

Examining the latent structure of worry and generalized anxiety in a clinical sample[☆]



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ARTICLE INFO

Article history:

Received 30 May 2013

Received in revised form

14 November 2013

Accepted 16 November 2013

Keywords:

Worry

Generalized anxiety

Taxometric

Latent structure

ABSTRACT

Generalized anxiety disorder (GAD) is characterized by “pathological” worry, suggesting that GAD worriers differ qualitatively from non-GAD worriers. However, results from taxometric studies of worry in undergraduate and community samples have been mixed and to date, no studies have utilized clinical samples. The current study examined the latent structure of worry and GAD symptoms in a diagnostically heterogeneous clinical sample. Indicators were selected from the Penn State Worry Questionnaire-Abbreviated ($n = 1175$) and the GAD-7 ($n = 638$) and submitted to three taxometric procedures: MAXCOV, MAMBAC, and L-Mode. Results from all three procedures suggested that both worry and generalized anxiety are best conceptualized as dimensional constructs. Findings also indicated that ongoing conceptualization, assessment, and treatment of worry and GAD may be hampered by the application of a categorical framework.

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Generalized anxiety disorder (GAD) is characterized by “pathological” worry, defined as uncontrollable and excessive, and at least three additional symptoms including fatigue, sleep difficulty, restlessness, irritability, difficulty concentrating, and muscle tension (American Psychiatric Association, 2013). Most major diagnostic classification schemes—including the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM 5; American Psychiatric Association, 2013)—define disorders categorically. Thus, GAD is conceptualized as a discrete disorder that is either present or absent and is assessed and treated accordingly. However, mounting empirical evidence supporting a dimensional latent structure of psychological disorders has yielded a call for shifting to a dimensional classification system (Brown & Barlow, 2009; Watson, 2005). Understanding the underlying structure of both worry and GAD symptoms directly affects conceptual

and etiological models, which differ based on a categorical or dimensional conceptualization. Because such models guide assessment and intervention strategies, there is a significant clinical need for accurate conceptualizations of the latent structure of GAD.

The unique association between worry and GAD is an area of considerable interest. Excessive worry is the defining characteristic of GAD, implying a categorical difference between “GAD worriers” and other “non-GAD worriers.” The distinction between worriers is complicated by increasing recognition of worry as a transdiagnostic construct with relevance to a number of disorders other than GAD (Harvey, Watkins, Mansell, & Shafraan, 2004; Starcevic et al., 2007). For example, Starcevic (1995) found that individuals with major depressive disorder (MDD) and GAD report comparable levels of worry. Further, other studies have found that excessive worry often fails to discriminate GAD from other disorders (Gladstone et al., 2005; Kertz, Bigda-Peyton, Rosmarin, & Björgvinsson, 2011; Mohlman et al., 2004). Thus, the extent to which there is a meaningful difference between worry within the context of a GAD diagnosis and worry outside the diagnosis is unclear.

A dimensional conceptualization of worry has been supported empirically by several taxometric studies. Ruscio, Borkovec, and Ruscio (2001) found preliminary support for an underlying dimensional structure using the Penn State Worry Questionnaire (PSWQ; Meyer, Miller, Metzger, & Borkovec, 1990) in a large undergraduate sample. Results from a second study of two large nonclinical samples were also indicative of worry’s dimensional structure (Olatunji, Broman-Fulks, Bergman, Green, & Zlomke, 2009). Of note, Olatunji

[☆] This work was conducted with support from Harvard Catalyst/The Harvard Clinical and Translational Science Center (National Center for Research Resources and the National Center for Advancing Translational Sciences, National Institutes of Health Award 8UL1TR000170-05 and financial contributions from Harvard University and its affiliated academic health care centers). The content is solely the responsibility of the authors and does not necessarily represent the official views of Harvard Catalyst, Harvard University and its affiliated academic health care centers, or the National Institutes of Health.

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et al. (2009) included additional measures of GAD symptoms, intolerance of uncertainty, and beliefs about worry as well as the PSWQ, suggesting that GAD itself may fall along a continuum. Furthermore, intolerance of uncertainty, which is often linked with GAD, also appears to have dimensional structure (Carleton et al., 2012). Moreover, findings that high worriers with and without GAD share many similarities (Ruscio, 2002) provide additional evidence for a dimensional conceptualization of GAD.

Not all studies have supported the dimensional conceptualization of worry, however. Schmidt et al. (2009) initially found a categorical structure of worry using the PSWQ in a sample of undergraduates. The authors then replicated this finding in a second independent sample of individuals from the community. Of note, the authors reported some methodological concerns with low indicator validity and a very high estimated base rate for the hypothesized worry group (40%), which is much greater than expected based on GAD prevalence rates. Given the inconsistent findings regarding the latent structure of GAD and worry, further study is warranted.

Although previous studies have been informative, they have been limited by the use of non-clinical samples. Replicating the finding that worry and GAD are dimensional constructs in clinical samples would provide additional evidence for the generalizability of the results. Furthermore, given the burgeoning literature implicating worry as a transdiagnostic symptom not limited to GAD, taxometric studies are needed to determine if a pathological worry group (putative GAD group) can be distinguished from psychiatric disorders that are also associated with pathological worry but do not meet full criteria for GAD.

The current study was designed to build upon previous studies investigating the underlying structure of worry and symptoms of GAD. This study fills important gaps in the literature by examining a diagnostically heterogeneous clinical sample of patients. We used two measures: the PSWQ-Abbreviated (Hopko et al., 2003) and the Generalized Anxiety Disorder Scale-7 (Spitzer, Kroenke, Williams, & Lowe, 2006). Based on previous taxometric studies of worry, we hypothesized that both worry and generalized anxiety would have a dimensional underlying structure.

1. Methods

1.1. Participants

The study sample consisted of 1175 adult patients presenting for treatment at the Behavioral Health Partial Program (BHPP) at McLean Hospital between July 2010 and July 2012. The BHPP is a cognitive behavioral therapy based day treatment program designed to use both individual and group therapy as treatment for individuals experiencing mood and/or anxiety disorders. All participants completed the Penn State Worry Questionnaire-Abbreviated (Hopko et al., 2003; $N = 1175$). Due to modifications of the larger study protocol, only a subsample of patients completed the GAD-7 ($n = 638$). The final sample was mostly female (56%), and the mean age was 35 years ($SD = 13.7$). Most participants had never married (58%) while 25% were married, 13% divorced, 3% living with their partner, and 1% widowed. Most participants (85%) were White, with 4% Asian, 2% Latino/a, 2% Black/African American, fewer than 1% Native Hawaiian/Pacific Islander or American Indian/Alaskan Native, and 3% multiracial (3% chose not to respond). With regard to education, 31% completed high school, 17% some college, 23% 4-year college, 28% post-graduate education, and 1% some high school. The most common diagnosis was Major Depressive Disorder (53%), followed by GAD (34%), Social Anxiety Disorder

(20%), Panic disorder (11%), Post-Traumatic Stress Disorder (11%), Obsessive-Compulsive Disorder (11%), Bipolar Disorder (10%), and a Psychotic Disorder (6%).

1.2. Measures

Penn State Worry Questionnaire-Abbreviated (PSWQ-A; Hopko et al., 2003). The PSWQ-A is an eight-item instrument derived from the full length 16-item PSWQ (Meyer et al., 1990) that measures worry frequency and severity. Items on the PSWQ-A (e.g. “Many situations make me worry”) are scored on a 5-point Likert scale ranging from 1 (*not at all typical*) to 5 (*very typical*). The PSWQ-A has shown good construct validity ($r = .65-.83$) in relation to the PSWQ and has demonstrated moderate to strong reliability and validity in older and younger adults (Crittendon & Hopko, 2006). In the current sample the PSWQ-A scores demonstrated excellent internal consistency in participants with current GAD ($\alpha = .92$) and without GAD ($\alpha = .94$).

The 7-item Generalized Anxiety Disorder Scale (GAD-7; Spitzer et al., 2006). The GAD-7 is a brief seven-item self-report instrument developed to assess/screen for GAD. Items on the GAD-7 (e.g. “Feeling nervous, anxious or on edge”) are scored on a 4-point Likert scale ranging from 0 (*not at all*) to 3 (*nearly everyday*). The GAD-7 has demonstrated good construct validity and reliability; higher severity scores on the GAD-7 are strongly correlated with greater impairment/worsening functioning as seen with the SF-20 Health-Related Quality of Life Scales (Spitzer et al., 2006). The GAD-7 scores demonstrated strong internal consistency in participants with GAD ($\alpha = .85$) and without GAD ($\alpha = .89$) in the current sample.

Mini-International Neuropsychiatric Interview (MINI; Sheehan et al., 1998). The MINI is a semi-structured diagnostic interview developed to screen for 17 Axis I DSM-III-R disorders. The MINI has shown to have strong reliability and validity in regards to the Structured Clinical Interview for DSM-IV (SCID-IV) with inter-rater reliabilities ranging from kappas of .89–1.0 (Sheehan et al., 1998). In the current study, the MINI was administered by doctoral practicum and intern-level students studying clinical psychology. All interviewers were trained and supervised by a postdoctoral psychology fellow on a weekly basis prior to administering any interviews for the program.

1.3. Procedure

The McLean Hospital Institutional Review Board approved the current study. All participants provided informed consent and were treated in accordance with the ethical guidelines provided by the American Psychological Association. Participants completed an initial assessment pre-treatment including a demographics survey, a battery of self-report measures and a structured diagnostic interview (MINI). The battery of self-report measures was also completed on discharge.

1.4. Data analytic plan

Descriptive statistics were estimated using SPSS 21.0. Taxometric analyses and comparison data simulations were conducted using Ruscio's (2011) suite of programs for R. We used Maximum Covariance (MAXCOV), Mean Above Minus Below a Cut (MAMBAC), and latent-mode factor analysis (L-Mode; Waller & Meehl, 1998) procedures, which provide non-redundant results.

Indicator selection. The PSWQ is considered the “gold standard” worry assessment tool and the eight item abbreviated version has also demonstrated strong psychometric properties (Crittendon & Hopko, 2006). Using all items as indicators, preliminary

Table 1
Measures of average indicator validity, correlations, and CFI values for taxometric analyses.

Measure		Validity	Indicator correlations			Skew	Kurtosis	CFI
			Full sample	Taxon	Complement			
PSWQ-A	MAXCOV	2.27	.68	.32	.32	-.43	-.99	.30
	MAMBAC	2.27	.68	.30	.33	-.43	-.99	.21
	L-MODE	1.59	.68	-.02	.55	-.43	-.99	.26
GAD-7	MAXCOV	1.77	.53	.16	.27	.06	-1.14	.42
	MAMBAC	2.20	.68	.34	.33	-.43	-1.00	.29
	L-MODE	1.80	.53	.12	.26	.07	-1.14	.43

Note: Correlations are averaged across indicators; skew and kurtosis values are average values across the full sample.

examination of correlations indicated that several within-group indicator correlations in the taxon were moderately high ($r > .50$), including correlations between items 1, 2, 3, and 5. Based on recommendations by others (Ruscio, Haslam, & Ruscio, 2006), we summed the four items to create a composite indicator, resulting in a total of 5 indicators (the composite and the remaining 4 items). Adequacy of the indicators was assessed by examining their validity and distributions. Across the three analyses, the indicators had adequate validity, as evidenced by Cohen's d greater than the recommended cut-off of $d > 1.25$ (Meehl, 1995). See Table 1. Indicator distributions suggested tolerable levels of skew (range from $-.43$ to $.07$) and kurtosis (-1.14 to $-.99$). For all three procedures, correlations between indicators were higher in the full sample ($r = .68$) compared to the taxon and complement groups. For MAXCOV and MAMBAC, within-group correlations were generally low, although slightly outside the recommended range of $r < .30$. For L-MODE, however, within-group indicator correlation in the complement group was well outside the recommended range. One study suggests that reliability of the CCFI decreases to approximately 80% when within-group correlations are of this magnitude (Ruscio, Walters, Marcus, & Kacetow, 2010), which should be kept in mind when interpreting findings from this procedure.

The GAD-7 is a frequently used measure for assessing symptoms of GAD and screening for the disorder. Items from the GAD-7 were used as indicators for generalized anxiety. Item 1 ("Feeling nervous, anxious, or on edge"), Item 2 (Not being able to stop or control worrying"), and Item 3 ("Worrying too much about different things") are designed to capture Criterion A and Criterion B of the DSM 5 criteria. Criterion C was assessed with the remaining items ("Trouble relaxing," "Being so restless that it's hard to sit still," "Becoming easily annoyed or irritable," and "Feeling afraid as if something awful might happen"). The indicators overall appeared adequate, based on acceptable validity, tolerable levels of skew (range from $-.13$ to $-.71$) and kurtosis ($-.75$ to -1.35), and higher correlations in the full sample than the complement and taxon groups. See Table 1. For MAMBAC, within-group correlations were slightly outside the recommended range of $r < .30$.

For both the PSWQ-A and the GAD-7, simulated datasets provided additional evidence for indicator adequacy. The simulated categorical dataset curve evidenced the expected peak while the dimensional data set curve was relatively flat, indicating adequacy of the data for analysis (Ruscio et al., 2006). Based on these characteristics, the indicators appear appropriate for performing taxometric analyses.

Taxometric method. The taxometric method is a set of procedures designed specifically for detecting the underlying latent structure of constructs. We used three taxometric procedures: MAXCOV, MAMBAC, and L-Mode. The MAXCOV procedure estimates the conditional covariance between two indicators (output variables) within non-overlapping subsamples that have been rank ordered along the input variable. These values are then plotted for each subsample, resulting in curves. A peaked curve occurs at the point of the

highest mixture of taxon and nontaxon members and suggests taxonic structure, while the absence of a peak suggests dimensional structure. The MAMBAC procedure (Meehl & Yonce, 1994) sorts cases in ascending order on one indicator, then examines mean differences of scores above and below cuts on a second variable. The differences are graphed, resulting in curves. Similar to the MAXCOV curves, taxonic constructs result in a plot that is peaked at the point that best distinguishes the two groups. Dimensional plots are relatively flat or bowl shaped with curves at one or both ends. Finally, the L-Mode procedure (Waller & Meehl, 1998) is based on a factor analytic approach that combines indicators and performs an exploratory factor analysis on indicator covariance. Factor score distributions are graphed with factor scores along the x -axis and frequency along the y -axis. Taxonic structure results in a bimodal distribution of factor scores while dimensional structure yields a unimodal distribution.

We generated two comparison data sets to facilitate the interpretation of the results (Ruscio, Haslam, & Ruscio, 2006). Each dataset matched the parameters of the research data (e.g., sample size, indicator skew, indicator correlations) but differed in underlying structure (i.e., either dimensional or taxonic). Data were interpreted by visually comparing curves generated from the research data to curves generated from the simulated datasets with known latent structure. The first two authors (SJK and RKM) independently rated the curves as dimensional, categorical, or ambiguous, resulting in acceptable agreement for all analyses (kappa range from $.66$ to 1.0) except the MAXCOV results for the GAD-7, with kappa = $.48$. Thus, the interpretation for all analyses were aided by the Comparison Curve Fit Index (CCFI), which objectively quantifies the degree of fit between the empirical data and the simulated dimensional and taxonic datasets (Ruscio, Haslam, & Ruscio, 2006). CCFI values range from 0 to 1.0, with 0 indicating the strongest support for a dimensional model, 1.0 indicating strongest support for a categorical model, and $.50$ is ambiguous, indicating that both models fit the data equally well. Values $< .45$ and $> .55$ have shown accuracy greater than $.90$ (Ruscio et al., 2010), while values between $.45$ and $.55$ should be interpreted with caution. The inchworm consistency test (Waller & Meehl, 1998) was also used. This test involves repeating the MAXCOV analysis at increasing windows. If the underlying structure is taxonic, the curves will show an increasingly sharp peak with increasing number of windows. If the underlying structure is dimensional, the curves will flatten with increasing number of windows. We repeated the MAXCOV analysis at 50, 100, 150, and 200 windows.

2. Results

2.1. Preliminary analyses

Sample characteristics. The overall mean PSWQ-A score in the sample was 28.1 ($SD = 9.1$). Participants with current GAD scored higher on the PSWQ-A ($M = 32.7$; $SD = 9.3$) compared to

participants without GAD ($M=26.1$; $SD=7.0$), $t(1173)=-11.97$, $p<.001$. The overall mean GAD-7 score in the sample was 10.6 ($SD=5.8$), indicating moderate levels of anxiety as compared to primary care samples (Spitzer et al., 2006). Participants with GAD scored higher on the GAD-7 ($M=13.3$; $SD=4.9$) compared to participants without GAD ($M=9.5$; $SD=5.7$), $t(636)=-7.96$, $p<.001$.

2.2. Taxometric analyses

PSWQ-A. MAXCOV was performed with standardized variables and composite input variables derived by summing all indicators except the output, so that each variable acted as the output variable once. Analyses were performed using 50 windows overlapping at 90%. The average of the plots is presented in Fig. 1 along with simulated taxonic and dimensional comparison plots. The research data are indicated by the dark line with points superimposed over the simulated comparison data (the middle 50% of data points are summarized by the gray band, with light lines indicating minimum and maximum values). Across the panel of curves, most appeared relatively flat, consistent with dimensional structure. Results from the inchworm consistency test (Waller & Meehl, 1998) were indicative of dimensional structure, as curves from increasing number of windows remained relatively flat and failed to show a peak, which would indicate taxonic structure. The dimensional interpretation was also supported by the CCFI of .30, which falls below the cut-off score of .45. Overall, the research data are more consistent with the dimensional comparison data and suggest a dimensional underlying structure.

The MAMBAC procedure was also performed to examine consistency of the results across analytic techniques. We used 50 equally spaced cuts along the input indicator starting at 10 cases from either end. The average curve is presented in Fig. 1. The curves for the simulated taxonic data could be distinguished from the dimensional data could be distinguished by a slight bump in the curve. The average of the curves for the research data is presented in Fig. 1. Examination of the research curves compared to the generated dimensional and taxonic comparison data indicated better fit with the dimensional data. The CCFI value of .21 also suggests that the research data are more consistent with a dimensional underlying structure.

Finally, results from the L-MODE procedure were examined. However, given the reduced accuracy of the procedure associated with high within-indicator correlations for the complement (approximately 80% accuracy; Ruscio et al., 2010), results should be interpreted with caution. The curve representing the research data appeared unimodal and consistent with the simulated dimensional data plot. There was no evidence of a bimodal distribution. See Fig. 1. The CCFI of .26 also suggested dimensional structure. Therefore, across three non-redundant analyses of the underlying structure of worry, results consistently suggested a dimensional conceptualization provided a superior fit over a categorical model.

GAD-7. The average of the curves generated from MAXCOV is presented in Fig. 2 along with simulated taxonic and dimensional comparison plots. The curves generated by the analyses were difficult to interpret subjectively, as many were ambiguous and appeared to have two modest peaks. It was unclear whether the peaks are better interpreted as one peak divided into two and thus consistent with a taxonic structure or as one peak with multiple moderate bumps and valleys that fall within an overall dimensional pattern (i.e., the peaks and valleys fall within the minimum and maximum values defined by the dimensional comparison data curve). However, the inchworm consistency test was suggestive of dimensional structure, as increasing windows failed to result in an increasingly peaked curve that would suggest taxonic structure. This interpretation was also facilitated by the objective CCFI of .42,

which is less than .50 and suggests that results are more consistent with a dimensional structure.

The MAMBAC procedure was also performed to examine consistency of the results across analytic techniques. We used 50 equally spaced cuts along the input indicator starting at 10 cases from either end. The average of the curves is presented in Fig. 2. Most curves were relatively flat with curves at one or both ends, consistent with a dimensional structure. No curves evidenced a single peak, which would suggest taxonic structure. When compared to the generated dimensional and taxonic comparison data curves, the average research data curve appeared more similar to the dimensional comparison data. Further, the CCFI value of .29 also suggests that the research data are more consistent with a dimensional underlying structure.

Results from the L-MODE procedure suggested that, while the curves from the simulated categorical and dimensional comparison data were distinguishable, with a bimodal and unimodal distribution respectively, the average curve for the research data was slightly ambiguous. There appeared to be two slight peaks in the curve; however, subjective interpretation is difficult because it is unclear if the slight peaks are truly distinct from one another or represent slight variations along a plateau. However, the CCFI of .43 falls below .50 and is suggestive of dimensional structure. Overall, the three procedures appear to converge on the finding that a dimensional structure provides the best fit to the data.

3. Discussion

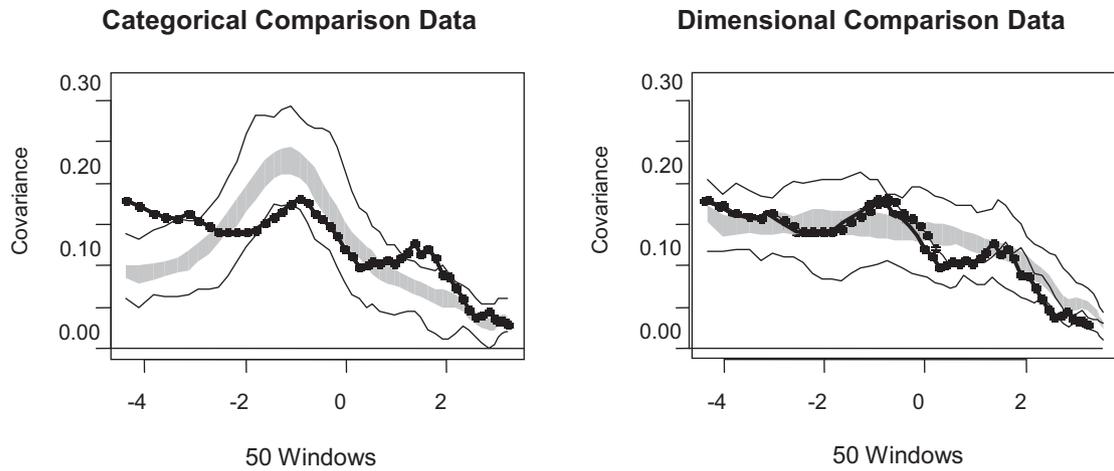
The current study examined the latent structure of worry and generalized anxiety in a diagnostically diverse clinical sample. Three non-redundant taxometric procedures, MAXCOV, MAMBAC, and L-Mode, were used to examine whether a dimensional or categorical structure provided the best fit to the data. Taken together, results from three procedures suggested that worry and generalized anxiety are best understood as having a dimensional underlying structure.

The finding that worry is best conceptualized as a dimensional construct is in line with several previous studies (Olatunji et al., 2009; Ruscio et al., 2001). Replicating other findings from community and undergraduate samples in the current clinical sample, which included a relatively high proportion of individuals with GAD, suggests that results are highly generalizable. Dimensional findings from this study contribute to a growing literature linking worry with a number of clinical disorders. Several studies suggest that excessive worry is common in depression, other anxiety disorders, and psychosis (Kertz et al., 2011; Starcevic, 1995; Startup, Freeman, & Garety, 2007) and is not linked specifically with GAD (Gladstone et al., 2005). Further, Ruscio (2002) found that only 20% of a sample of “pathological worriers” met diagnostic criteria for GAD, suggesting that high levels of worry exist outside of the context of the disorder.

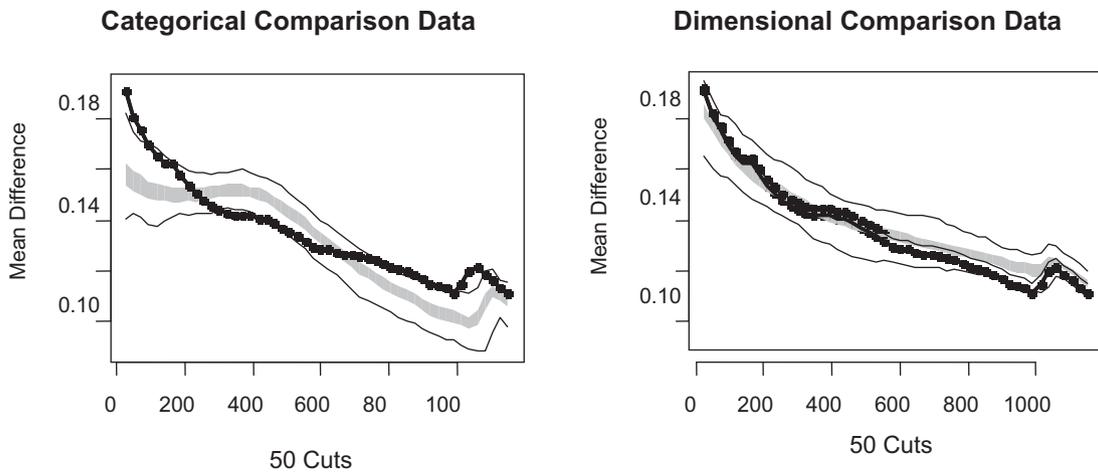
The results for generalized anxiety also converged around a dimensional latent structure. Our results are similar to that of a previous study examining worry and symptoms of GAD in nonclinical samples (Olatunji et al., 2009) and those from a recent study of intolerance of uncertainty (Carleton et al., 2012), which has been closely linked with GAD (Dugas, Marchand, & Ladouceur, 2005). Evidence of dimensional structure from the current study adds to mounting literature favoring dimensional models of psychological disorders, including posttraumatic stress disorder, depression, borderline personality disorder (Haslam, 2003), and in some studies, social anxiety disorder (Kollman, Brown, Liverant, & Hoffman, 2006; Weeks, Norton, & Heimberg, 2009).

Discussions around the construct validity of GAD may be informed by these results. Since the introduction of GAD into

MAXCOV



MAMBAC



L-Mode

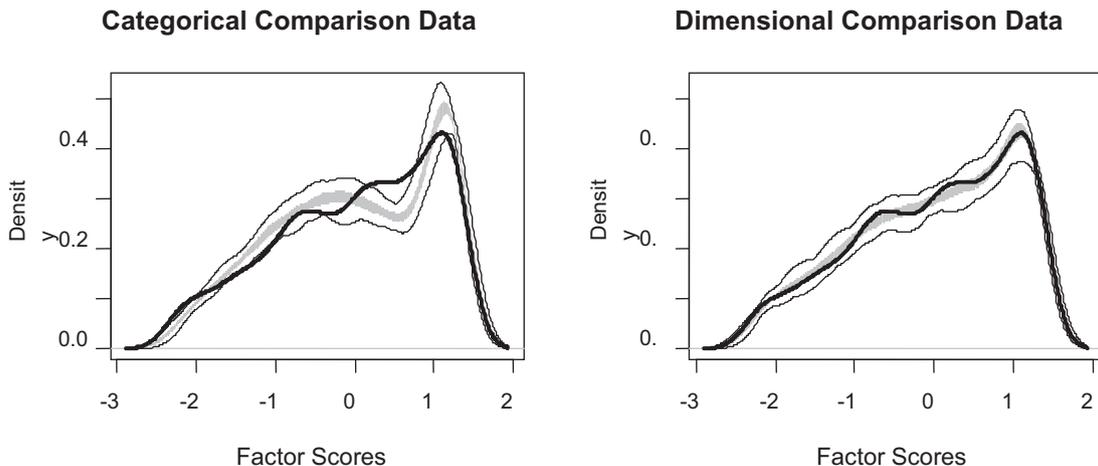


Fig. 1. Average curves for MAXCOV, MAMBAC, and L-Mode analyses for the PSWQ-A.

the DSM-III, the diagnosis has been associated with criticism, including poor recognition (Beesdo et al., 2009) and relatively low diagnostic reliability compared to other anxiety disorders (Brown, DiNardo, Lehman, & Campbell, 2001). Such difficulties may be due in part to changing diagnostic criteria and the fact that as currently described, the disorder does not have a unique

defining characteristic (Starcevic, Portman, & Beck, 2012). The prevalence of worry across disorders has led some to suggest that the continued overemphasis on pathological worry as the defining feature of GAD will hamper its recognition and perpetuate its reputation as a “deficient concept” (Starcevic et al., 2012, p. 666). Despite these limitations, the diagnosis warrants

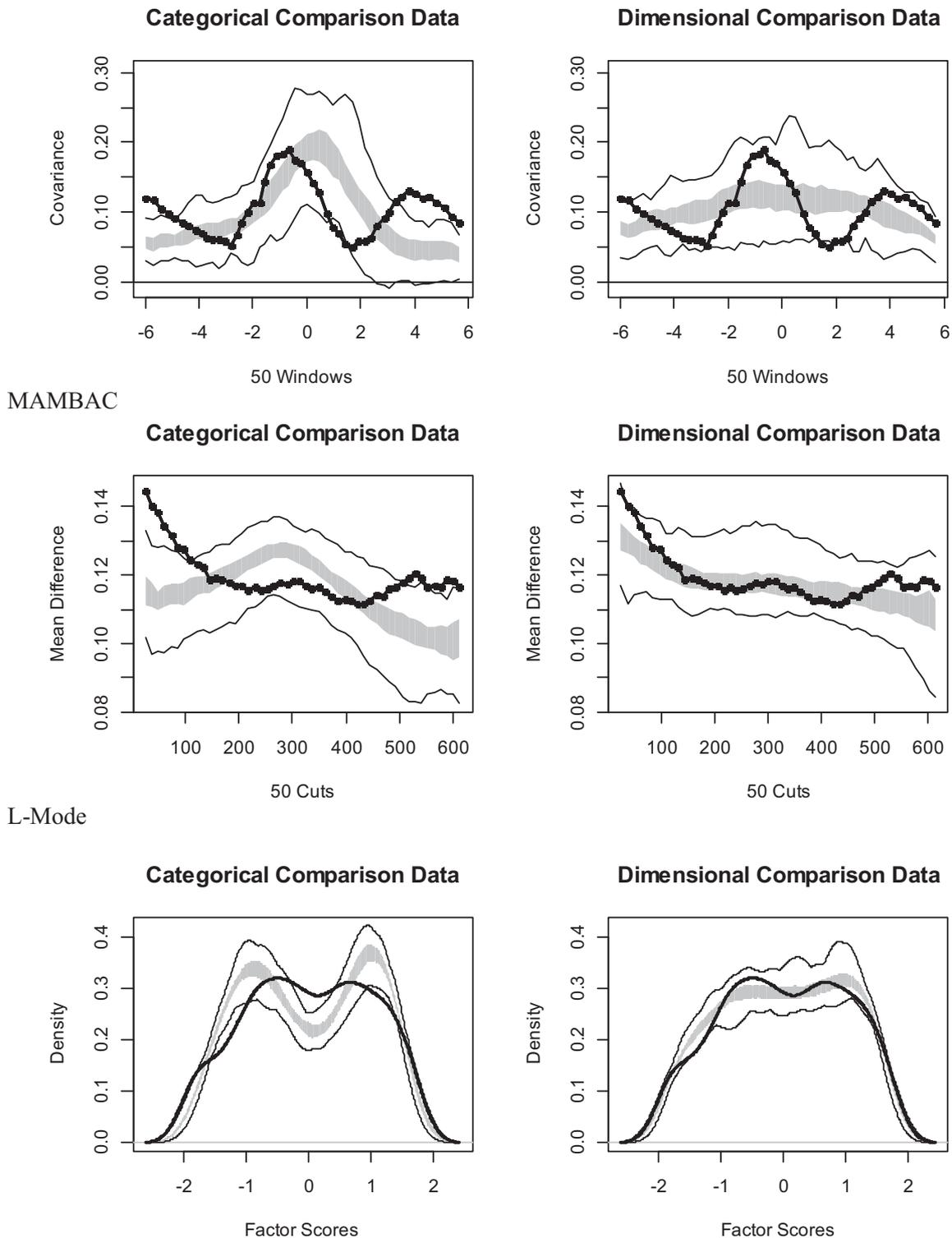


Fig. 2. Average curves for MAXCOV, MAMBAC, and L-Mode analyses for the GAD-7.

attention and has high clinical utility. GAD is a common disorder, especially in primary care settings (Wittchen & Hoyer, 2001), and is associated with significant human and economic burden (Wittchen et al., 2002); furthermore, without treatment GAD has a chronic course (Wittchen et al., 2002). Therefore, improving the conceptualization and assessment of GAD is important to providing needed services to the many who might benefit from treatment.

Understanding worry and generalized anxiety as dimensional constructs has important implications for conceptual models, assessment, and treatment. Because categorical and dimensional structures imply different causal models, conceptual models of GAD may need to be refined. For example, dimensional constructs are best explained by additive models in which various factors interact to explain increasing or decreasing symptom severity along a continuum; alternatively, taxonic constructs may be better explained

by dichotomous causal factors (see Ruscio et al., 2006 for further discussion). Theoretical models of GAD and worry may be further enhanced by discussion and study of how hypothesized components influence one another to predict degrees of worry severity, rather than predicting GAD group membership. In terms of assessment, if GAD is better understood as a dimensional construct, ratings of worry or symptom severity may be more useful than a determination of diagnostic status. For example, the GAD-7 may be more beneficial when using dimensional score ranges rather than relying on a cut-off score of 10 as a screener for the disorder. Finally, the current study provided little evidence of qualitative differences between threshold GAD or “pathological” worriers and those with slightly fewer symptoms. Therefore, individuals with less severe symptoms might also benefit from treatment in terms of both reducing symptoms and preventing the development of more impairing symptoms.

Although the current study had many strengths, there are also several limitations that may have influenced the findings. First, the nature of the sample may limit the generalizability of results. Specifically, a symptomatically severe clinical sample with high levels of psychological distress may not be representative of typical presentations. Relatedly, all participants in the sample were diagnosed with a psychiatric disorder; therefore, while individuals with little or no worry were included, those individuals were likely experiencing other psychiatric symptoms. In addition, several characteristics of the data were less than ideal, including high indicator correlations in the complement group for the PSWQ-A L-Mode analysis and visual ambiguity in the curves for the GAD-7 MAX-COV analysis. Finally, we relied on self-report data as indicators for the analysis and were unable to include other measures, such as clinician ratings of symptoms or behavioral measures. Additional work is needed to address these limitations and to replicate the current findings.

Despite the prevalence and clinical utility of the GAD diagnosis, the recognition of this disorder remains hampered by a number of limitations. Results from the current study extend previous findings supporting a dimensional latent structure of worry and GAD to a clinical sample. Thus, this study adds to a growing body of literature supporting a dimensional classification for emotional disorders.

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