Research paper

Social inhibition, sense of belonging and vulnerability to internalizing problems

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A B S T R A C T

Background: The aim of this study was to provide a conceptual test of how social inhibition, sense of belonging and internalizing problems are related, and whether sense of belonging moderates or mediates the relation between social inhibition and internalizing problems.
Methods: Data were used from two waves of the Dutch internet cohort LISS (Longitudinal Internet Studies of the Social Sciences; N = 511, M age = 52.09 years). Social inhibition was measured using the DS14 in 2012, sense of belonging (i.e., feeling cut off and having people to really talk to) was measured with the General Social Exclusion Index in 2012 and internalizing problems with the MHI-5 in 2015.
Results: Social inhibition was related to a lower sense of belonging and more internalizing problems. A low sense of belonging was related to more internalizing problems. Results indicated no moderation. However, evidence was found for partial mediation. That is, feeling cut off and having people to really talk to explained part of the link between social inhibition and internalizing problems. All analyses were controlled for sex, age and income.
Limitations: The items used to measure sense of belonging only cover part of the construct. The study was not fully prospective, as such, no conclusions can be drawn regarding causality.
Conclusions: Low sense of belonging is a key factor to consider when aiming at understanding individual differences in internalizing psychopathology related to social inhibition.

1. Introduction

Humans are inherently social. Research suggests that people are healthier when they experience a sense of belonging (Newman et al., 2007b). Unsurprisingly, a growing body of evidence suggests that a low sense of belonging and social exclusion are experienced as painful and related to psychological problems, among which anxiety and depression (e.g., MacDonald and Leary, 2005). Sense of belonging might be of particular importance in the context of certain trait characteristics. A notable trait in these may be social inhibition. As of yet, to the best of our knowledge no study has examined how the three constructs are related. The aim of this study was to examine how social inhibition, sense of belonging and internalizing problems are associated, and provide a conceptual test of whether sense of belonging either moderates or mediates the relation between social inhibition and internalizing problems.

Social inhibition can be defined as the "tendency to inhibit the expression of emotions/behaviors in social interactions to avoid disapproval by others" (Denollet, 2005, p. 89). Furthermore, it can be seen

as part of the behavioral inhibition construct, along with a non-social inhibition component (Dyson et al., 2011). Apart from inhibiting the expression of emotions and behaviors, individuals with high levels of social inhibition also generally feel uncomfortable around other people (Friedman and Booth-Kewley, 1987; Gest, 1997). In the literature, various terms and operationalizations have been used – often interchangeably – to describe inhibitory behaviors, such as social withdrawal and behavioral inhibition (Rubin and Asendorpf, 2014).

Since the early '80 of the 20th century, the concept of social inhibition has been studied in relation to a range of behaviors and (mental) health outcomes. For example, in children social inhibition was found to be related to shyness and behaviorally inhibited interaction patterns (Kochanska and Radke-Yarrow, 1992) and decreased facial expressiveness (Yarczower and Daruns, 1982). In adult samples, associations were found with avoidance (Leary et al., 1986), asking for help (Williams and Williams, 1983) and, more recently, achievement and social outcomes (Hughes and Coplan, 2010; Rubin et al., 2009). The literature on social inhibition got a scientific boost with the development of the Type D personality construct (Denollet et al., 1996).

Type D personality is defined by a combination of social inhibition and negative affectivity. Initially, Type D was predominantly studied in the context of cardiovascular diseases (e.g., Denollet et al., 2000; Habra et al., 2003). Over the last years, however, increasing support was found for the link between Type D personality and mental health outcomes, and internalizing problems in particular.

1.1. Social inhibition and internalizing problems

Recently, there has been a gradual shift in research on social inhibition as studied in medical psychology, towards clinical and social psychology. This has particularly been the case with regard to related constructs, such as social withdrawal and shyness in children (Katz et al., 2011; Nelson et al., 2008), the Behavioral Inhibition System/Behavioral Approach System (Carver, 2004; Depue and Jacono, 1989; Johnson et al., 2000; Kasch et al., 2002; Meyer et al., 2001) and research on the Type D personality construct (van Dooren et al., 2016; Condén et al., 2013; De Fruyt and Denollet, 2002; Lee et al., 2012; Park et al., 2014). Few studies have focused on the construct of social inhibition itself, but some findings seem to support a relation between social inhibition and internalizing problems (Bohlin et al., 2000; Lukaschek et al., 2016). For example, Bohlin, Bengstgard and Andersson found that higher levels of social inhibition were related to higher levels of internalizing problems in a sample of Swedish 7- and 8-year-old children. Taken together, these results suggest that although there is a gradual shift towards research with mental health outcomes, very little is still known when looking only at studies on social inhibition.

1.2. Social inhibition and sense of belonging

The link between social inhibition and internalizing problems may be especially apparent within the context of social problems, and in particular the feeling that one belongs to a social group. Sense of belonging is defined by Hagerty et al. (1992) as "the experiences of personal involvement in a system or environment so that persons feel themselves to be an integral part of that system or environment" (Hagerty et al., 1996, p. 173). Increasing evidence suggests a link between social inhibition and social problems. For example, Nelson and colleagues (2008) found that shy individuals experience a poorer relationship quality with important others. Moreover, social inhibition has been associated with social impairment (Bohlin et al., 2000). Lastly, a study on Type D personality – as indicated by a combination of social inhibition and negative affect – and psychosocial stressors found that Type D personality was strongly associated with feelings of social isolation (Michal et al., 2011).

1.3. Sense of belonging and internalizing problems

Social functioning by itself has also been related to internalizing problems. Hagerty et al. (1996) found that sense of belonging was closely related to psychological functioning. Furthermore, Hall-Lande et al. (2007) found that social isolation was associated with an increased risk for depressive symptoms, suicide attempts, and low self-esteem. Newman et al. (2007a) found that adolescents who reported a higher sense of peer group belonging experienced fewer internalizing problems than their peers with low sense of belonging. In a similar vein, Flook et al. (2005) found that among children, a lack of peer acceptance predicted (among others) more internalizing symptoms (i.e., shyness, loneliness and negative emotions such as sadness and anxiety) two years later. Lastly, a high sense of belonging has also been linked to a greater sense of well-being (Jose et al., 2012) and less psychological pathology (Baumeister and Leary, 1995).

Apart from each having their own, unique effect, risk factors can also have combined effects on the development of psychological problems. Exactly how social inhibition, internalizing problems and a sense
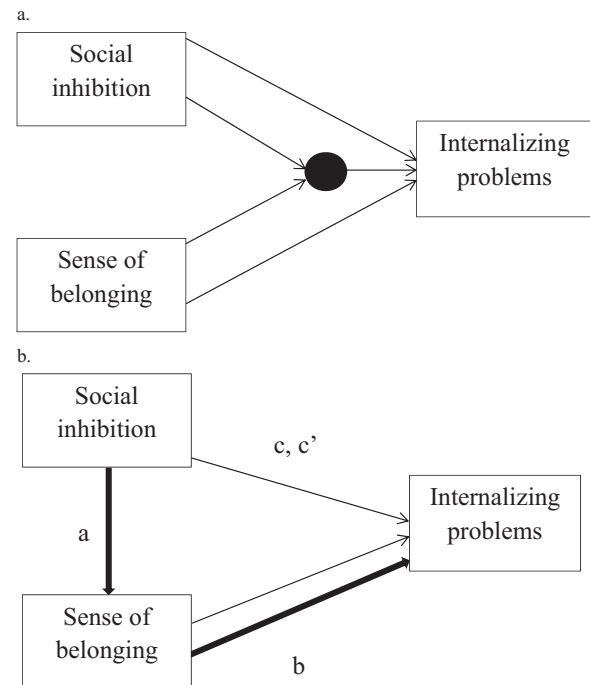

Fig. 1. In Fig. 1a, a theoretical moderation model of the prospective effect of social inhibition on internalizing problems moderated by feeling cut off from other people and having people around to really talk to is depicted. In Fig. 1b, a theoretical mediation model of the prospective effect of social inhibition on internalizing problems divided over direct effects and mediation via feeling cut off from other people and having people around to really talk to is presented. The mediation effect is illustrated by the arrow in bold.

of belonging are linked is as of yet unclear. Nonetheless, examination of the links between these constructs has the potential to integrate knowledge from multiple disciplines, such as personality, medical and clinical, and social psychology. Specifically, we hypothesize that sense of belonging may either have a mediating or moderating effect, or both, in the relation between social inhibition and internalizing problems.

1.4. Sense of belonging: moderator or mediator?

If sense of belonging *moderates* the relation between social inhibition and internalizing problems, sense of belonging either enhances or weakens the effect of social inhibition on internalizing problems. This would be in accordance with the stress-vulnerability model (Zubin and Spring, 1977), which proposes that person characteristics (i.e., social inhibition) interact with social or environmental factors (i.e., lack of belonging) and that this interaction results in an increased or decreased risk of subsequent psychological problems (i.e., internalizing problems). Specifically, socially inhibited individuals may be more likely to experience internalizing problems if they experience a low sense of belonging. For a graphical representation of this moderation model, see Fig. 1a. As of yet, only some suggestive evidence has been found with regard to the moderating role of sense of belonging. The stress-vulnerability model (Zubin and Spring, 1977) has a long history of validation (e.g., Harter, 1996), supporting a model in which person characteristics and environmental risk factors interact, resulting in an accumulative effect where 1 plus 1 equals 3. As such, socially inhibited individuals are expected to experience more internalizing problems when they have a low sense of belonging. However, to the best of our knowledge, such a model has not been tested yet.

Mediation can be found if sense of belonging explains (part of) the association between social inhibition and internalizing problems. That is, social inhibition is related to a low sense of belonging, which in turn is associated with internalizing problems. See Fig. 1b for a