

*Chapter 1*

**SELF-MONITORING, SELF-ASSESSMENT AND  
DISCREPANCIES WITH OBSERVER RATINGS IN  
SCHIZOPHRENIA AND SCHIZOAFFECTIVE DISORDER:  
A STRATEGY FOR NEGOTIATING CHANGE IN  
SYMPTOM UNAWARENESS**

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**ABSTRACT**

It has been suggested that the frequently observed association between noncompliance with treatment and symptom unawareness in cases of schizophrenia and schizoaffective disorder may be a function of a broader adaptive strategy of self-deception (SD). A critical review of the related literature is used to illustrate and contrast this view with the more widely held claim that symptom unawareness is better characterized as a neurological deficit. It is argued that the SD model is more consistent with the observation that the polarity and extent of symptom awareness for many individuals is highly variable over time and settings. It is also noted that few studies have been done to evaluate the efficacy of psychological interventions with respect to symptom unawareness. It is proposed that as with other types of self-assessment and self-monitoring, symptom identification and recognition can be expected to improve under conditions where there is: (1) an agreed upon rule-based system for describing, observing and recording behavior (2) the means to create and maintain an historical archive of self-assessments (3) the opportunity and means to compare current self-assessments with past self-assessments (4) the provision of consistent, individualized social feedback over time

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using a shared rule-based system, and (5) the means and opportunity to regularly compare, discuss and reconcile self-assessments with the assessments of others. An approach to increasing symptom awareness and acceptance that incorporates most of these features through the utilization of a modified version of the Brief Psychiatric Rating Scale (BPRS; Overall and Gorham, 1962) is described. Illustrative findings from an ongoing study that attempts to evaluate the effectiveness this approach is reported.

## INTRODUCTION

Symptom unawareness became a bona fide area of study about fifteen years ago with the realization that it is predictive of a variety of important clinical outcomes (Amador & Strauss, 1993; Amador, Strauss, Yale, Flaum et al., 1993; Amador, Strauss, Yale & Gorman, 1991; Bartko, Herczog, & Zador, 1988; McEvoy et al., 1989; Pini, Cassano, Dell'Osso, & Amador, 2001). In this chapter we wade into the highly unsettled territory that encompasses the theories and research associated with symptom unawareness in psychotic disorders in general, and schizophrenia and schizoaffective disorder, in particular, and focus on what is arguably one of the most neglected (or avoided) issues in this area of research: the question of whether it is possible to mitigate symptom unawareness. As one would expect, this question necessarily bleeds into even more fundamental areas of dispute. For example, one issue of continued debate is whether symptom unawareness is best characterized as a psychological defensive/adaptive process (Moore, Cassidy, Carr & Callaghan, 1999; Subotnik et al., 2005; Van Putten, Crompton, & Yale, 1976; White, Bebbington, Pearson, Johnson, & Ellis, 2000) and thus probably amenable to modification through psychological intervention; or a less malleable deficit that is more akin to the anosognosia that occurs in some neurological disorders (Amador, Strauss, Yale & Gorman, 1991; Rickelman, 2004).

There is also the question of whether insight enhancement is always desirable. Often implied in the ever-growing list of untoward outcomes that appear to be associated with poor insight is the notion that if insight could somehow be improved, so too would the clinical fortunes of the patient. However, it would appear that things are not that simple. Not only are improvements in insight often accompanied by spikes in dysphoria, but there is even evidence of a heightened risk of suicide (Amador, Friedman et al., 1996; Dixon, King & Steiger, 1998; Moore et al., 1999). I hope to make the case in the following pages that this apparent relationship between dysphoria and insight is entirely consistent with the role and function of self-deception in normal human adaptation, which is to provide us with protection from the potentially efficacy-draining and demoralizing effects of our frequent failures and many imperfections (Bonanno, Field, Kovacevic, & Kaltman, 2002; Heine, Lehman, Markus, Kitayama, 1999; Mullen & Riordan, 1988; Taylor & Brown, 1994; Taylor & Brown, 1988; Taylor, Lichtman, & Wood, 1984; Weinstein, 1980; Weinstein, 1987). I will further argue that a logical extension of this view is that the indiscriminate removal of self-deception, even in cases of psychosis, can be to be as harmful, as it is therapeutic.

Finally, there is also the question of how do the differences in symptom unawareness contribute to the delineation of the still contested nosologic boundaries between schizophrenia and schizoaffective disorder (e.g., Averill, et al., 2004). In this regard, it seems important to understand why individuals with schizoaffective disorder appear to have greater symptom awareness and illness acceptance than individuals with schizophrenia and,

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interestingly, bipolar disorder (Pini et al., 2001). This finding, in addition to highlighting the possibility that between-disorder differences in insight levels might be an under-appreciated boundary marker, suggests that symptom unawareness does not have a straightforward, linear relationship with illness severity (at least as conventionally defined).

In this chapter, I hope to describe an approach to modifying symptom unawareness and acceptance that utilizes a modified version of the Brief Psychiatric Rating Scale (BPRS; Overall and Gorham, 1962). Three cases from an ongoing study (two involving schizoaffective disorder, one involving schizophrenia) will be presented to illustrate the potential advantages of this approach and the broadened conception of symptom awareness described above.

### INSIGHT, SELF-DECEPTION, SELF-MONITORING

Self-deception, along with its attendant motivational benefits, is a necessary part of the human condition. Without it, some of us would undoubtedly succumb to a semi-paralytic state of self-doubt and self-assigned incompetence (Taylor & Brown, 1988; Taylor & Brown, 1994). On the other hand, too much self-deception or deception that is dramatically discordant with circumstance and culture, inevitably exacts costs that are no less severe than those that ensue from too little self-deception (e.g., Paulhus, 1998). Consequently, much of our psychological health rests with our ability to regulate our "illusion of well being" (Taylor & Brown, 1988; Taylor & Brown, 1994). This capacity for well regulated self-monitoring and self-assessment is often impaired in individuals with psychotic disorders (Amador & Strauss, 1993; Pini et al., 2001) and is marked by a denial or unawareness of some or all of the aspects of being mentally ill (Amador & Strauss, 1993). However, until recently, and in contrast to self-deception, the research community has largely ignored the issue of poor insight in psychotic disorders.

In terms of the research that has been done on symptom unawareness, it is probably fair to say that the findings to date strongly suggest that poor insight is almost always predictive of less favorable outcomes in psychotic disorders. For example, poor insight in psychotic disorders has been found to be predictive of poor treatment compliance (Amador, Flaum, Andreasen, Strauss, Yale, Clark, & Gorman, 1994; Amador & Strauss, 1993; McEvoy, et al., 1989), higher rates of relapse (Bartko et al., 1988; McEvoy et al., 1989) and lower levels of psychosocial competence (Amador et al., 1994; McGlashan & Carpenter, 1981). Interestingly, however, although bipolar disorder is believed to have a generally better outcome than schizoaffective disorder, it is the former disorder that is associated with higher levels of symptom unawareness. Indeed, several cross-sectional comparisons across diagnostic groups have found that patients with schizophrenia and bipolar disorder are likely to have less insight into current and past features of their mental disorder than patients with major depression or schizoaffective disorder (Amador, Strauss, Yale, Flaum et al., 1993; Pini et al., 2001). Equally intriguing is the finding that the presence of dysphoric affect, especially depression and anxiety, is positively correlated with an increased awareness of both positive and negative symptoms for all psychotic disorders (Freudenreich, Deckersbach, & Goff, 2004).

Arguably, a major catalyst for this newfound interest in symptom unawareness in the psychoses has been the belated realization that it is in fact a complex, multi-dimensional construct. For example, Xavier Amador, one of the first researchers to make a coherent and empirically supported case for the multidimensional character of symptom unawareness, has argued for the existence of the following, non-orthogonal dimensions (Amador, Strauss, Yale, Flaum et al., 1993): Global awareness of mental disorder; awareness of the social consequences of having a mental disorder; awareness of the effects of, or need, for medication; time – current and retrospective awareness; awareness for each specific modality/symptom/sign and; causal attributions about the symptoms/signs.

However, as useful as multi-dimensional conceptions of symptom unawareness may have been to the development of standardized measures such as the Scale to Assess Unawareness of Mental Disorder (SUMD; Amador, Strauss, Yale, Flaum et al., 1993), they have also had the unfortunate effect of reinforcing the view that self-deception and symptom unawareness are qualitatively distinct from each other. Consequently, most, if not all, measures of symptom awareness employ dimensions of insight that range from “aware” to “unaware”, with full “awareness” representing the upper and preferred end of the scale. Self-deception researchers, on the other hand, tend to conceive of awareness as a much broader construct and assume that what is an optimal amount of awareness in one situation might not be appropriate in another. Hence, awareness in this perspective can be understood as a dimension that ranges between minimization/ denial (i.e., unawareness) at one end, and exaggeration /amplification (e.g., obsessive preoccupation) at the other (Paulhus, 1998).

As one would imagine, the claim that self-deception and symptom unawareness are different in some important and fundamental way is inextricably intertwined with the question of whether symptom unawareness should be conceptualized as a psychotic symptom that is qualitatively different than delusional thinking. On an intuitive level, the view that poor insight is a form of self-directed delusional thinking has much to recommend it. It is certainly more parsimonious than the alternative, and as a type of delusional thinking, it would not be unreasonable to speculate that the cognitive behavioral strategies that have proven to be successful in modifying other types of delusional thinking might also prove to be effective in the case of diminished insight (e.g., Chadwick & Lowe, 1990; 1994). Amador and other researchers, however, have argued strenuously against this notion and have insisted that symptom awareness and delusions are not equivalent (Amador, Strauss, Yale, Flaum et al., 1993), noting that several studies have failed to find an association between delusional thinking and any of the putative dimensions of insight assessed by multi-dimensional insight measures such as the SUMD.

Of course, the problem here is that Amador and those who insist on making a distinction between delusions and poor insight, do so at the peril of ignoring the fact that there is no *a priori* reason why delusional content should not include one's own thoughts and beliefs. Furthermore, not all studies have failed to yield a relationship between insight and delusional thinking. Van Putten et al. (1976), for example, reported finding a positive relationship between poor insight and grandiose delusions; and Dickerson and colleagues found insight to be inversely related not only to delusions, but also to conceptual disorganization, paranoia, emotional withdrawal, and poor interpersonal rapport (Dickerson, Boronow, Ringel, & Parente, 1997).

In sum, despite the vigorous position adopted by Amador and others, it is far from settled as to whether poor insight or unawareness is qualitatively different from delusional thinking.

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There is no disputing that delusional individuals can and do demonstrate an accurate awareness into various aspects of their delusional beliefs (e.g., the fact that their beliefs are inconsistent with logic or the dominant beliefs of their culture or even the laws of nature). It is also true that they can become aware that the delusional beliefs that they held in the very recent past are in fact false (i.e., retrospective insight). However, it can be argued that these observations merely serve to demonstrate two things about delusions: (1) Like symptom unawareness, most delusions are in reality complex, multi-dimensional mixtures of many different beliefs (some false, some not) that are woven together to create a relatively stable "belief structure"; and (2) by definition, delusional individuals are unable to accurately assess the truth-value of the more critical component beliefs of their delusions. This universal ability of human beings to think about their own thoughts and beliefs has a name. It is called "metacognition".

The assertion that unawareness in psychotic disorders is distinct from delusional thinking is also consistent with the increasingly popular view that the etiology of the unawareness in psychotic disorders is primarily neurocognitive in nature (Amador, Strauss, Yale & Gorman, 1991; Young et al, 1993). In fact, some researchers have gone as far as to characterize the deficit as a type of anosognosia (Amador, Strauss, Yale & Gorman, 1991; Rickelman, 2004). The evidence cited in support of this view, though largely correlational, is, nonetheless, quite substantial. For example, Young and colleagues were among the first to demonstrate that symptom unawareness is inversely related to performance on the Wisconsin Card Sorting Test (WCST), an assumed measure of frontal lobe functioning (Young, Davilia, & Scher, 1993). This finding was subsequently replicated and extended by Young (Young, Zakzanis, et al, 1998) and other researchers (e.g., Lysaker & Bell, 1994; Mohamed, Fleming, Penn, & Spalding, 1999). However, here too there have been a number of non-supporting studies and dissenting views (Aleman, De Haan, & Kahn, 2002; Arduini et al. 2003; Cuesta & Peralta, 1994; Cuesta, Peralta, Caro, & DeLeon, 1995; Fredenreich et al, 2004; Kemp & David, 1996; McCabe, Quayle, Beirne, & Duane, 2002; McEvoy, et al, 1993). For example, Fredenreich et al. (2004) in a study of 122 outpatients with schizophrenia were unable to find a relationship between frontal lobe deficits (assessed using a full battery of neuropsychological tests) and symptom awareness. And in one of the few studies to include a metacognitive version of the WCST, Koren et al (2004) found that the metacognitive measures were far superior to the conventional WCST as predictors of poor insight. This finding makes not only intuitive sense, but it is also consistent with a number of other findings. Todman, Leeds and Taylor (1997), for example, have demonstrated that acceptance of the need for psychotropic medication in a sample of patients with schizophrenia and schizoaffective disorder can be predicted by the degree to which subjects overestimate their performance on a standardized cognitive task 12 weeks after the test, but not immediately after the test. Similarly, Lysaker, Bryson, et al (2003) report that in addition to executive function deficits, subjects who are unaware of their symptoms tend to exhibit a positive re-appraisal style of coping; a conclusion that is not inconsistent with the claim that poor insight is defensive function associated with grandiosity (e.g., VanPutten et al., 1976). In short, it would appear that while it is true that many patients with schizophrenia and schizoaffective disorder do manifest executive function deficits, the evidence that symptom unawareness is directly and exclusively attributable to these neurocognitive deficits is equivocal, at best.

## INSIGHT IN SCHIZOPHRENIA AND SCHIZOAFFECTIVE DISORDER

As noted above, there have been a number of cross-sectional studies across diagnostic groups that have yielded results that suggest that patients with schizophrenia and bipolar disorder have less insight into current and past mental disorder than patients with major depression or schizoaffective disorder (e.g., Amador & Strauss, 1993; Pini et al., 2001). This finding is somewhat surprising, as it fails to correspond to the continuum of severity that is assumed to underlie the four disorders; but it is also consistent with findings that suggest that insight may be only weakly correlated to symptom severity (Amador & Strauss, 1993; Amador, Strauss, Yale & Gorman, 1991). Given the moderating effect of dysphoric mood on insight that has been reported in some studies (Dixon et al., 1998; Freudenreich et al., 2004; Moore et al., 1999) various theorists have attempted to explain these between-disorder differences by suggesting that symptom unawareness is a trait feature in schizophrenia and schizoaffective disorder, but in bipolar disorder, it is probably a state feature that is inextricably yoked to the manic and hypomanic episodes of the illness (e.g., Ghaemi & Rosenquist, 2004; Ghaemi, Stall & Pope, 1995). And there is some empirical support for this conjecture. Results from a recent meta-analytic study by Ghaemi and Rosenquist (2004), for example, suggest that there is on average as much as a 20% improvement in insight after recovery from a manic episode. However, recent longitudinal studies have reported that insight seems to vary over time in individuals with schizophrenia and schizoaffective disorder, as well, albeit probably not to the same degree (see Cuesta, Peralta, & Zarzuela, 2000).

## MODIFICATION OF INSIGHT

Although research on symptom awareness has increased dramatically over the last fifteen years, there has been comparatively little interest in developing and/or evaluating interventions for dealing with symptom unawareness. This neglect is no doubt partly attributable to the long-standing paucity of innovation in non-pharmacological interventions for the seriously mentally ill (SMI), but I would venture that it also reflects the influence of the prevailing view that symptom unawareness is a neurocognitive deficit. Hopefully, my admittedly brief review of relevant literature above has introduced enough uncertainty about the strong version of the neurocognitive model to at least entertain the working hypothesis that poor insight in schizophrenia and schizoaffective disorder is probably multi-determined. Furthermore, since there is no a priori means of determining what aspects, or what proportion, of a patient's poor insight might be attributable to psychological adaptation, it seems reasonable to adopt the stance that all patients with impaired insight are viable candidates for psychological intervention until proven otherwise.

In a recent review of the research on treatment interventions that target poor insight in psychotic patients, Henry and Ghaemi (2004) concluded that not only was there a paucity of such research but that most of the approaches studied to date have not yielded impressive results. They identify two interventions as having some promise, however: individualized psychoeducational approaches and videotaped self-observation techniques. These two interventions appear to have one important feature in common: They provide the patient with

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illness-related information that is specific and relevant to the patient as an individual. In both cases the individual is provided with vivid, declarative information (i.e., images and propositions) about how their behavior is likely to be perceived, categorized and labeled by other people. This is an important departure from the conventional group-based model of psychoeducation in which the patient receives syndrome -specific, rather than person-specific, information. And in keeping with this distinction is the fairly consistent finding that psychoeducation groups (at least when not supplemented by family psychoeducation) tend to improve patients' knowledge about their syndrome, but not much else (Merinder et al 1999).

Videotaped self-observation techniques of the sort referred to by Henry and Ghaemi (2004) have typically involved the video recording of patients while in an acutely psychotic state and then re-exposing the patients to the taped session during a subsequent phase of partial remission. In one such study, Davidoff, Forester, Ghaemi, and Bodkin (1998) compared a group of re-exposed subjects to a group of subjects with poor insight who had been exposed to a placebo videotape. They found that the videotaped self-observation technique did not have a significant effect on overall psychopathology but did improve insight scores and, importantly, delusional thinking. It is worth noting that self-observation techniques that employ videotaping for feedback and benchmarking have also been shown to be effective in improving self-assessments in various occupational and educational settings (e.g., Martin, Regehr, Hodges, & McNaughton, 1998; but see, Kruger & Dunning, 1999).

Contrary to the conclusions of Henry and Ghaemi (2004) there are several studies that suggest that Cognitive Behavioral Therapy (CBT) techniques may be effective in enhancing medication compliance and poor insight. As a case in point, Turkington, Kingdon, and Turner (2002) designed a CBT-based intervention model in which medication compliance was improved by a structured exploration and reframing of the disorder and treatment via a combination of face- to-face therapy sessions and behavioral homework. Based on the results from at least one study in which this approach was utilized, the authors reported that overall insight and compliance improved post therapy and at one-year follow-up. Importantly, they also found that patients who demonstrated the greatest amount of insight also tended to become more depressed. Similar results were reported by Kemp, Hayward, Applewhaite, Everitt, & David (1996) using yet another CBT-based type of intervention, Compliance Therapy, which is an amalgam of CBT, motivational interviewing and psychoeducation. In the original study, the authors reported finding improvement in compliance levels and insight, at both post-treatment and at the six-month follow-up. They also indicated that there was an improvement in overall functioning. However, it is worth noting that O'Donnell et al (2003) were unable to replicate the Kemp, Heyward et al (1996) results in a one year follow-up study.

To summarize, the literature on treatment interventions targeting poor insight is limited, to say the least. Unfortunately, there is even less information available about the differential effects of the proposed interventions on patients with different psychotic disorders, such as schizophrenia and schizoaffective disorder. Yet, this is clearly something that should be considered, given the reported between-disorder differences in insight (Amador, Strauss, Yale, Flaum et al., 1993; Pini et al., 2001) and the aforementioned between-phase variation that appears to characterize some psychotic and mood disorders (Cuesta, Peralta et al., 2000).

## A PROPOSED INTERVENTION

On the basis of the few studies that have been done on the effectiveness of interventions targeting symptom unawareness, it would appear that customizable, individualized approaches are more likely to meet with success than group-based interventions. A plausible reason for this may be that individualized approaches significantly reduce the degrees of freedom that patients have at their disposal to engage in avoidance and distortion. This would explain why video self-observation is so effective, and why the impersonal abstractions found in the curriculum of a typical psychoeducation group is effective at creating syndrome-knowledge but is decidedly less effective in promoting self-knowledge.

Recently, my colleagues and I have been exploring the utility of highly individualized approach of our devising that is based on a modified version of the Brief Psychiatric Rating Scale (BPRS; Overall and Gorham, 1962). This new version of the BPRS, the Brief Psychiatric Rating Scale—Therapeutic Milieu (BPRS-TM; Todman, Leeds and Garrett, 2002) was originally developed to address a broader array of issues that are associated with the management and clinical monitoring of the SMI in community treatment settings. However, we have since come to believe the BPRS-TM is also well suited to the task of modifying insight and behavior via a process of person-specific training in self-observation, self-monitoring, and ultimately, self-government. Moreover, in contrast to the interventions and assessment methods described above, the design of the BPRS-TM embraces the idea that insight is a bipolar construct that ranges from the minimization of awareness to the amplification of awareness, and that neither extreme is inherently maladaptive. It is therefore our contention that the BPRS-TM can be construed as a structured context in which it is possible for the patient and the therapist to compare and contrast their perceptions of the patient's symptoms and signs over time. We have further conjectured that in such a context it should be possible to teach individuals with schizophrenia and schizoaffective disorder to be better (i.e., more reliable, accurate and sensitive) observers of the changes in their own behavior and internal states. This approach is therefore not unlike some of the techniques that have been shown to be effective in improving the accuracy of self-assessments in non-psychiatric populations (e.g., Dunning, Heath, & Suls, 2004; Farh & Dobbins, 1989). It also consistent with the literature that suggests that self-monitoring is an inherently potent device for altering the behavior that is being monitored. Kazdin (2001) for example, notes that the systematic observation of one's own thoughts and behavior over time can lead to substantial changes in behavior. Although there is some disagreement as to exactly how large a therapeutic effect can be expected from self-observation alone (see Korotitsch and Nelson-Gray, 1999) there seems to be general agreement among researchers that behavioral change becomes more likely as self-monitoring becomes more structured and systematic (Cone, 1999). It is therefore our opinion that by systematizing a patient's self-monitoring behavior we can convince the patient that his or her prior self-assessments might be worth revisiting. However, before presenting the three cases that will hopefully illustrate how this approach might work in practice, it is necessary to describe in greater detail the changes that were made to the original BPRS and the rationale for those changes.

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## THE BPRS TO THE BPRS-TM

The BPRS (Overall and Gorham, 1962) is one the most widely used instruments for assessing clinical change in psychiatric patients (see Hedlund & Vieweg, 1980, for a review). Originally designed to assess psychopharmacological treatment effects in inpatients across a variety of symptom constructs (Overall and Gorham, 1962), the initial version of the scale consisted of 14-items but was soon changed to a 16-item version, which was subsequently followed by the current 18-item version (Guy, 1976; Overall, 1983). All versions of the scale have utilized the same scoring system, which is based on a seven-category dimension of severity, ranging from 0 (not present) to 6 (extremely severe).

Several researchers have tried to customize and refine the symptom monitoring capabilities of the BPRS in order to better meet the needs of specific patient populations and/or settings (e.g., Bech, Kastrup, & Rafaelsen, 1986; Hafkensheid, 1991; Lukoff, Nuechterlein, & Ventura, 1986). In a particularly important example of this type of effort, David Lukoff and his colleagues expanded the BPRS to 24-items (Lukoff, Nuechterlein et al., 1986) and incorporated a number of changes that are designed to be particularly useful in identifying and monitoring symptom changes in SMI patients who are undergoing rehabilitation in an outpatient setting (Lukoff, Liberman & Nuechterlein, 1986). Perhaps the most critical of these improvements has been the decision to provide anchor point definitions, which serve to minimize rater drift and afford easier inter-rater agreement across the full range of the 7-point scale (Ventura, Green, Shewer & Liberman, 1993). Also notable is the fact that by adding six new items, namely, "suicidality", "self-neglect", "bizarre behavior", "elevated mood", "motor hyperactivity", and "distractibility", they have been able to create a symptom profile that is substantially more representative of the range of symptomatology that is characteristic of the chronic SMI population. This is particularly the case with regard to mood and attentional disturbances.

As important and necessary as these changes have been to improving the utility of the BPRS in SMI populations, we suspected that there were a number of additional improvements that could be made to further enhance the usefulness of the instrument, especially with respect to the type of community-based settings in which chronic SMI patients typically receive their care. Consequently, my colleagues and I set about the task of further revising the BPRS for use in the milieu-type, day-treatment programs that are traditionally employed in the delivery of aftercare services to the SMI. The 26 symptoms/signs that were eventually selected for inclusion in the revised scale were the following: Somatic Concern; Anxiety & Tension; Depression; Guilt; Hostility; Suspiciousness; Unusual Thought Content (i.e., delusions and magical thinking); Grandiosity; Hallucinations; Disorientation; Conceptual Disorganization; Excitement; Motor Retardation; Blunted Affect; Mannerisms and Posturing; Uncooperativeness; Emotional Withdrawal; Suicidality; Self Neglect; Bizarre Behavior; Elevated Mood; Motor Hyperactivity; Distractibility; Boredom; Cravings & Drug Seeking Behavior; and Unawareness.

Since the focus of this chapter is on the use of the BPRS-TM as an intervention tool, the following is an abbreviated description of the relevant aspects of the revision process. For a more complete description and discussion of all of the changes and their rationale, the reader is referred to Todman, Leeds and Garrett (2002). A copy of the complete scale, along with a scoring manual, is available from the author.

## Symptom Unawareness and the BPRS-TM

One of the most surprising findings to have emerged from the research on insight is that it is only weakly correlated with symptom severity (Amador & Strauss, 1993; Amador, Strauss, Yale, Flaum et al., 1993; Amador, Strauss, Yale & Gorman, 1991). The obvious implication for such a finding is that the level of symptom awareness and acceptance (at least in the case of schizophrenia and schizoaffective disorder) cannot be inferred on the basis of symptom severity estimates derived from the original or subsequent versions of the BPRS. This oversight is potentially problematic for a several reasons. First, approximately half of the items on the earlier versions of the BPRS are based on self-report, leaving open the very real possibility that this data will be colored by the patient's symptom unawareness. Second, because insight has been shown to correlate with a number of clinical features and outcomes (e.g., compliance) it is information that is potentially invaluable in evaluating the meaning of changes in symptom severity. For example, a recent drop in the severity of self-neglect might be more easily understood if there is accompanying evidence of an increased awareness of the symptom and its severity. The third reason for having an index of insight on the BPRS is that levels of unawareness can and do change with time and contexts (Cuesta, Peralta et al., 2000).

The modifications that we have made to the BPRS to address the issue of symptom unawareness are the following: (1) A change to a multi-perspective system that incorporates information from both the patient, the interviewer and other observers external to the interview context. This allows for the detection of marked discrepancies between the self-report data and the other two vantage points (see below for a more complete discussion of the multi-perspective approach); and (2) the inclusion of a "Symptom Unawareness" item (Item no:26). This item permits the interviewer to confront that patient directly about his/her acceptance and awareness of his/her symptoms in a global sense. It is important to appreciate here that in responding to this item patients may often state that they are very aware and accepting of their illness, even though on the basis of interviewer and external observations, they are seen to act in ways that are inconsistent with those beliefs (e.g., being oblivious to the effects of their extremely poor hygiene). In these instances the ratings from the interviewer and external observers should be reflect this discrepancy.

## Multi-perspective Observation

As I have already mentioned, The BPRS-18 and the Lukoff, Neuchterlein et al (1986) version intermingle items that are based solely on subjective, self-report data with items that are based entirely on observational data. The interviewer is discouraged from using observational data in scoring the self-report items, presumably even when the clinician has good reason to believe that the self-reported data is incorrect. By the same token, there is no effort made to determine whether the patient's self-observations conform to the observations used to rate the observation-based items. To remedy this problem, we have allowed for both self-report and observational data to be collected on ALL symptom constructs.

A second limitation of the existing BPRS formats is that observations (self and other) are restricted to the patient-interviewer dyad. However, the formal interview is a unique observational context that is by its nature limited in its ecological validity, meaning that the patient will almost certainly present differently once outside of the formal interview context.

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Yet, ironically, one of the strengths of a multi-disciplinary treatment milieu is that there is always a variety of perspectives on the patient's progress or lack of it that is available for comparison with the interview data. Each member of the treatment team interacts with the patient in unique contextual framework and will undoubtedly observe different aspects of the patient's typical behavioral repertoire. We have therefore expanded the observational data pool by allowing symptom ratings to be made by "External Observers". In this approach, change from any perspective is potentially important, as are significant discrepancies in the direction of change between the various perspectives. Absolute differences between ratings from the various perspectives, on the other hand, would also be important, but not on the basis of a slavish adherence to an absolute criterion for severity.

PR= Patient Report (frequency/rate per reporting period); IO= Interviewer Observation (frequency/rate during interview); Ext O = External Observations (frequency/rate during period reported by patient);

In the case of IO and Ext O, the frequency of symptoms (e.g., anxiety, depression) are based on the frequency of observed external signs of the corresponding symptoms (e.g., sad faces or tearfulness in depression).

N/A	1	2	3	4	5	6	7
not assessed	not present	v. mild	mild	moderate	moderate ly severe	severe	extremely severe

#### 7. Unusual thought content (VI)

[Degree of unusualness of thought content, independent of level of disorganization]

PR: patient states that during the interaction/observation period he/she entertained thoughts, ideas and beliefs that would be considered strange and unusual to most people from the same culture.

IO & Ext O: patient exhibits signs of entertaining strange or unusual thoughts, ideas and beliefs during the interaction/observation period.

PR:	N/A	1	2	3	4	5	6	7
IO:	N/A	1	2	3	4	5	6	7
Ext O:	N/A	1	2	3	4	5	6	7
Distress Index:	N/A	1	2	3	4	5	6	7
Patient Disruption Index:	N/A	1	2	3	4	5	6	7
IO Disruption Index	N/A	1	2	3	4	5	6	7
Ext O Disruption Index	N/A	1	2	3	4	5	6	7

Figure 1. A sample item from the Brief Psychiatric Rating Scale -Therapeutic Milieu (BPRS-TM; Todman, Leeds and Garrett, 2002) illustrating the 7-point likert scoring system and the multi-perspective approach.

With this modification, the BPRS has been transformed into far more of a living, interactive document that is capable of informing treatment planning and management decisions in a way that is compatible with multi-disciplinary treatment team approach; an approach that typifies most community-based, milieu-type treatment programs for the SPMI. This is not a trivial point. By framing the team discussions around the BPRS, all of the team

members are provided with the same textured portrait at a specific point in time, and can thus tailor their interactions accordingly. In this way it is argued that the all too common problem of staff members working at cross-purposes with the same patient could be reduced considerably.

To sum up, the new multi-perspective approach allows for ratings from three perspectives across all items. These perspectives are: (1) the Patient Reports (PR), based on self-report ; (2) Interviewer Observations (IO), collected during the interview session and in other less formal interactions with the patient; and (3) External Observations (Ext. O) derived from observations made by other clinicians outside of the interview context (see Figure 1).

### Personal Anchors and Visual Analog Cues

One of the critical aspects of any rating scale is the appropriateness of the definitions associated with its behavioral anchors. Anchor point definitions are essential for ensuring comparability across raters and the stability of ratings within raters across time. As noted earlier, one of the strengths of the Lukoff, Neuchterlein et al (1986) modification of the BPRS is the utilization of anchor point definitions. However, once it has been established that the patient does have "depressive" or "anxiety" symptoms, for example, the degree of severity that is attached to those symptoms is largely dependent upon the patient's own internal severity scale that he or she uses to express the level of subjective functional interference and distress. And it is precisely because this judgement about severity is based on an implicit, private scale that it is necessary that the patient be encouraged to not only make these personal anchors explicit, but also utilize them as a frame of reference with which he or she can compare future feelings of distress or functional interference. Consequently, the point that I wish to convey here is that even in those instances where a patient provides statements that correspond to the universal anchor point definition of a rating of "7", this rating would have a dramatically different meaning in the case of patients who differ in their personal definitions of what constitutes a severely distressing or disruptive experience (e.g., the patient who hallucinates constantly, but is not distressed or disrupted by the experience).

To remedy this problem, the BPRS-TM requires that during the initial interview with the patient, the interviewer establish personal anchors for the "Extremely Severe" (7) and "Moderate" (4) ranges of subjective distress and functional interference (see figure 2 for example). This is accomplished by having the interviewer ask the patient to provide the best example of a prior personal experience that the patient considers to be severely distressing, and another experience that they would characterize as moderately distressing. The same procedure is then repeated with the construct of functional interference. These personal anchor definitions are recorded on the answer form and used in all subsequent administrations of the BPRS-TM to remind the patient that he/she should compare all estimates of distress and functional interference with the personal anchors that they provided at the beginning of the interview process.

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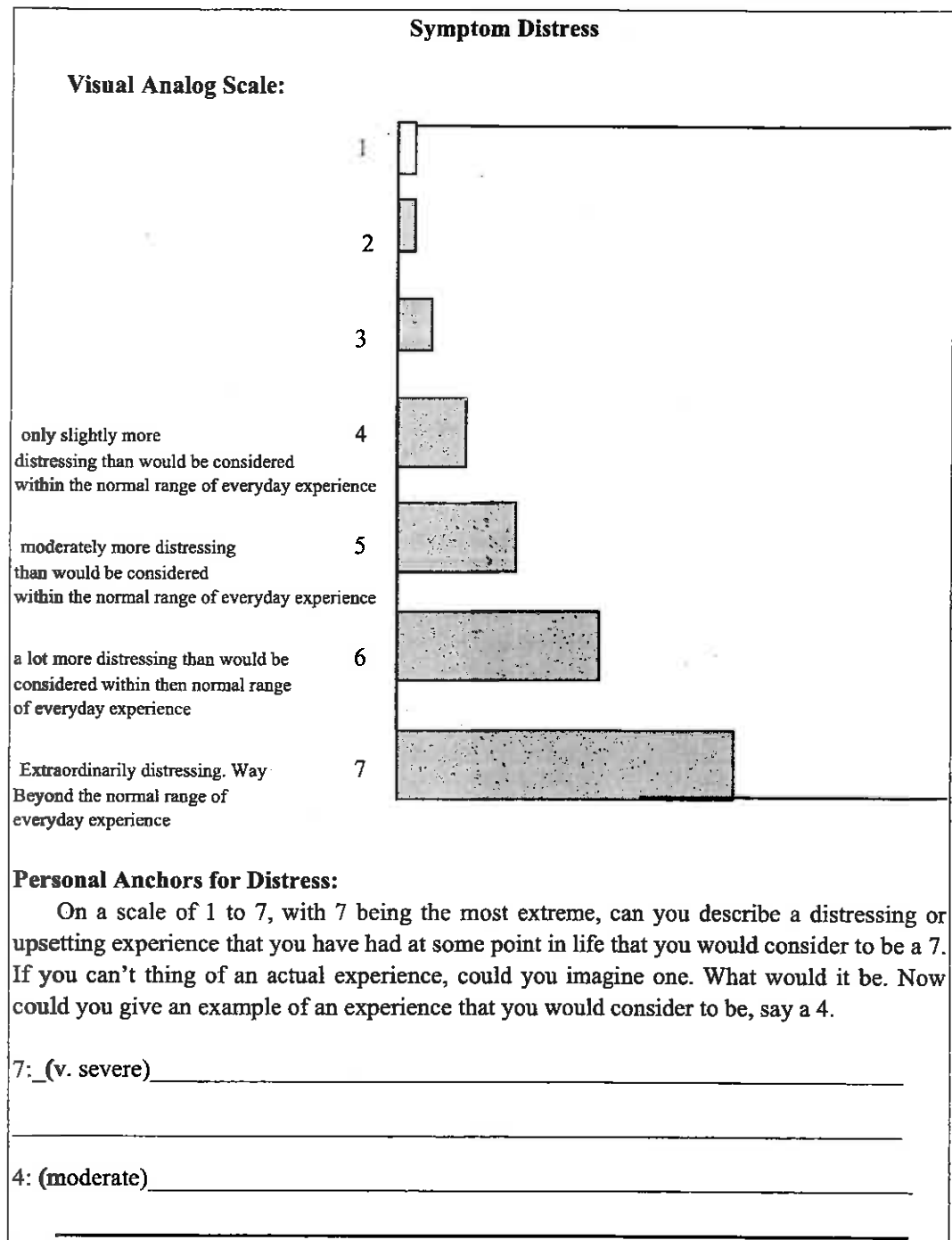


Figure 2. An example of the visual analog scale and personal anchors used for rating distress on the Brief Psychiatric Rating Scale—Therapeutic Milieu

It is important to appreciate that the distress scale is based on the INTENSITY of the experience. (i.e., the greater the intensity of the distress in response to the symptom, the greater the rated severity.) Functional disturbance, on the other hand, is based both on the

INTENSITY and the EXTENSIVENESS of the experienced or observed disruption. Hence, for a symptom to be severely disruptive, it would have to disrupt almost completely (i.e., intensively) and do so over a wide number of functional activities (i.e., extensively).

There is of course no escaping the fact that there is a sizable proportion of patients who will insist that they cannot think of any suitable exemplars of extremely severe or moderate experiences, or that they can't estimate how frequently they experienced a symptom. It is for this reason that the rater is obliged to make use of a visual analog scale when collecting PR data (see Figure 2). The visual analog scale consists of seven partially shaded horizontal bars, stacked on top of each other, with the top bar (which corresponds to the "not present-1" category) containing the least amount of shading and the bottom bar, (which corresponds to the "extremely severe-7" category) the most. In the case of distress, the patient is informed that the shaded portions of the bar represents the INTENSITY of the distress (meaning: concern, worry, anxiety, apprehension, fear, sadness) experienced as a consequence of the actual experience of the symptom, the memory of experience, or anticipation of the return of the symptom during the average day or during the entire rating period. If the patient is able provide personal anchors, they should be recorded next to the appropriate bars as concrete reminders for the next administration. Similarly, in the case of functional disturbance, the patient is made to understand that the shaded portions represent the INTENSITY AND EXTENSIVENESS of disruption of activities (including psychological activities such as concentrating, thinking, remembering) that the patient should be doing or would like engage in on a regular basis, but is unable to do so, or do so very well, because of the impact of the symptom in question. In terms of frequency, the patient is simply asked to estimate the frequency rate of the symptom by using the bars as a guide.

### Severity: The Uncoupling of Frequency, Distress, Intensity and Functional Interference/Disturbance

In the original version of the BPRS, as well as all of the other versions that we are aware of, symptom severity has been assessed on the basis of intermingled judgements about symptom frequency, symptom intensity and the degree of functional impairment. There are a host of problems with this approach but one of the most salient is the fact that subjective distress is not included in the definition of severity on any of the items, except to the extent that distress is intrinsic to the symptom being assessed (e.g., anxiety or depression). However, patients may or may not be distressed about symptoms such as hallucinations, which in turn, may or may not be tied to symptom awareness. The proposed modification tackles this problem by allowing for the rating of the frequency of the occurrence of the symptom or sign, independently of the ratings of distress and functional disturbance. There is no a priori assumption made regarding which dimension is the better severity "index". The meaning of changes on one dimension could be interpreted very differently depending upon the changes or lack of changes that occur on the other dimensions. Take the example of hallucinations. On the BPRS-TM, reported increases in the frequency of hallucinations in absence of a corresponding increase in distress or functional disturbance would have a significantly different meaning than an increase that is accompanied by either increases in distress or functional disturbance. This approach, we argue, is far more in keeping with the dynamic way clinicians think about and use patient information to affect clinical decisions. All of this, of

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### Boredom

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course, is not too suggest that interference, frequency and distress are orthogonal. It is entirely likely that someone who has successfully adapted to a high frequency of auditory hallucinations, for example, will be less attentive to the rate at which they are experienced, and therefore under-estimate their rate of occurrence. On the other hand, someone who is deeply perturbed by such an experience may over-estimate the frequency of the hallucinatory experiences.

A final comment about functional interference. Although patients may reach an accommodation with their symptoms in the form of symptom unawareness, just as frequently, if not more so, they can develop a maladaptive accommodation with the consequences or effects of that symptomatology. In other words, many patients are inclined to minimize and underestimate the degree of functional interference that may be attributable to their symptoms (e.g., poor hygiene that makes it difficult for the patient to develop social relationships), even if they acknowledge the existence of their symptoms (e.g., Amador, Strauss, Yale, Flaum et al., 1993; Todman, Leeds, & Taylor, 1997). To reiterate the point made in the preceding section on symptom unawareness, we consider this tendency for misattribution and unawareness to be a central component of the psychotic process and its relationship to subjective frequency of occurrence and distress has the potential to tell us a great deal about a patient's readiness to confront a particular symptom or sign.

In the current modification, the dimension of symptom frequency is rated from all three perspectives (i.e., IO, PR & Ext. O). The dimension of distress, however, for the purposes of this revision, is conceived as being a totally private, subjective dimension. Hence, it is rated only from the PR perspective. The construct of functional disturbance or interference, on the other hand, has a decidedly private, subjective component that cannot be accurately assessed by external observation, as well as an observable component that may or may not be accurately perceived by the patient. Although a provision is made for ratings of functional disturbance to be made on the basis on the interviewer's observations (IO), we are acutely aware that in the relatively brief and artificial context of an interview, it may not always be possible to make accurate attributions about the source of what appears to be functional interference. Furthermore, the sample of behaviors upon which such judgements are based is likely to be too limited to permit generalizations outside of the context of the interview setting. These reservations therefore serve to underscore our conviction that the observations made over longer periods of time and across a variety of contexts by an external observer add a dimension of ecological validity that is invaluable to the monitoring of patient functioning.

## Boredom

The affect state of boredom is a scandalously under-appreciated construct in psychopathology theory and research. Like anxiety and depression it is a dysphoric mood state that is as ubiquitous as it is unpleasant, and can range in severity from the relatively infrequent and insignificant to the truly chronic and disabling (e.g., Bargdill, 2000; Perkins & Hill, 1985; Sommers & Vodanovich, 2000; Todman, 2003; Tolor, 1989). Several factors suggest that an assessment of boredom severity should be included in the BPRS. First, there is the long held thesis that some of the negative symptoms observed in the presentation of some of the SMI are in fact the product of chronic under-stimulation, hence, boredom (e.g., Wing & Brown, 1970; Gordon-Leeds, 1997). The second reason for considering boredom severity is

tied to the fact that like depression and anxiety, boredom has a motivational component, a propensity to act in a way that reduces or removes the feeling state. In keeping with this motivational role, boredom figures prominently among of the risk factors that are known to be associated with relapse in substance dependence (e.g., Blaszczyński, McConaghy & Frankova, 1990; Frosyth & Hundleby, 1987). There is also some very preliminary evidence to suggest that increases in boredom may also be a risk factor for relapse in psychotic patients (Todman, 2003). A third reason, and one that is specifically relevant to the problem being addressed in this chapter is the fact that boredom, as a type of dysphoric state, might be expected to have a moderating effect on insight.

We have addressed the issue of boredom by adding a boredom item (item number:24) to the scale. Although the external behaviors associated with boredom might be easily confused with or overlap with some of the other symptoms on the scale (specifically: depression, uncooperativeness, motor hyperactivity and distractibility), we are of the opinion that the observation that a patient looks as if he/she is bored has the potential to enlighten rather than obscure the interpretation of elevations on these other symptom constructs. This is of course especially true if the patient actually reports being bored.

We have argued that in keeping with what is known about the conditions that improve inter-rater agreement, there are at least five distinctive features of the BPRS-TM that can be expected to facilitate the process of educating patients to be better observers of their behavior and experience (Dunning, Heath, & Suls, 2004; Farh & Dobbins, 1989). They are:

1. A method for recording Self-observations. Although self-reporting is by definition an essential property of all self-report instruments, the self-observations employed in the BPRS-TM are multi-dimensional and made continuously over time using explicit rules of measurement and observation.
2. An agreed upon rule system for the observation of behavior (including feelings and covert behaviors). By this we mean that the BPRS-TM provides a set of explicit rules for observing behavior that is shared by patient and the therapist. There is an effort to "standardize" the language and concepts that are used to describe the patients behavior and experience so that there is shared way of seeing and talking about the patient's illness. In a way, this technique is intended to facilitate the development of the collaborative approach that is the hallmark of CBT, especially when used as a method for modifying delusional beliefs (e.g., Chadwick & Lowe, 1990, 1994).
3. A method for comparing self-observations over time. The patient's self-ratings are made in relation to a subjectively defined benchmarks or anchors that allow a greater consistency of ratings over time. Hence, the patient is afforded the opportunity and means to compare current self-assessments with past self-assessments. Importantly, benchmarking has been shown to be a helpful technique for improving the accuracy of self-assessments in non-psychiatric populations (Dunning et al., 2004)
4. Feedback using an agreed-upon rule system. Feedback from other individuals has been shown to be an effective tool for "repairing" overly optimistic self-assessments in industry settings (Dunning et al., 2004). The BPRS-TM allows the therapist (or another observer of the patient's behavior) to provide individualized social feedback using the shared rule-based system for describing the patient's behavior, and to do so repeatedly over time.

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5. Comparison, reconciliation and negotiation. In other words, the BPRS-TM provides the means and opportunity to regularly compare, discuss and reconcile self-assessments with the assessments provided through social feedback.

## METHOD

### Subjects

The three cases presented below are drawn from a sample of 22 subjects who were recruited from a community-based day treatment clinic for SMI in New York City for a larger study on the utility of the BPRS-TM. The subjects were selected for the study on the basis of the following inclusion criteria: Having a diagnosis of schizophrenia, schizoaffective disorder or Bipolar Disorder; between the ages of 21 and 65 and; no admissions to a psychiatric ward or inpatient facility within the last year. The exclusion criteria were: Not having a unequivocal diagnosis of either schizophrenia, schizoaffective disorder or bipolar disorder; having a diagnosis of mental retardation; actively abusing substances; grossly disorganized in speech and/or behavior.

All of the patients met the DSMIV-TR diagnostic criteria for either schizophrenia, bipolar disorder or schizoaffective disorder. The diagnoses was confirmed on the basis of a semi-structured interview by the treating psychiatrist, followed by an independent chart review and DSMIV-TR based interview by a graduate level research assistant with extensive training and experience in clinical diagnosis. Only patients for whom there was no disagreement between the two diagnostic interviews were included in the study.

### Procedure

Four therapist-research assistants were employed in the study, all of whom were either doctoral or masters level students in a graduate program in clinical psychology. All of the therapist-research assistants received training in the use of the BPRS-TM from one of the authors of the instrument (NG). Subjects were randomly assigned to one of the four therapist-research assistants and asked to commit to a year of meetings but were assured that they could withdraw at anytime. All of the subjects continued to receive treatment and services as usual from the day treatment program staff, including psychotropic medication and psychiatric counseling.

After an initial meeting to get acquainted, the therapist-patient dyads met for 60 to 90 minutes on a biweekly basis. As a matter of protocol, no data was collected during the first three meetings. Instead, these initial sessions were used as an opportunity to establish rapport between the subject and therapist, and to explain the purpose of the BPRS-TM and how it was to be used in the study. Any subject who indicated at the end of the third session that they did not feel comfortable with their assigned therapist was re-assigned to another therapist, provided that they expressed a willingness to continue on with the study. Subjects were given the following information in the therapist's own words:

Very often patients and therapists disagree about what the patient is experiencing or doing and whether or not it is something to be concerned about. Sometimes its because the therapist is mistaken, and sometimes its because the patient does not realize that things are more serious than they imagine them to be. The BPRS-TM is tool that we will be using to help both of us to keep track of important things that you experience, and how they may or may not be affecting you. The important thing is that you will be able to rate how you think you are doing and I will be doing the same. And when we meet, we will be able to compare notes and perhaps figure out why we agree on some things and not on others. We will also be able look back and compare our old ratings with our new ratings and see if we can agree on where things are getting better, worse or staying the same.

## Predictions

In terms of predictions, there are several outcomes that were anticipated. They include:

1. That individuals with schizoaffective disorder would exhibit less symptom unawareness than individuals with schizophrenia. We also anticipated that subjects with schizoaffective disorder would demonstrate greater changes in their self-assessments over time, and that these changes would result in greater accordance with their therapist's ratings of their behavior.
2. That symptom unawareness would decline with respect to specific symptoms and signs when there were accompanying increases in reported distress and/or functional disturbance associated with the same symptoms and signs.
3. That the association of excessive amounts of distress and/or disturbance with a symptom or sign would result in an another form of self-deception, namely, symptom amplification.
4. That individuals with schizoaffective disorder would exhibit higher levels of dysphoria, including anxiety, depression and boredom, than individuals with schizophrenia, and that the levels of dysphoria would positively covary with levels of symptom unawareness

## CASE EXAMPLES

The three BPRS-TM protocols presented in figures 3 through 5, span a period of approximately eight months and are the products of a series of interactions that occurred in the context three separate patient-interviewer/observer dyads. The first patient HA, is a 45 year old, African American female who has been diagnosed with schizophrenia, paranoid type. The second patient, JE, is a 42 year old, African American female with the diagnosis of schizoaffective disorder, bipolar type. The third patient, NJ, is a 51 year old African American male with the diagnosis of schizoaffective disorder, depressive type. Although the patient-interview/observer dyads met at least twice a month, data was formally collected only once a month. Thus far, this has resulted in seven rating periods for HA and JE (T1 through T7) and six rating periods for NJ (T1 through T6). However, HA refused to participate at T5, so no data was collected for her during that time period. Each rating period is associated with a panel of four scores on a seven point likert scale (see example in Figure 1). Three of the

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four scores were generated by the patient (PR, DI, PD). The remaining score (IO) was generated by the interviewer/observer. The scores for each rating period consisted of: frequency estimates for each target symptom and sign by the patient (PR), the interviewer/observer's ratings for the same target symptom/sign (IO), patients' ratings of subjective distress associated with the target symptom/sign (DI) and patients' ratings of disruption or interference caused by the symptom/sign (PD). Although the patient-interviewer/observer dyads provided ratings on all 26 items on the BPRS-TM, only the most salient items are presented. All three of the patients were reportedly compliant with the prescribed psychotropic medications and had been receiving the same type and dosage of medications for at least the two years prior to the start of the study. All three of the patients remained relatively free of any complications or side effects associated with the medications that they had been prescribed.

### Case 1: HA (Figure 3)

#### *Diagnosis: Schizophrenia, Paranoid Type*

HA is a 45 year old female of African American descent. She experienced her first psychotic break at 23 years of age, although there is reason to believe that there were psychotic symptoms present for quite some time before her initial hospitalization. As the data presented in figure 3. indicates, HA's scores on the ANXIETY/TENSION and DEPRESSION items are relatively unremarkable. The moderate discrepancy between HA's ratings (PR) and that of the interviewer/observer (IO) at T1, notwithstanding, there is high level of agreement between the patient and the interviewer/observer ratings for the two symptoms/signs. This is not the case with the symptom/sign of SUSPICIOUSNESS, however, where there is a marked discrepancy between the elevated levels observed (IO) and the HA's self-report. It is notable, however, that despite HA's apparent unawareness, the levels of observed suspiciousness (IO) appear to peak at T4, which corresponds to period just before HA refused to cooperate (T5). It is also interesting that there was a noticeable improvement in HA's observed suspiciousness (IO) at T6, but no change in HA's self-appraisal (PR) for the same period.

A similar pattern (i.e., high ratings of symptom frequency from the interviewer/observer vs. low ratings of symptom frequency and associated distress and disruption from the patient) is evident on the responses to the items of SELF-NEGLECT, UNUSUAL THOUGHT CONTENT (UTC), and CONCEPTUAL DISORGANIZATION. In all three instances, HA demonstrates the type of stubborn unawareness that prior research suggests is typical of many individuals with schizophrenia. Moreover, as would be predicted, HA is neither distressed (DI), nor is she of the opinion that the symptoms/signs are the cause a significant disruption in functioning (PD).

By contrast, the pattern of responses on the item of DISTRACTIBILITY from T1 to T7 strongly suggests that the patient developed an awareness of her moderate levels of distractibility by T6, and that this improvement in awareness was associated with a dramatic increase reported distress (DI). Interestingly, in the following time period of T7, HA reported that the frequency of the symptom (PR) declined to the levels of T1-T5, even though her reported distress remained high and she had begun to attribute disruptive consequences to the symptom.

HOSTILITY is one of the few symptoms/signs where HA seems to have been consistently aware of the level of disruption associated with the symptom/sign (PD). She was also distressed about the symptom/sign (DI) but apparently not to the same extent. Although she tended to underestimate the frequency of her expressions of hostility in relation to the observations of the interviewer/observer (IO), the level of agreement was generally quite good. Indeed, at T6, not only is there perfect concordance between what is reported (PR) and what is observed (IO), but the scores are considerably lower than those in the pre-T5 periods, and are accompanied by equally low levels of reported distress (DI) and disruption (PD).

SUBJECT: HA DIAGNOSIS: SCHIZOPHRENIA

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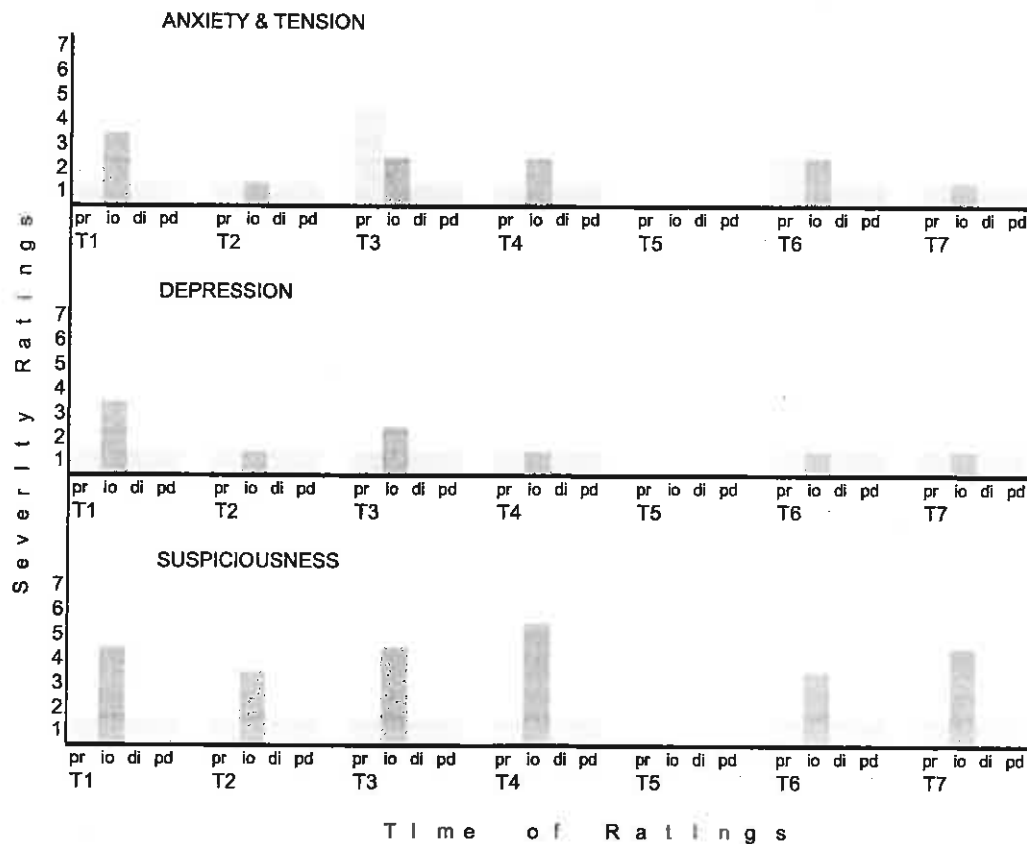


Fig. 3. Relevant BPRS-TM scores for subject HA. (X) AXIS: T1-T7 = TIME OF RATINGS  
(Y) AXIS: SYMPTOM SEVERITY/FREQUENCY - 1 = NOT PRESENT 7 = EXTREMELY SEVERE/FREQUENT  
pr = PATIENT SELF REPORT- SYMPTOM/SIGN FREQUENCY di = PATIENT SELF REPORT-DISTRESS  
io = INTERVIEWER OBSERVATION- SIGN FREQUENCY pd = PATIENT SELF REPORT-DISRUPTION

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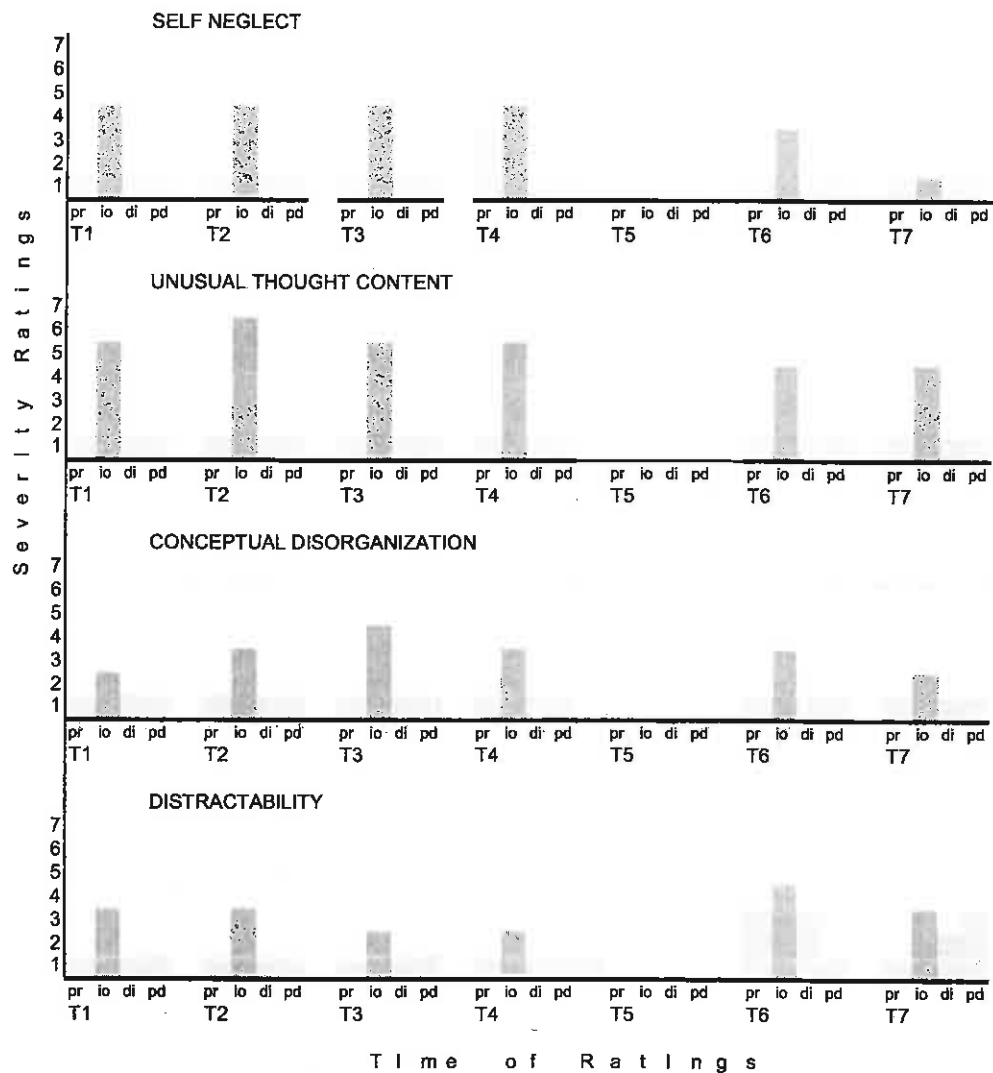


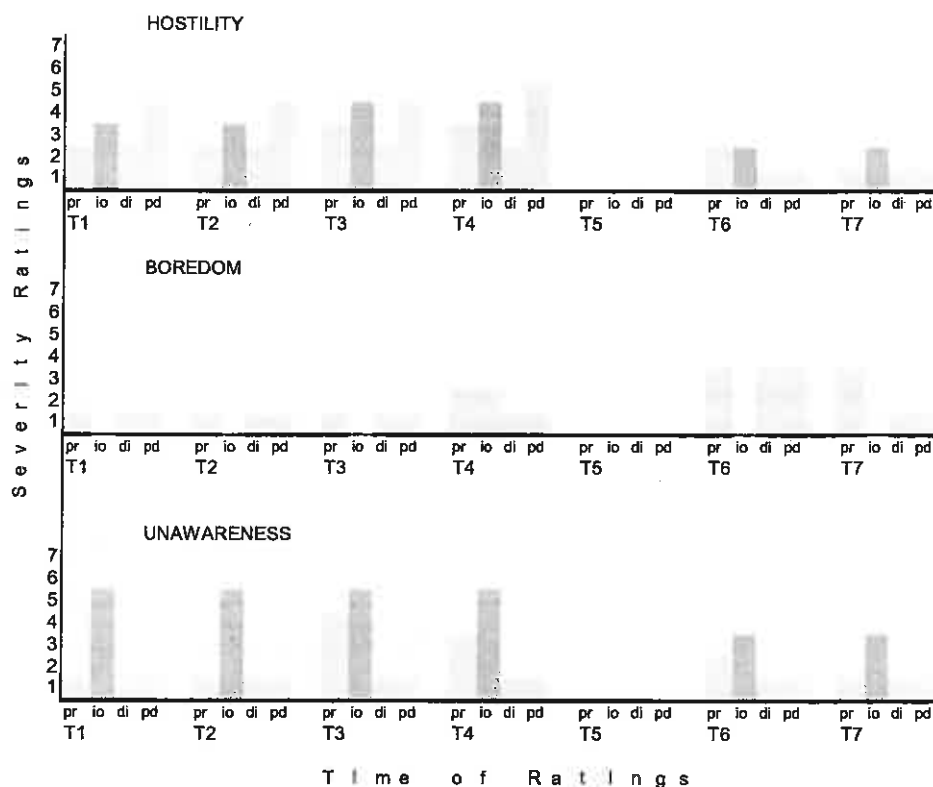
Fig. 3 continued. Relevant BPRS-TM scores for subject HA. (X) AXIS: T1-T7 = TIME OF RATINGS  
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 pr = PATIENT SELF REPORT- SYMPTOM/SIGN FREQUENCY di = PATIENT SELF REPORT-DISTRESS  
 io = INTERVIEWER OBSERVATION- SIGN FREQUENCY pd = PATIENT SELF REPORT-DISRUPTION

The reported levels of BOREDOM were low prior to T5, but became moderately high in periods of T6 and T7. This is notable, if for no other reason than the fact that periods of T6 and T7 were the periods for which the interviewer/observer concluded that the least amount of unawareness occurred across all of the symptoms assessed (UNAWARENESS, T6, T7). In contrast, for periods T1 to T4, when HA reported low levels of boredom, the interviewer/observer's ratings for unawareness on the UNAWARENESS item were significantly higher (IO). Finally, consistent with the multi-dimensional models of symptom unawareness, HA appears to have been fully accepting of having a mental illness in the global sense during periods T1 and T2, but became decidedly less accepting in periods T3 and T4,

underscoring the distinction between symptom unawareness and illness acceptance on the one hand, and highlighting the variability of insight (on symptom and global levels) over time, on the other.

SUBJECT: HA DIAGNOSIS: SCHIZOPHRENIA

GENDER: F AGE: 45



**Fig. 3 continued.** Relevant BPRS-TM scores for subject HA. (X) AXIS: T1-T7 = TIME OF RATINGS  
 (Y) AXIS: SYMPTOM SEVERITY/FREQUENCY - 1= NOT PRESENT 7= EXTREMELY SEVERE/FREQUENT  
 pr = PATIENT SELF REPORT- SYMPTOM/SIGN FREQUENCY di = PATIENT SELF REPORT-DISTRESS  
 io = INTERVIEWER OBSERVATION- SIGN FREQUENCY pd = PATIENT SELF REPORT-DISRUPTION

## Case 2: JE (Figure 4)

### Diagnosis: Schizoaffective Disorder, Bipolar Type

JE is a 42 year old female of African American descent. She experienced her first psychotic break at 18 years of age, and has had numerous hospitalizations since. However, she has not had an admission within in the last two years, which may be partly attributable to the stabilization of her housing status (she was once homeless). The pattern of scores seen in

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JE's protocol (Figure 4) is decidedly different than the one seen in the case of HA. Most notably, there is evidence of much greater volatility in terms of reported (PR) and observed (IO) symptom severity (i.e., levels of frequency, distress and disruption).

The items of ANXIETY/TENSION and DEPRESSION are prime examples of the aforementioned volatility of symptom severity. Most of the observation periods are marked by a relatively high level of patient-interviewer/observer agreement, with the only apparent case of symptom unawareness occurring at T1. Also notable is the hint of symptom amplification at T7, a time period that is also distinguished by an extremely high level of distress and perceived disruption, thus illustrating the hypothesized relationship between excessive distress and the amplification of symptomatology.

Periods T1 and T2 on the item of SUSPICIOUSNESS are characterized by a significant amount of observed suspiciousness and significant unawareness on the part of JE. There is also very little distress or reported disruption. However, T3 is marked by a sudden and dramatic elevation in the patient's reported level of suspiciousness, so much so, that it exceeds the estimates of the interviewer/observer (i.e., mild symptom amplification). Importantly, there is an accompanying increase in reported distress and disruption, once again underscoring the important role of dysphoria in moderating insight. This experience appears to have been important because from T4 on there is a steady and significant decline in reported and observed levels of suspiciousness, and a similar decline in reported distress and disruption. It is therefore tempting to speculate that this may be an instance in which the patient (at or around T3) managed to become aware of at least the public aspects of her suspicious behavior and its attendant disruptive consequences. This in turn was followed by a period of adaptation/learning that resulted in lower levels of severity on all fronts (i.e., frequency, distress and disruption).

MOTOR HYPERACTIVITY is marked by high volatility in observed and reported expressions of the symptom/sign. However, in T1 through T4, there is both a high level of patient-interviewer/observer concordance, coupled with high levels of reported distress and disturbance. Interestingly, all of the reported indices of severity (i.e., frequency, distress and disturbance) steadily decline from T5 on, whereas the observed levels hyperactivity move upward in the opposite direction. In short, JE appears to have moved into a phase of symptom unawareness for her hyperactivity and in so doing has been able to moderate her feelings of distress and concern for its disruptive effects. To the extent that the hyperactivity does not result in serious social and functional problems, this may indeed be an example of a situation where unawareness is benign, if not adaptive.

The item of UTC is an example of a symptom/sign for which the observed frequency remained at the same moderately high level across the seven rating periods. However, it is also another example of rampant symptom amplification in T1 and T2. As was the case in most of the other instances of symptom amplification, there are also heightened levels of reported distress and disturbance. In perhaps the strongest evidence yet of the moderating effects of dysphoria, in T6 and T7, JE reported experiencing no distress or disruption due to UTC, and, in fact, did not report having very much UTC at all, despite the significant levels of observed UTC by the interviewer/observer. In other words, JE went from a state of extreme amplification in T1 and T2, to a state of relative unawareness in T6 and T7. In T1 and T2, it appears as though she was inclined to over-estimate the frequency with which her beliefs were being perceived as atypical and socially unacceptable, which in turn may have resulted in the elevated levels of distress (or vice versa). However by the time T6 and T7

rolled around, she had transitioned into a state of low distress and relative unawareness in which she was inclined to underestimate the frequency with which her beliefs were being perceived as atypical and the cause for untoward social consequences. Hence, a reduction in associated distress and perceived disturbance.

SUBJECT: JE      DIAGNOSIS: SCHIZOAFFECTIVE DISORDER, BIPOLAR TYPE  
GENDER: FEMALE      AGE: 42

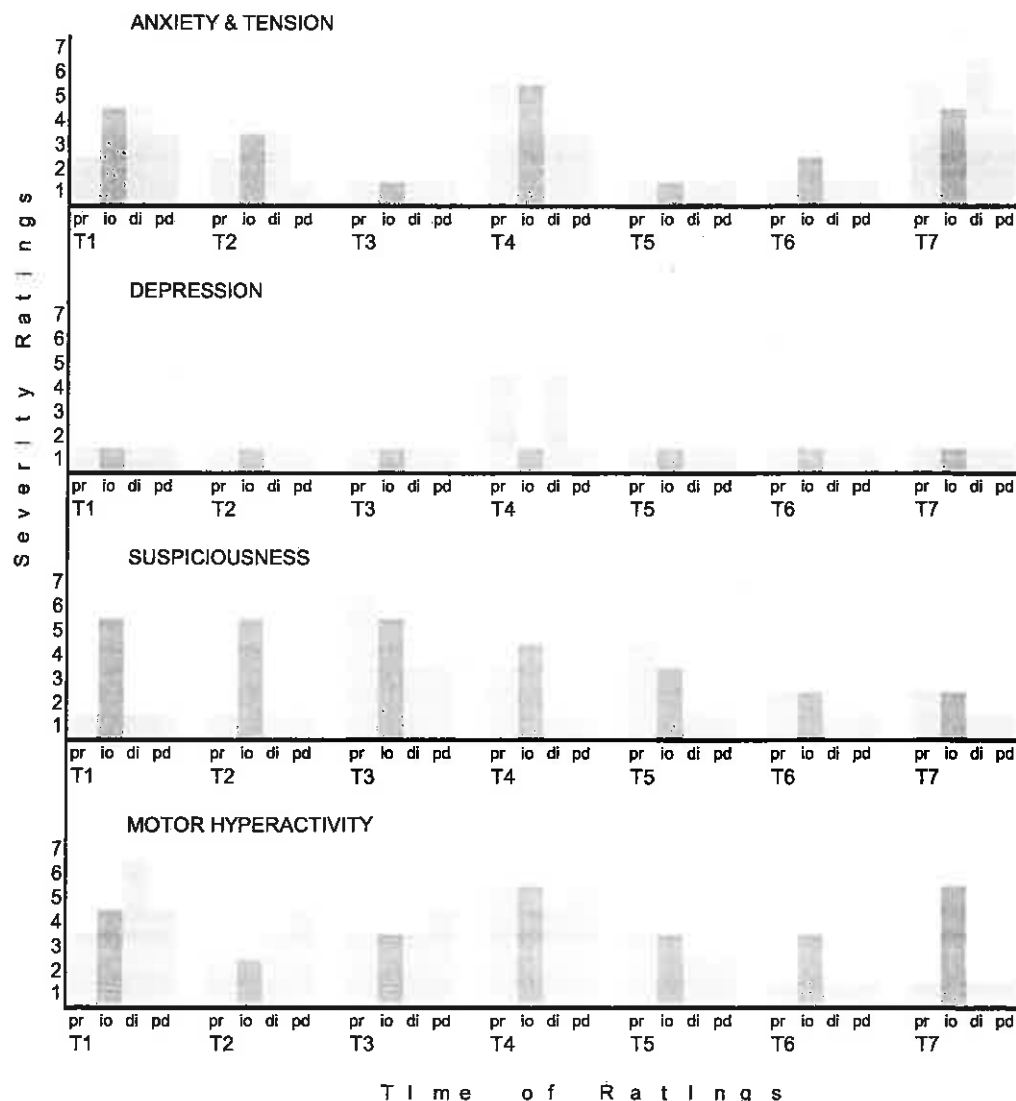


Fig. 4. Relevant BPRS-TM scores for subject JE. (X) AXIS: T1-T7 = TIME OF RATINGS  
(Y) AXIS: SYMPTOM SEVERITY/FREQUENCY - 1= NOT PRESENT 7= EXTREMELY SEVERE/FREQUENT  
pr = PATIENT SELF REPORT- SYMPTOM/SIGN FREQUENCY di = PATIENT SELF REPORT-DISTRESS  
io = INTERVIEWER OBSERVATION- SIGN FREQUENCY pd = PATIENT SELF REPORT-DISRUPTION

Unlike the case of HA there is no obvious covariation between reported BOREDOM and changes in insight. However, like HA, JE invariably reported feelings of distress whenever boredom became more frequent. In terms of UNAWARENESS, with the exception of the

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### Case 3:

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period of T7, JE was consistently accepting of the idea that she had mental illness in the global sense. But as in the case with HA, this was at odds with the instances of unawareness that were observed in the context of specific symptoms. In the case JE, these were, MOTOR HYPERACTIVITY, UTC and SUSPICIOUSNESS.

SUBJECT: JE DIAGNOSIS: SCHIZOAFFECTIVE DISORDER, BIPOLAR TYPE

#### UNUSUAL THOUGHT CONTENT

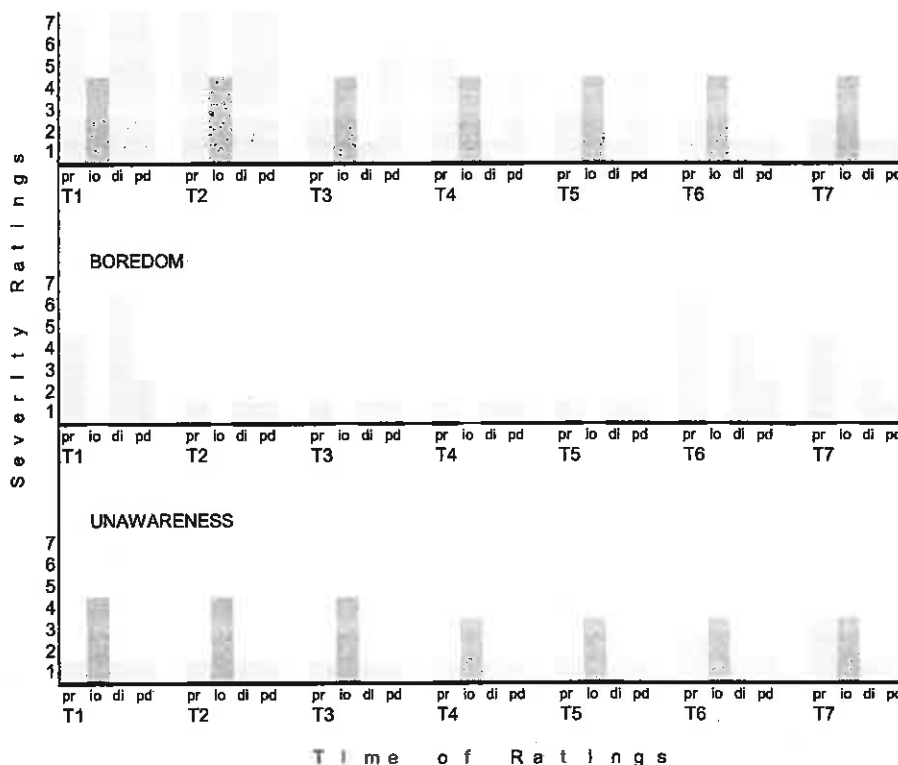


Fig. 4 continued. Relevant BPRS-TM scores for subject JE. (X) AXIS: T1-T7 = TIME OF RATINGS  
(Y) AXIS: SYMPTOM SEVERITY/FREQUENCY - 1= NOT PRESENT 7= EXTREMELY SEVERE/FREQUENT  
pr = PATIENT SELF REPORT- SYMPTOM/SIGN FREQUENCY di = PATIENT SELF REPORT-DISTRESS  
io = INTERVIEWER OBSERVATION- SIGN FREQUENCY pd = PATIENT SELF REPORT-DISRUPTION

### Case 3: NJ (Figure 5)

#### Diagnosis: Schizoaffective Disorder, Depressive Type

NJ is a 51 year old male of African American descent. He experienced his first psychotic break somewhere around his late teens but has only been hospitalized on five occasions. However, one of his admissions at age 26 was for a period of almost a year. As the data presented in figure 5 indicates, instances of symptom amplification and heightened distress

SUBJECT: NJ DIAGNOSIS: SCHIZOAFFECTIVE DISORDER, DEPRESSIVE TYPE  
GENDER: F AGE: 52

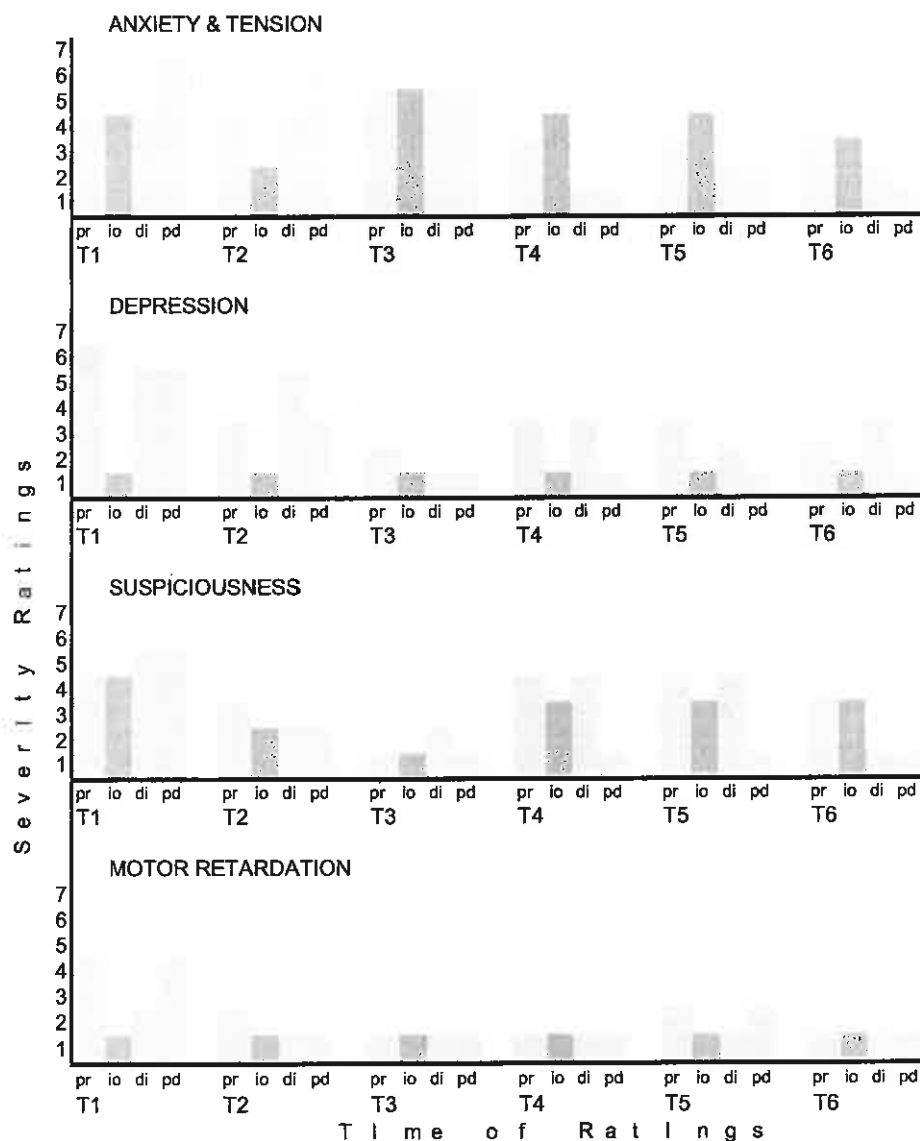


Fig. 5. Relevant BPRS-TM scores for subject NJ. (X) AXIS: T1-T7 = TIME OF RATINGS  
(Y) AXIS: SYMPTOM SEVERITY/FREQUENCY - 1= NOT PRESENT 7= EXTREMELY SEVERE/FREQUENT  
pr = PATIENT SELF REPORT- SYMPTOM/SIGN FREQUENCY di = PATIENT SELF REPORT-DISTRESS  
io = INTERVIEWER OBSERVATION- SIGN FREQUENCY pd = PATIENT SELF REPORT-DISRUPTION

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occurred in the context almost all of symptoms assessed. In support of the therapeutic ambitions for the BPRS-TM, it is worthwhile noting that the levels of reported distress and perceived disruption appeared to decline over time across most of the symptoms monitored. To a lesser degree, this was also true of the tendency to amplify the reported frequency of symptoms. With the notable exception of ANXIETY/TENSION, the observed severity of NJ's symptoms/signs generally did not exceed what was observed in the cases of JE and HA, but the level of distress and perceived disruption was significantly higher. There are only a

few instances in protocol where NJ exhibited clear signs of symptom unawareness. One of those occasions was from T4 to T6 on the item of CONCEPTUAL DISORGANIZATION, but only after a period of high concordance with the ratings of the interviewer/observer (see T1 to T3). It is unclear from the available transcripts what exactly prompted this reversal, but as in the previous cases, the apparent symptom awareness/acceptance (i.e., high patient-interviewer/observer agreement) in T1 to T3 was associated with high levels of distress whereas the unawareness in T4 to T6 was accompanied by low levels of distress. The other occasion in which symptom unawareness seems to crop up was on the item of DISTRACTIBILITY. Here the level of observed severity was lower than with CONCEPTUAL DISORGANIZATION, but the progression from symptom amplification to symptom unawareness was similar to the one observed on the UTC item in case of JE.

SUBJECT: NJ DIAGNOSIS: SCHIZOAFFECTIVE DISORDER, DEPRESSIVE TYPE

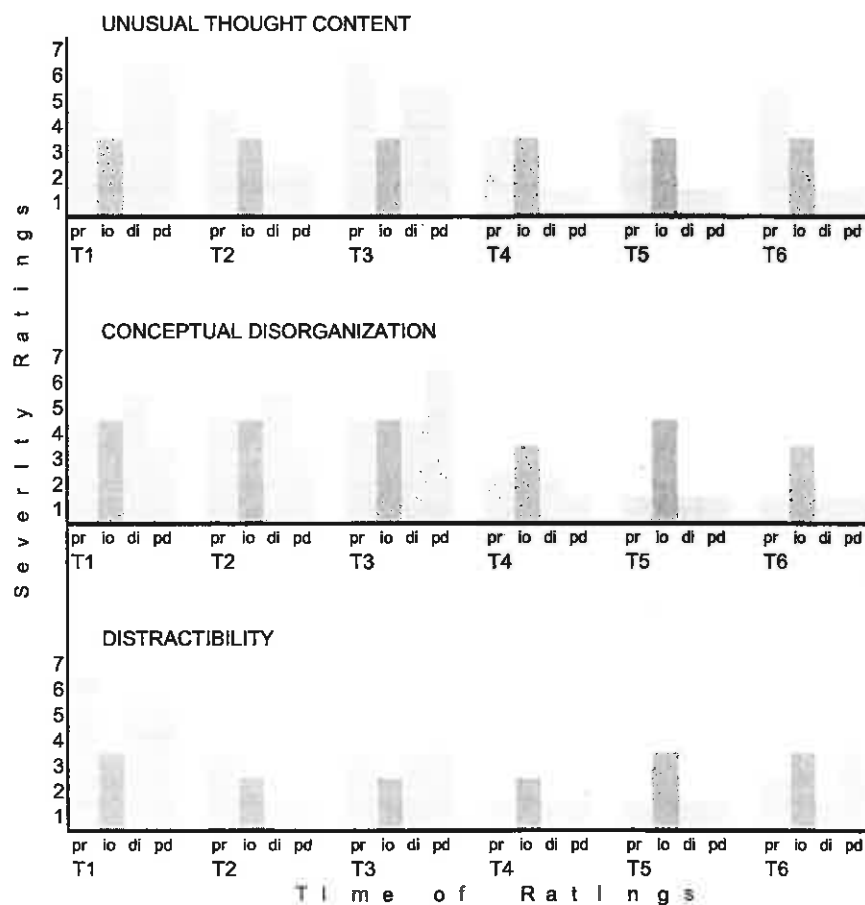


Fig. 5 continued. Relevant BPRS-TM scores for subject NJ.

(X) AXIS: T1-T7 = TIME OF RATINGS

(Y) AXIS: SYMPTOM SEVERITY/FREQUENCY - 1 = NOT PRESENT 7 = EXTREMELY SEVERE/FREQUENT

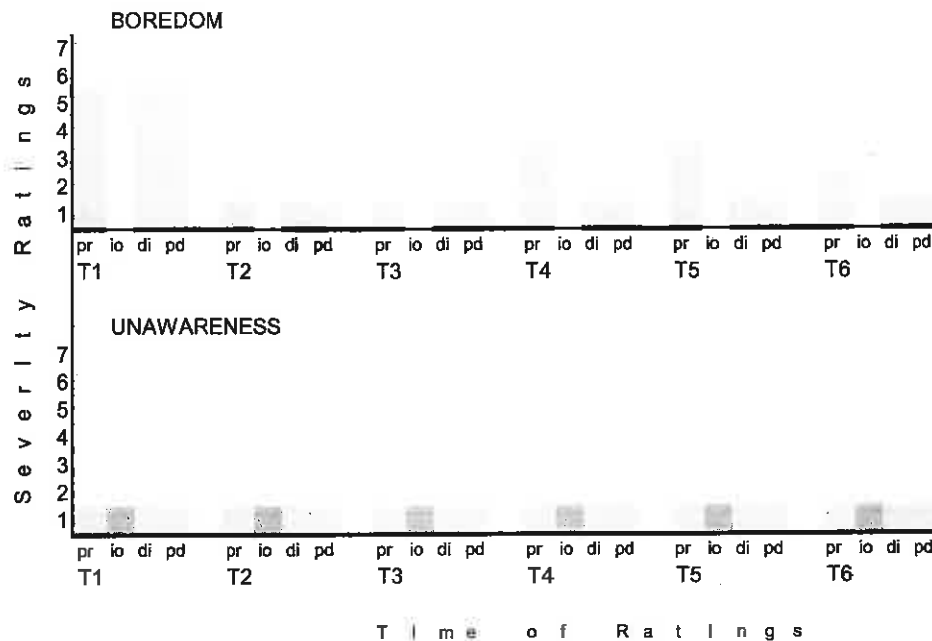
pr = PATIENT SELF REPORT- SYMPTOM/SIGN FREQUENCY

di = PATIENT SELF REPORT-DISTRESS

io = INTERVIEWER OBSERVATION- SIGN FREQUENCY

pd = PATIENT SELF REPORT-DISRUPTION

SUBJECT: NJ DIAGNOSIS: SCHIZOAFFECTIVE DISORDER, DEPRESSIVE TYPE



**Fig. 5 continued.** Relevant BPRS-TM scores for subject NJ. (X) AXIS: T1-T7 = TIME OF RATINGS  
 (Y) AXIS: SYMPTOM SEVERITY/FREQUENCY - 1= NOT PRESENT 7= EXTREMELY SEVERE/FREQUENT  
 pr = PATIENT SELF REPORT- SYMPTOM/SIGN FREQUENCY di = PATIENT SELF REPORT-DISTRESS  
 io = INTERVIEWER OBSERVATION- SIGN FREQUENCY pd = PATIENT SELF REPORT-DISRUPTION

Reported boredom follows the same pattern as symptom distress throughout the protocol, moving from high to low over time, once again suggesting that BOREDOM may be a useful marker for general dysphoria. Finally, the item of UNAWARENESS is particularly instructive. Taken at face value, the ratings would suggest that the patient is almost always completely insightful. However, this is obviously not the case. NJ, as we have seen, is given to persistent and extreme periods of symptom amplification in which one could make the case that he is actually trying to justify and explain his pronounced and chronic feelings of distress and social incompetence through the ramping up of his symptoms and their attendant disruptive elements.

## DISCUSSION AND CONCLUSIONS

Several observations about the patterns of responses seen in the three cases presented above are worth emphasizing:

1. It is possible for poor insight to manifest itself in the form of an amplification of specific symptoms and signs. For example, NJ evidenced this type of symptom

hyperawareness in relation to almost all of the symptoms and signs at some point over the course of his meetings with his therapist. He exaggerated the severity various symptoms and signs in terms of their frequency and in terms of the extent and intensity of disruption to his functioning. This finding is at odds with the unipolar conception of symptom unawareness commonly found in the clinical literature (e.g., Amador, Strauss, and Yale, Flaum et al., 1993). However, it is entirely consistent with a model of insight based on a bipolar construct of self-deception, anchored by under-awareness at one end and over-awareness at the other.

2. The exaggeration of symptoms and signs and their attendant consequences in terms of distress and disruption appear to be significantly more prevalent in the protocols of the two patients with schizoaffective disorder, especially the protocol of the patient with schizoaffective disorder, depressive type (NJ). This is consistent with the presumed role of dysphoric affect in the modulation of insight (e.g., Dixon et al., 1998; Freudenreich et al., 2004; Moore et al., 1999; Pini et al., 2001). It is also consistent with the fact that unlike mildly depressive affect, which tends to produce more accurate self-assessments, moderate to severe levels of depression are associated with unrealistically negative self-assessments (Taylor & Brown, 1988; Taylor & Brown, 1994).
3. Patients' attributions about their symptoms or signs (i.e., the level of distress or disruption) often changed over time even when the reported frequency of the symptoms and signs remained constant. For example, a reduction in associated distress and disruption occurred in several instances in which the perceived frequency of the symptom or sign remained high (see Figure 4., UTC item). This may have been indicative of some cognitive reframing on the part of the patient, but it is entirely possible that these patients became less accurate, not more accurate, in their perception of the connection between their symptoms/signs and their consequences.
4. It was not possible to discern a clear relationship between changes in depression or anxiety levels and changes in symptom awareness. However it is notable that distress and disruption levels appear to covary with patient-interviewer agreement on symptom frequency on all three protocols. It is also worth noting that the patients' agreement with the interviewer's ratings seem to be far more stable over time when the patients attribute significant amounts of distress and disruption to specific symptoms and signs.
5. Finally, the ratings of the therapist appear to have a moderating effect on the patients' awareness of, and attributions about, their symptoms and signs. But there are also hints that they can influence the frequency of the actual symptoms and signs as well. For example, HA, exhibited a gross discrepancy with her therapist in her perception of her personal hygiene (self-neglect). However, after discussing and negotiating with her therapist about what this sign meant and how it affected other people and their perceptions of her, HA not only moderated her perception of the sign, but also moderated the actual behaviors associated with the sign (see Figure 3. Self-Neglect item). This is of course limited evidence indeed, but it is consistent with the underlying assumption that the self-monitoring of symptoms, in the context of a structured, shared system of observing and measuring, will encourage change.

It is instructive that there has been a movement afoot for quite some time to recast many, if not most, psychiatric symptoms, including hallucinations and delusions, as dimensional constructs, rather than as discrete, pathological entities, qualitatively distinct from so-called "normal" behaviors and experiences (e.g., Strauss, 1969). Unfortunately (and somewhat paradoxically) the movement to replace the old conception of insight with the multidimensional construct of symptom unawareness appears to have brought about the opposite result: the dichotomization of insight into behaviors and causes associated with symptom unawareness and those associated with self-deception. However, as I have tried to show in the examples provided above, in addition to minimizing their symptoms (i.e. symptom unawareness), subjects with schizophrenia and schizoaffective disorder are also capable of maximizing or amplifying their symptoms. Moreover, in the examples shown, this amplification process seems to invariably occur in the context of high levels of distress and/or perceived functional disturbance. It also occurred more frequently and more vividly in the two patients with schizoaffective disorder. Of course, both of these patterns may disappear when the larger sample is evaluated, but for the time being it raises the possibility that by subsuming symptom unawareness into the broader construct self-deception, a richer and more nuanced list of predicted outcomes among psychotic disorders might obtain. Furthermore, since self-deception is a normal and, at times, useful psychological tool in non-psychiatric populations, it seems reasonable to assume that there may be contexts in which symptom unawareness or symptom amplification are adaptively superior to what is traditionally described as "good" insight.

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## Chapter

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