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Does Worrying Mean Caring Too Much? Interpersonal Prototypicality of Dimensional Worry Controlling for Social Anxiety and Depressive Symptoms

Thane M. Erickson
Seattle Pacific University

Michelle G. Newman
Pennsylvania State University

Erin C. Siebert
Jessica A. Carlile
Gina M. Scarsella
Seattle Pacific University

James L. Abelson
University of Michigan

Worry, social anxiety, and depressive symptoms are dimensions that have each been linked to heterogeneous problems in interpersonal functioning. However, the relationships between these symptoms and interpersonal difficulties remain unclear given that most studies have examined diagnostic categories, not accounted for symptoms' shared variability due to general distress, and investigated only interpersonal problems (neglecting interpersonal traits, interpersonal goals, social behavior in daily life, and reports of significant others). To address these issues, students (Study 1; *N* = 282) endorsed symptoms and interpersonal circumplex measures of traits and problems, as well as event-contingent social behaviors during one week of naturalistic daily interactions (*N* = 184; 7,036 records). Additionally, depressed and anxious patients (*N* = 47) reported symptoms and interpersonal goals in a dyadic relationship, and significant others rated patients' interpersonal goals and impact (Study 2). We derived hypotheses about prototypical interpersonal features from theories about the functions of particular symptoms and social behaviors. As expected, worry was uniquely associated with prototypically affiliative tendencies across all self-report measures in both samples, but predicted impacting significant others in unaffiliative ways. As also hypothesized, social anxiety was uniquely and prototypically associated with low dominance across measures, and general distress was associated with cold-submissive tendencies. Findings for depressive symptoms provided less consistent evidence for unique prototypical interpersonal features. Overall, results suggest the importance of multimethod assessment and accounting for general distress in interpersonal models of worry, social anxiety, and depressive symptoms.

Keywords: worry; social anxiety; depression; interpersonal circumplex; structural summary method

Address correspondence to Thane Erickson, Ph.D., Department of Clinical Psychology, Seattle Pacific University, 3307 3rd Ave. W., Suite 107, Seattle, WA 98119; e-mail: erickt@spu.edu.

WHEREAS PSYCHIATRIC CLASSIFICATION EMPHASIZES categorical diagnosis (American Psychiatric Association [APA], 2013), taxometric analyses show that worry (Ruscio, Borkovec, & Ruscio, 2001), social anxiety

(Kollman, Brown, Liverant, & Hofmann, 2006), fear of negative evaluation (Weeks, Norton, & Heimberg, 2009), and depressive symptoms (Ruscio & Ruscio, 2000) comprise latent continuous dimensions with no clear qualitative cutoffs between subthreshold and clinical levels. According to the National Institutes of Health's Research Domain Criteria (RDoC), because such symptoms occur across diagnostic categories, clinical disorder research may not speak to underlying dimensions and their specificity in impacting social role functioning (Cuthbert & Insel, 2013). Additionally, these symptoms co-occur and share common variance due to negative affect or general distress (Brown, Chorpita, & Barlow, 1998; Watson et al., 1995), but studies have rarely accounted for this shared distress.

Interpersonal dysfunction has also been conceptualized as a transdiagnostic feature cutting across anxiety and depressive diagnoses (McEvoy, Burgess, Page, Nathan, & Fursland, 2013). For instance, dimensional worry, as well as clinical and subthreshold symptoms of generalized anxiety disorder (GAD), predicted distress about social relationships (Breitholtz, Johansson, & Öst, 1999; Roemer, Molina, & Borkovec, 1997) and interpersonal difficulties (Erickson & Newman, 2007; Przeworski et al., 2011; Ruscio et al., 2005). Clinical and subthreshold social anxiety symptoms (e.g., fear of negative evaluation) also predicted interpersonal dysfunction (Alden & Phillips, 1990; Carleton, Collimore, & Asmundson, 2010; Davila & Beck, 2002; Kachin, Newman, & Pincus, 2001; Rapee & Heimberg, 1997; Wenzel, Graff-Dolezal, Macho, & Brendle, 2005) as have clinical, subthreshold, and remitted levels of depressive symptoms (Hammen & Brennan, 2002; Stewart et al., 2002). However, by investigating only diagnostic categories or not accounting for shared symptom variance, extant studies leave the relationship between interpersonal and symptom dimensions unclear.

Several relationships are possible. First (1), similar to negative affect, interpersonal dysfunction may be a *nonspecific* correlate of symptoms (i.e., people in general distress may also report generalized interpersonal dysfunction). If only this nonspecific link is present, then research on social correlates of symptoms is unlikely to advance understanding or treatment of particular symptom dimensions. Alternatively, (2) *pathoplasticity* (Widiger & Smith, 2008) may characterize the relationship of symptoms to interpersonal tendencies, meaning that individuals with similarly elevated dimensional symptoms (e.g., worry) experience heterogeneous types of interpersonal problems (e.g., being too forgiving versus too spiteful). Strong pathoplasticity would imply that there is no one interpersonal style *specific* to a symptom dimension such as worry, given that worry could be linked to a variety of interpersonal styles. Lastly, (3) specific symptom dimensions may have *differentiated* and *prototypical* interpersonal features (e.g., dimensional social anxiety may be prototypically submissive). These relationships are not mutually exclusive and may differ across symptom dimensions. Each possibility has implications for understanding the difficulties of individuals with particular symptoms. This paper aims to answer the question of how dimensional worry, social anxiety, depressive symptoms, and their shared distress variance relate to interpersonal tendencies.

THE INTERPERSONAL CIRCUMPLEX AS A DIMENSIONAL ORGANIZING FRAMEWORK

The interpersonal circumplex (IPC) provides an overarching conceptual framework for examining interpersonal tendencies associated with symptom dimensions. The IPC dimensionally assesses the full range of social behavior via two underlying dimensions of dominance vs. submissiveness and affiliativeness vs. coldness (Gurtman, 2009; see Figure 1, panel A). Most IPC measures contain eight scales reflecting blends of these dimensions on the circle, permitting estimation of specific interpersonal tendencies (i.e., angle) most characteristic of the person. Measuring all combinations of these dimensions ensures that specific types of problems are not overlooked (e.g., trusting and forgiving too much reflects a combination of high affiliation and low dominance). IPC research has linked self-reported interpersonal problems of many types to the aforementioned symptoms (e.g., Cain, Pincus, & Grosse Holtforth, 2010; McEvoy et al., 2013; Przeworski et al., 2011).

Some studies have found that dimensional anxiety and/or depressive symptoms correlate with multiple interpersonal problems, finding that most symptom types correlate with most interpersonal problems (e.g., McEvoy et al., 2013). However, this approach may not account for variability shared between symptom types, as well as between types of interpersonal difficulties. In contrast, the *structural summary method* (SSM) for analyzing circumplex data (Gurtman & Balakrishnan, 1998; Wright, Pincus, Conroy, & Hilsenroth, 2009) breaks down participants' responses into parameters that distinguish general interpersonal distress from specific interpersonal tendencies. An individual's average score on all eight circumplex problem scales (*elevation)* reflects nonspecific interpersonal distress (relevant to Alternative 1). Profile *amplitude* reflects the amount of differentiation across scales; one type of