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A test of the tripartite model's prediction of anhedonia's specificity to depression: patients with major depression versus patients with schizophrenia

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Abstract

The tripartite model of depression and anxiety suggests that anhedonia represents a relatively specific marker of depression. A strong version of this view is that anhedonic symptoms would particularly characterize depressed patients, even when compared to another diagnostic group—schizophrenic patients—for whom anhedonic symptoms represent a well-studied feature. This prediction was tested among 102 VA psychiatric inpatients (95 men), ages 21–72 ($M=43.56$; S.D.$=8.47$), all of whom received diagnoses of either major depression ($n=50$) or schizophrenia ($n=52$) based on structured diagnostic interviews. As predicted, patients with major depression scored significantly higher on the anhedonic symptoms scale of the Beck Depression Inventory (BDI) than did patients with schizophrenia. However, there was no difference between the two groups on the BDI total score or the BDI non-anhedonic symptoms score. Consistent with the tripartite model, anhedonic symptoms were more related to depressive vs. schizophrenic diagnostic status, whereas non-anhedonic depressive symptoms were not. Within the study's limitations, results were interpreted as relatively strong support for the validity and extension of the tripartite model.

Keywords: Anhedonia; Schizophrenia; Major depression

1. Introduction

In their tripartite model of depression and anxiety, Clark and Watson (1991) theorized that depression is specifically characterized by anhedonia (frequently associated with low positive affect), at least as compared to anxiety, which is specifically characterized by physiological hyperarousal. The third aspect of the model, generalized negative affect, is a non-specific factor thought to relate to both depression and anxiety. The model has potential implications for the nature, nosology, and measurement of depressive syndromes and disorders. For example, identification of the specific phenomenological characteristics of depression may refine nosological schemes, as well as inform theories about the cause, course and epidemiology of depression. In this vein, Silverstein et al. (1995) reported that gender differences in

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depression may stem from differences in non-specific factors, such as negative affect, as opposed to factors specific to depression, such as anhedonia (see also Joiner and Blalock, 1995). This finding, in turn, may influence theories on the nature and causes of the depression gender difference. For example, Silverstein et al. (1995) have suggested that achievement-related experiences play a role.

In addition to its theoretical implications, the tripartite model may prove clinically useful. As one example, its main point is the differential diagnosis of depressive and anxiety disorders. This distinction can be difficult and can produce key implications for clinical decision-making (e.g. the treatment of social reticence would depend on whether it was due to a depressotypic lack of motivation or an anxiotypic fear of social interaction; see e.g. Kendall et al., 1992).

Understandably, past work on the tripartite model's validity has emphasized (among other things) the ability of the specific dimensions of depression and anxiety (i.e. anhedonic symptoms and physiological hyperarousal, respectively) to discriminate depressive from anxiety disorder diagnoses. For example, Watson et al. (1988) demonstrated that, in adults, low positive affect (cf. anhedonia) was associated with a formal diagnosis of mood disorder but was unrelated to a diagnosis of anxiety disorder, consistent with the tripartite model. Lonigan et al. (1994) found that a construct similar to low positive affect distinguished between depressed and anxious child and adolescent psychiatric patients (cf. Joiner et al., 1996). Joiner et al. (1999) demonstrated that a measure of physiological hyperarousal discriminated anxiety disordered from mood-disordered patients. Taken together, these studies support the tripartite model's predictions regarding the inter-relations of anhedonic symptoms, physiological hyperarousal, and depressive and anxiety disorders.

Of course, in clinical settings, particularly inpatient settings, mood and anxiety disorders do not exhaust the range of encountered diagnoses. The tripartite model's general validity and clinical utility would be enhanced and extended by demonstration that a specific aspect of the model (e.g. anhedonic symptoms) discriminated the corresponding disorder (e.g. depression) from disorders that primarily involve neither mood nor anxiety pathology. This demonstration would be particularly compelling if the specific aspect (e.g. anhedonic symptoms) were known, a priori, to characterize the other disorder (e.g. as anhedonia characterizes schizophrenia). The purpose of the present study was to provide one such demonstration.

In some clinical settings (e.g. inpatient psychiatry units), it is questionable whether clinicians' first association to 'anhedonia' would be 'depression' (as it may be according to the tripartite model). Rather, their first association might be 'schizophrenia'. Indeed, numerous investigators have been impressed by the anhedonic qualities of people with schizophrenia. Meehl (1973), for example, stated of schizophrenia: '... there is a quasi-pathognomonic sign..., namely, anhedonia—a marked, widespread and refractory defect in pleasure capacity which, once you learn how to examine for it, is one of the most consistent and dramatic behavioral signs of the disease' (p. 140). In his classic work, Bleuler (1911/1950), too, noted anhedonia—in describing people with schizophrenia, he said, '... indifference seems to be the external sign of their state; an indifference to everything—to friends or relations, to vocations or enjoyment...' (p. 40). The 'associated features' section of DSM-IV's (American Psychiatric Association, 1994) description of schizophrenia reads, 'Anhedonia is common and is manifested by a loss of interest or pleasure' (p. 279). A review of anhedonia in schizophrenic people found increased rates of anhedonia in schizophrenics as compared to others (Blanchard, 1998). Anhedonia is also an item on the Scale for the Assessment of Negative Symptoms (SANS) and recent studies have found that 'deficit' schizophrenia is characterized by anhedonia more so than 'non-deficit' schizophrenia and that anhedonia in these patients is independent of comorbid depression (Loas et al., 1996, 1999). In fact, patients with 'deficit' schizophrenia showed lower levels of depression than those with 'non-deficit' schizophrenia (Loas et al., 1996). A longitudinal study compared depressed patients and schizophrenics on a measure of social anhedonia. They found no difference in social anhedonia at baseline between depressed and