2004) have demonstrated that individuals with high belonging needs are more sensitive to social cues and are disposed of particularly good social perception skills. If positive social

* Corresponding author. Tel.: +49 6813023338; fax: +49 6813024791.
E-mail addresses: c.reichl@mx.uni-saarland.de (C. Reichl), josh@mx.uni-saarland.de (J.F. Schneider), f.spinath@mx.uni-saarland.de (F.M. Spinath).

interaction is not possible, individuals might search for representations of social bonds, a process referred to as *social snacking*, or alternatively make use of illusions or surrogates, referred to as *social shielding*. In the literature, various such strategies have been verified. For example, individuals might use symbols (e.g., photographs, recent letters, or a wedding ring) to remember a positive social relationship or interaction (Gardner et al., 2005), engage in parasocial attachments with TV characters (Greenwood & Long, 2009; Jonason et al., 2008) or religious activities (Epley, Akalis, Waytz, & Cacioppo, 2008), attribute humanlike mental states or traits to pets or gadgets (Epley et al., 2008), or simulate social interaction by self-talk (Jonason et al., 2008).

1.2. Self-talk

Self-talk can be considered to play an important role in self-regulation (Azmitia, 1992; Hardy, 2006). To test for this, Brinthaupt, Hein, and Kramer (2009) developed and validated an inventory that assesses how frequently a person talks to oneself, aloud or silently, with a four-factor model: *Social assessment* describes the extent to which a person tends to imagine past or potential social interaction. *Self-reinforcement* refers to self-confirming conversation. By contrast, *self-criticism* encompasses self-blaming talk about negative experiences. Finally, *self-management* is aimed at anticipating and directing one's future behavior. In a recent paper, Jonason et al. (2008) suggested that talking to oneself "may be a partial remedy to diminished social interactions" (p. 648). From an evolutionary point of view, self-talk might provide cues that activate agency detection mechanisms that inform the individual that he or she is not alone. Empirically, they demonstrated that loneliness appear to be correlated with self-talk. The use of overt self-directed speech and auditory imagery might be applied in order to compensate for unavailable real social interaction.

1.3. Summary and hypotheses

Referring to the theorizing and empirical findings of the Model of Belonging Regulation (Gardner et al., 2005) and approaches from evolutionary psychology (Jonason et al., 2008), we predicted that individuals with a high need to belong and feelings of loneliness would exhibit a higher frequency of self-talk as a surrogate for real conversation (social shielding; Hypothesis 1). Moreover, we postulated that loneliness would show higher correlations with health outcomes than the need to belong because the concept of loneliness comprises the subjective component of quantitatively or qualitatively deficient social networks (Hypothesis 2). Finally, we predicted a protective function of self-talk such that it would buffer the negative effects of loneliness on physical and mental health (Hypothesis 3).

2. Method

2.1. Participants and procedure

Participants were recruited via the German Panel Project Sozioland, a division of the independent opinion platform Respondi,[1] which aims to support scientific research. A study invitation and an associated link to the online questionnaire were emailed to a random sample of Sozioland participants. The average response rate of Sozioland studies is about 35%. Respondents included 559 individuals (332 women) from different occupational groups. Of these, 357 respondents reported that they were in a romantic relationship.

Another 178 reported being single, and 24 did not specify their relationship status. Participants' ages ranged from 16 to 76 years with an average age of 36.1 (SD = 12.5) years.

2.2. Measures

Need to belong was assessed by the 10-item German version of the Need to Belong Scale (Leary, Kelly, Cottrell, & Schreindorfer, submitted for publication; Renner, 2006). Participants responded on a 4-point scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). High scores on this scale indicate a strong desire to relate to social groups and to be accepted by other people as well as a tendency to have negative reactions to social rejection and ostracism. Previous research has reported good reliability coefficients of Cronbach's α coefficients of about .80 (Mellor et al., 2008; Pickett et al., 2004). A series of studies has further demonstrated that the need to belong was correlated but distinct from related concepts such as extraversion or affiliation motivation and independent from insecure attachment or unfulfilled needs for acceptance (Leary et al., submitted for publication).

Loneliness was measured by the short 5-item version of the German UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980; Stephan & Fäth, 1989), which assesses subjective feelings of loneliness and social isolation. Participants responded on a 4-point scale ranging from 1 (*never*) to 4 (*frequently*). The short form is highly correlated (r = .91) with the original 20-item version. In previous research, the scale exhibited a mean reliability of α = .87 and has been shown to correlate with other loneliness measures and with scales assessing the adequacy of the individual's interpersonal relationships (Vassar & Crosby, 2008).

Self-talk was assessed using the 16-item German version of the Self-Talk Scale (STS; Brinthaupt, Schneider, & Hein, 2005; Brinthaupt et al., 2009). This measure examines self-talk in adults as described in relatively abstract terms (e.g., talking to oneself while trying to plan what to say or do) and as generalized across time and situations. The instrument yields scores for the four subscales social assessment, self-reinforcement, self-criticism, and self-management as well as a total score. Participants indicated on a 5-point scale ranging from 1 (*never*) to 5 (*very often*) how often they usually show the specific self-talk behavior. The authors demonstrated the scale's good retest reliability over a 3-month interval and distinct correlations of the subscales with several concepts such as self-esteem, internal state awareness, or automatic negative and positive self-statements in theoretically meaningful ways (Brinthaupt et al., 2009).

General health status was assessed using the German Short Form 12 Health Survey (SF-12; Bullinger & Kirchberger, 1998). The SF-12 yields two global scores, the *physical* and *mental health scales*. Respondents indicated the extent to which they experienced health problems during the past 2 months. Physical health comprises aspects such as physical functioning, role limitations due to physical problems, and bodily pain. Mental health includes vitality, psychological distress, social functioning, and role limitations due to emotional problems. Each component is scored such that high values indicate a good health status, with a mean score of 50 and a standard deviation of 10 in the general population. Total scores can be obtained via published algorithms (Bullinger & Kirchberger, 1998). Empirical studies have supported the validity of the SF-12 by differentiating between specific patient groups and showing correlations with physical and mental criteria. Moreover, a good retest reliability has been shown across a 2-week interval (Ware, Kosinski, & Keller, 1996).

The questionnaire also included information concerning age, gender, and relationship status.

---

[1] For more information, see http://www.respondi.com/en/home.html.