

## **Pseudohallucinations in an Adolescent: Considerations for Diagnosis and Treatment in the Case of "Kate"**

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### **ABSTRACT**

Hallucinations are usually considered a hallmark of severe psychopathology, most commonly psychotic or thought disorders such as schizophrenia or other organic brain syndromes. However, several studies describe “non-psychotic hallucinations” occurring in children and adolescents who experience hallucinations without other core symptoms of true psychosis, such as the presence of a thought disorder, disorganized behavior, and pervasive dysfunction. Some authors describe the controversial subject of “pseudohallucinations,” which appears to be more representative of conversion disorder symptoms rather than psychotic symptoms. We present a case of "Kate," a 16-year-old adolescent female who required psychiatric hospitalization for auditory hallucinations with secondary delusional thinking. She was initially given a diagnosis of psychotic disorder, not otherwise specified (NOS), and treated with an antipsychotic and an antidepressant. At outpatient follow-up, although Kate continued to endorse hallucinations and delusional thinking, her symptoms were not felt to be part of a true psychotic disorder. The hallucinations could be viewed as a product of extreme anxiety; a diagnosis of generalized anxiety disorder (GAD) was made, and Kate was maintained on the antidepressant and antipsychotic medications. However, this did not entirely explain Kate's symptoms. The consideration of “pseudohallucinations” as conversion disorder symptoms in the form of psychiatric symptoms was key to making an accurate diagnosis, predicting prognosis, and tailoring treatment for Kate and her parents. A total of 29 months of a combination of both cognitive-behavioral and psychodynamic treatment by the first author (MAS) included both weekly individual therapy and weekly therapy with her parents for the first 12 months, biweekly individual and parents therapy for the next eight months, and monthly individual sessions for the final nine months, during which Kate was 18 years old. During the initial course of treatment, the antipsychotic was tapered and

discontinued without precipitating an exacerbation of symptoms. Symptoms continued to improve throughout treatment with both patient and parents. We discuss the differences between psychosis and “pseudopsychosis” and the reasons for making the distinction in this case. We also discuss the possible explanation for these “pseudohallucinations” in Kate and how treatment was tailored. Finally, we discuss the implications for diagnosis, prognosis, and treatment of this and similar cases of non-psychotic hallucinations.

*Key words:* adolescents; hallucinations; pseudohallucinations; psychosis; conversion disorder; case study; clinical case study

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## 1. CASE CONTEXT AND METHOD

Hallucinations are usually considered a hallmark of significant psychopathology (Lawrence, Jones, & Cooper, 2010) and include most commonly psychotic or thought disordered illnesses such as schizophrenia or organic brain syndromes. However, hallucinations have also been shown to occur in the general population (Lawrence et al., 2010) and may be the product of a variety of psychic mechanisms (McKegney, 1967; Kelleher, Jenner, & Cannon (2010). Hallucinations have also been reported in children and adolescents, and reportedly occur in various clinical populations other than those with psychosis, including youth with conduct and disruptive disorders (Garralda, 1984a, 1984b), depression, bereavement and loss, anxiety, and adjustment disorders (Kotsopoulos, Kanigsberg, Cote, & Fiedorowicz, 1987). In children, hallucinations may be an indicator of the severity of stress, anxiety, and inadequate coping skills rather than a sign of specific psychopathology (Mertin & Hartwig, 2004). However, psychotic symptoms may also represent markers for severe non-psychotic psychopathological disorders and the presence of multiple co-morbid disorders (Kelleher et al., 2012) .

Thus, there appears to be a category of “non-psychotic hallucinations” in children and adolescents, so-called and reported by several authors (Kotsopoulos et al., 1987; Frazier et al., 2007; Aug & Ables, 1971; Simonds, 1975). In one follow-up study, non-psychotic hallucinations in children and adolescents were not associated with development of psychotic symptoms later in life (Best & Mertin, 2007). Therefore, delineating psychotic from non-psychotic hallucinations is important for prognosis and treatment. The difference between psychotic and non-psychotic children who experience hallucinations has been delineated by the presence or lack of other psychotic symptoms, including disorders in the production of language, diminished motor activity, incongruous mood, bizarre behavior, and social withdrawal (Aug & Ables, 1971; Garralda, 1984b).

In line with the above, below we discuss the concept of “pseudohallucinations,” which are more akin to conversion disorder manifesting as psychiatric symptoms instead of neurologic symptoms. We also present a case of what we contend to be “pseudohallucinations” in "Kate," a 16-year-old adolescent female. Within the case we discuss the possible etiology and purpose of the hallucinations and how treatment was tailored to Kate and her parents.

## 2. THE CLIENT

Kate is a 16-year-old Caucasian female who is a sophomore in high school and who was referred by her primary care physician for inpatient psychiatric treatment for auditory hallucinations and paranoia. Kate reported the sudden onset of auditory hallucinations during the previous two weeks. The "leader" of the voices told her to not enter the room, and when Kate did not obey, the voice became "mad" at her. There were several voices, and at times, the voices would communicate with one another.

## 3. GUIDING CONCEPTION WITH RESEARCH AND CLINICAL EXPERIENCE SUPPORT

### *Diagnosis*

Hallucinations are usually considered a hallmark of psychosis and in children are usually inferred by most to be equivalent to schizophrenia (Aug & Ables, 1971). However, early-onset schizophrenia (EOS), defined as having the onset of schizophrenia before the age of 18, is rare (Frazier et al., 2007). Youths with EOS tend to be predominantly male, experience an insidious onset of symptoms, and have more severe negative symptoms and cognitive impairment (Frazier et al., 2007). Kate, being a female and presenting with the sudden onset of positive symptoms without the presence of negative symptoms or cognitive impairment, does not fit the typical presentation of EOS. Thus, alternate diagnoses were considered.

A diagnosis of schizophrenia implies not only hallucinations, but an overall defragmentation and disorganization of behavior, incongruity of affect, and thought disorder that is frequently lacking in some cases (Aug & Ables, 1971). Several studies have identified these "non-psychotic hallucinations" in children (Garralda, 1984a, 1984b; Lukianowicz, 1969) and they are perhaps more common than we realize (Schreier, 1999). However, there is still sparse understanding regarding the etiology or meaning of these isolated hallucinations (Kelleher et al., 2012).

The lack of thought disorder or impairment in functioning led to the consideration of other explanations for Kate's symptoms other than a true psychotic disorder. Van der Zwaard and Polak (2001) reviewed the concept of "pseudohallucinations" and whether these can be differentiated from true hallucinations. The concept "pseudohallucination" is obscure and controversial (Berrios & Dening, 1996). Generally, a pseudohallucination is described as an involuntary sensory experience perceived as a hallucination, but also recognized as a hallucination (Van der Zwaard & Polak, 2001; Berrios & Dening, 1996). A "true" hallucination would be perceived as real and not referred to as "voices." Such "functional" auditory hallucinations can take the form of voices speaking to one another or addressing the patient, often in a devaluing, commanding, or commenting fashion. The voices can seem familiar to the patient and can vary in number and gender. The voices are often anxiety-provoking and can trigger secondary delusions. Stress and anxiety can result in an increase in hallucinations, and the content is often emotionally charged (Van der Zwaard & Polak, 2001).

The terms “pseudohallucination” and its preferred counterpart “non-psychotic hallucination” elicit comparisons to the terms “pseudoseizure” and “non-epileptic seizure.” Not coincidentally, McKegney (1967) makes the case for pseudohallucinations to have more in common with conversion and somatoform symptoms than with psychotic symptoms. Just as “hysterical” blindness and deafness represent psychogenic loss of function, inappropriate or hyper-function as a conversion symptom is also possible (McKegney, 1967). Hallucinations, therefore, could represent a conversion phenomenon via hyper-function of the auditory or visual systems. Likewise, schizophrenia, which is commonly seen as a biochemical or neurophysiologic disease, may have symptoms which can be mimicked in the same way that epilepsy is “mimicked” in patients with pseudoseizures (Bishop, Jr. & Holt, 1980).

Differentiating hallucinations from pseudohallucinations is both controversial and difficult. Bishop, Jr. and Holt (1980) point to the other symptoms of psychosis which may or may not be present: 1) loss of reality testing, 2) pervasive dysfunction, 3) disorganized behavior, and 4) a clinical picture in which the form of the symptoms is not understandable in the context of the patient’s premorbid personality functioning or life situation. Kate did not exhibit pervasive dysfunction, as she continues to do well in her studies and maintain appropriate peer relationships. Kate also did not exhibit any disorganized behavior other than that related to her concerns about the hallucinations. As we discuss further, we contend that reality testing remained intact at an age-appropriate level.

Bishop, Jr. and Holt (1980) attempted to operationalize a working definition of pseudopsychosis which included hallucinations or delusions as the predominant symptoms, the absence of derailment of thought and blunting of affect, and psychological factors judged to be etiologically involved in the symptoms. These symptom criteria are similar to those for conversion and somatoform disorders (American Psychiatric Association, 2000). The DSM-IV TR describes pseudohallucinations as generally occurring with intact insight in the absence of psychotic symptoms, often involving more than one sensory modality, and having a naïve, fantastic, or childish content (American Psychiatric Association, 2000). Kate’s hallucinations certainly meet this quality.

The lack of thought disorder and presence of insight are generally considered to be necessary to differentiate pseudohallucinations from true hallucinations. As Kate spoke of the hallucinations, she was aware that they were abnormal, should not be present, and needed to be addressed. However, she did have difficulty distinguishing whether or not the conspiracy was “real.” In other disorders such as obsessive-compulsive disorder, insight is not required or expected to be present in children and adolescents to compensate for the developmental level of these patients (Garraida, 1985). In our case, Kate did not demonstrate any thought disorder abnormalities, but it could be argued that difficulty with reality testing was more akin to “lack of insight” that may be appropriate on a developmental level. The fact that Kate cited the *Wikipedia* entry on “schizophrenia” as rationale for her own diagnosis was indicative that Kate’s reality testing and insight remained intact, as many patients with schizophrenia lack insight into their own illness (Pia & Tamietto, 2006). In this case, it is difficult to distinguish between delusional thinking and developmentally-appropriate lack of insight.

As previously stated, pseudohallucinations likely have more in common with conversion or somatoform disorders than with psychotic disorders. We can try to explain pseudohallucinations in this context as a conversion symptom. Pseudohallucinations may represent a manifestation of dependency needs which cannot be or were not met (McKegney, 1967). Because of this unmet need, the patient tries to recapture a status of dependency while also feeling that the ungratifying object may need to suffer. In our example, a child being psychiatrically ill would "hurt" the parents. The symptoms themselves were manifested as hostile imagery toward the patient and her parents. However, due to her psychiatric symptoms, the hallucinations also serve to project feelings of helplessness and dependency. Auditory hallucinations are ideal vehicles for conversion symptoms, as a "voice" is capable of expressing many conflicts. This lessens the need to express the conflicts by other means (McKegney, 1967). The external origin would also mean that the individual does not have to claim responsibility or control.

In his paper *Hallucinations in Non-Psychotic Children*, Lukianowicz (1969) described 14 adolescents in Northern Ireland who reported hallucinations that were determined to be non-psychotic. Lukianowicz found that most of the children in the study were suffering primarily not from psychosis, but from anxiety with projected fears being perceived as hallucinations. Common scenarios in these patients and families usually involved a stressful situation at home, most often involving fear of parental rejection, indifference, or a rigid and restrictive attitude. Most commonly, mothers were viewed as anxious, insecure, dependent, and projecting their own anxieties onto their children. Fathers tended to be disinterested, rigid, or unavailable; one-third of the fathers were in poor physical health, and almost half were unemployed. Treatment was psychotherapy involving both children and parents, based on an analysis of the presumed "aims and functions" of the non-psychotic hallucinations. Parent therapy was geared towards helping them to understand the child's difficulties and to change their attitudes towards the child. Lukianowicz (1969) described six possible "aims and functions" of non-psychotic hallucinations: 1) escape mechanism to elude fear/anxiety or from intolerable reality; 2) wish fulfilling mechanism to achieve satisfaction denied in real life (more common in adolescents); 3) externalized fear/anxiety, leading to relief; 4) expression of intolerable hostile feelings/wishes; 5) expressing feelings of guilt or fear of punishment; and 6) neurotic reliving of a traumatic event. Next we will review the individual and family psychological context relevant to crafting a psychodynamic formulation and treatment plan for Kate's hallucinations.

### ***Psychotherapeutic Modality***

The initial therapy employed in Kate's case was cognitive-behavior therapy (CBT). CBT has been shown to be the most validated treatment for anxiety disorders in children and adolescents (AACAP Practice Parameter, 2007), and has been shown to be effective for somatoform disorders (Kroenke, 2007). Initial therapeutic goals were to treat the hallucinations as if they were panic attacks and engage in relaxation and self-calming strategies. One of the theories regarding panic attacks is the person's misinterpretation of normal bodily functions, the anxious apprehension of which results in an increasing cascade of somatic and anxious symptoms (Richter et al., 2012). In other words, the bodily symptom/sensation is real, but the meaning of the symptoms is misperceived by the individual, which results in worsening



symptoms. In Kate's case, we applied this by acknowledging that Kate's perception of the hallucination was real, but we examined the evidence whether or not the claims of Kate's hallucinations were true, in fact treating the hallucinations as if they were cognitive distortions. If Kate heard an auditory hallucination saying there was a conspiracy, we discussed whether there was other evidence supporting the existence of a conspiracy. In other words, just because an auditory hallucination made a declaration does not mean the declaration was true. The aim of this treatment were to reinforce Kate's self-calming strategies, decrease anxiety, and decrease secondary delusional beliefs related to the hallucinations.

Kate was extremely resistant to initially accepting that the hallucinations were "not real." Kate would argue with the therapist or with her parents when either tried to help her "calm down" by realizing the hallucinations were not real. In fact, many of her parents' attempts to make her feel less anxious turned into arguments between Kate and her parents. Kate's defensiveness regarding the nature of the hallucinations further gave credence to the notion that the hallucinations were serving some function for Kate, leading to the formulation that the symptoms were more akin to conversion disorder. Therefore, a psychodynamic goal was taken to explore Kate's unconscious mechanisms for perpetuating the hallucinations. Somatic symptoms such as stomachaches and headaches are common manifestations of anxiety in children and adolescents, and it is recommended that the therapist help the patient and parents understand the nature of these somatic symptoms and their relationship to anxiety (AACAP Practice Parameter, 2007). It was felt without Kate's understanding of the nature and cause of her hallucinations, they would continue. Therefore a psychodynamic course was pursued to help Kate understand the function of the hallucinations and to gain access to and express her underlying feelings that were felt to be contributing to her hallucinations. Although there are few clinical trials assessing the efficacy of psychodynamic psychotherapy for the treatment of childhood anxiety, there is extensive clinical experience that psychodynamic psychotherapy has been successful in treating youth with anxiety and panic symptoms (AACAP Practice Parameter, 2007). The majority of therapy with Kate was psychodynamic/expressive, with elements of CBT to address acute needs regarding hallucinatory, anxiety, or panic symptoms.

#### **4. ASSESSMENT OF THE CLIENT'S PROBLEMS, GOALS, STRENGTHS, AND HISTORY**

##### *Presenting Problems*

As mentioned above, Kate is a 16-year-old Caucasian female who is a sophomore in high school and who was referred by her primary care physician for inpatient psychiatric treatment for auditory hallucinations and paranoia. Kate reported the sudden onset of auditory hallucinations during the previous two weeks. The "leader" of the voices told her to not enter the room, and when Kate did not obey, the voice became "mad" at her. There were several voices, and at times, the voices would communicate with one another. There were two benevolent voices—a male and female—and several malicious voices. She believed that the people behind the voices "want her dead" because of her "disobedience." She believed she would no longer be safe from "the people" and expressed concern that she needed to be cautious. Kate reported resultant poor sleep

(secondary to worrying about her safety in her room) but did not endorse any other psychiatric symptoms. She was hospitalized on initial presentation with diagnoses of Psychotic Disorder, NOS and Anxiety Disorder NOS and was initially started on risperidone 1mg PO once nightly for hallucinations, with subsequent addition of citalopram 10mg once daily to address suspected underlying depression and anxiety symptoms. Kate was hospitalized for five days total and discharged after she claimed the hallucinations had disappeared. Outpatient follow-up was scheduled one week after discharge.

At her first outpatient follow-up, Kate revealed that she had continued to experience auditory hallucinations during the hospitalization but said they were gone so she could leave. Since discharge, she was sleeping in her parents' room due to fear of the voices. She reported being scared of a "conspiracy working in her head" and felt like the voices "were watching her." She also endorsed having a portal in her room with "things coming in from another dimension;" her father identified this as a plotline from a science-fiction TV show they watch frequently. She also claimed that giant eels were living in the walls of her bedroom and would try to "eat her dreams" while she was sleeping. When screened further about delusions, Kate said,

I guess I just feel like there's a conspiracy, and I'm supposed to stop them, but I don't know how. They keep trying to convince me that I'm crazy so I don't think that they're real, but I have to stop them.

She believed that because she had knowledge of the conspiracy; "men with guns" were going to kill her and her parents. Kate believed that if she "didn't stop them, it will be the end of the world." Of note, Kate had researched 'schizophrenia' on *Wikipedia* and thought this to be the condition from which she believed she was suffering.

In screening for a mood disorder, Kate reported her mood was "usually normal," although she endorsed some anhedonia due to her position that she "should not get as involved with the world" due to her belief in the conspiracy. She denied suicidal or homicidal ideation, intent, or plan and denied self-injury. During screening for anxiety, she reported frequent, excessive worrying, occasionally getting "irritated and nervous," and "getting really shaky like something really important is about to happen, and if I don't figure it out something bad will happen." She reported difficulty focusing and concentrating, "especially when it's quiet because that's when the voices come." She also endorsed palpitations, tremors, shortness of breath, and the impending sensation that "something bad was happening" that lasted for "perhaps five minutes." She denied signs or symptoms of obsessive compulsive disorder or post-traumatic stress disorder.

Kate is the only child of her biological parents; this is their only marriage. Her 48-year-old father has been unemployed for the past two years. Her 45-year-old mother is an accountant. Her father has a history of alcohol addiction and underwent inpatient rehabilitation two years ago. He has since been sober and has been attending Alcoholics Anonymous meetings daily. Both Kate's father and maternal grandmother have a history of depression. There is no family history of psychotic disorders. The family is Christian. Kate is in 10<sup>th</sup> grade, and last year she received all As. She has several friends at school, participates in extracurricular activities, and

frequently attends church youth group events. She identifies herself as heterosexual, but has never dated and did not display interest in dating.

Regarding her mental status exam, Kate is a 16-year-old female who appears her stated age. She makes good eye contact and is cooperative with the interview. Her thought processes are linear, logical, and goal-directed. Her thought content is focused on the "voices" and the "conspiracy," and she appears anxious while talking about them. Her memory, orientation, and language are intact. She does not appear to be responding to internal stimuli during the interview, although her eye gaze often deviates while speaking of the voices. There are no loose associations, flight of ideas, thought derailment, or thought blocking.

### *Hospital Experience*

During her inpatient admission, Kate was initially diagnosed with Psychotic Disorder, NOS and considered to be on the schizophrenia spectrum. She endorsed auditory hallucinations consisting of multiple voices conversing with one another, and there seemed to be a delusional element to her symptoms which would certainly be considered "bizarre." For this reason, Kate was initially placed on risperidone. However, other symptoms of a psychotic disorder were lacking. There were no signs of disorganized speech, thought derailment, loosening of associations, incoherence, or thought blocking. Kate did not appear to be responding to internal stimuli. There were no signs of disorganized behavior such as social withdrawal, deterioration of personal hygiene, or increased impulsivity. Kate did not satisfy criterion B for schizophrenia, which describes social or occupational dysfunction markedly below the level achieved prior to the onset of symptoms (American Psychiatric Association, 2000). When the onset is in childhood or adolescence, this may be a failure to achieve the expected level of interpersonal, academic, or occupational achievement (American Psychiatric Association, 2000). Kate did not experience a decline in functioning in her school performance or in her social activities. She still met criteria for Psychotic Disorder, NOS due to persistent auditory hallucinations in the absence of other features and symptoms lasting less than one month. But this descriptor does not explain Kate's symptoms. Kate was also given the diagnosis Anxiety Disorder NOS, which was changed to Generalized Anxiety Disorder in the outpatient setting.

### *Family History*

A familial pattern of infantilization emerged between Kate and her parents. The father, now two years sober, was usurping household responsibilities from Kate, and treating her more like a young child than an adolescent. For instance, even though it was Kate's responsibility to clean the cat's litter box and put away the dishes, her father usually did these for her because "she didn't know how." Her father also chose to volunteer during lunch hours at Kate's school as a way to spend more time with Kate since he was currently unemployed due to chronic back pain. As Kate's father was available to her at lunch, Kate would sometimes approach her father with several somatic complaints of not feeling well and occasionally Kate's father would pull her out of school and the two of them would stay home together. Kate acknowledged if her father had not been at school with her, she would probably "just tough it out." Kate's father attributed his behaviors to his guilt over "never being there" for Kate during her childhood while he was



struggling with alcohol addiction, and he wanted to “make her happy now,” as he felt unable to do so when Kate was younger.

Kate's mother similarly took on several responsibilities for Kate, albeit for a different reason. It became her mother's job to wake Kate up in the morning, tell Kate when to get dressed, when to do her homework and study for tests, and when to go to sleep. Kate's mother would check on her grades via her teacher by email and then inform Kate of her grades and encourage her to study. Her mother did this seemingly out of fear that if “left to her own devices,” Kate would make poor choices and would eventually follow her father's footsteps towards addiction.

Kate's mother struggled with dealing with her husband's addiction and felt “helpless” in affecting change with him. Therefore, Kate's mother wanted to “help [Kate] as much as possible” so she would be successful and independent. However, her mother was unaware that through her actions she was actually fostering Kate's dependence upon her. This superficially increased her mother's anxiety, but more deeply appeared as a self-fulfilling prophecy that Kate could not take care of herself and needed her mother to “right the ship.” This was in contrast to her mother's own perceived inability to help her husband with his addiction.

This was the backdrop for Kate's entry into adolescence, the developmental stage when children normally attempt to relinquish dependency on their parents and develop their own sense of autonomy. With both of her parents infantilizing her, Kate struggled to become a more independent, autonomous teenager. One might expect a teenager in such a circumstance to “act out” in some way. In his paper “The Acting Out Adolescent: A Point of View,” Masterson (1974) provides a psychodynamic interpretation of “acting out” as “most commonly a disruptive behavior ... a defense mechanism in which the patient reproduces forgotten memories, attitudes, and conflicts by actions rather than words without conscious awareness.” The intrapsychic defenses of the acting out adolescent are the “denial of reality in order to project an intrapsychic conflict onto the environment to replay or rework an infantile conflict that causes great internal distress” (Masterson, 1974). This is very similar to McKegney's (1967) explanation for how pseudohallucinations express unconscious conflict. Therefore, these symptoms may represent Kate's unconscious “acting out.”

As an only child, Kate had understood that her mother had taken care of her father due to his alcohol addiction, and that through most of her childhood her father functioned more like a sick sibling than a parent. Early in the course of treatment, Kate acknowledged suppressing anger towards both of her parents—her father, for his addiction and prior unavailability, and her mother for making excuses for her father and being emotionally unavailable. Kate recalled “never getting to play Barbies with [her mother]” as her mother was either working as the sole source of income for the family, or she was “busy dealing with [her father].” However, Kate's religious principles and her conviction that she must “honor thy parents” prevented her from feeling that her anger was allowable or justified, and she initially felt guilty about these feelings. Furthermore, Kate stated she was fearful that if she expressed her feelings towards her father or “made him upset,” he would subsequently suffer a relapse into his addiction and it would be “her

fault.” Additionally, Kate’s father did “all he could” to prevent Kate from becoming angry due to his own guilt about his previous addiction.

Kate’s mother displayed a habit of not expressing anger because “if it doesn’t change anything, there’s no point,” which was reflective of her inability to “change” her husband’s addictive behavior. Therefore, typical expression of anger and “acting out” behavior—most commonly overtly disruptive behavior—may not have been an ego-syntonic expression of conflict for Kate. This scenario is ripe for the development of conversion or somatoform symptoms as a way to express Kate’s unconscious conflicts. The hallucinations can be seen as fitting in with her religious beliefs, as her parents were fond of saying they “heard the voice of God to do His work.” There was never an indication that Kate’s symptoms were feigned or fabricated, which would have suggested a factitious disorder (American Psychiatric Association, 2000).

### *Diagnoses*

As mentioned, Kate was diagnosed with Psychotic Disorder NOS during her inpatient hospitalization, as well as Anxiety Disorder NOS as there was strong suspicion there was an underlying mood or anxiety disorder. At her first follow-up appointment in the outpatient setting, she described enough symptoms to merit a diagnosis of Generalized Anxiety Disorder, and the Anxiety Disorder NOS diagnosis was dropped. She initially denied depression or symptoms specific to a mood disorder. The diagnosis of Psychotic Disorder NOS remained for the first few months of treatment, but eventually Kate began to endorse more depressive symptoms, such as low mood, irritability, and decreased energy. It seemed possible that one of the unconscious purposes of the pseudohallucinations was to defend against depressive symptoms. This process led to the consideration of removing the Psychotic Disorder NOS diagnosis in favor of GAD and Depressive Disorder NOS, although this was not fully decided until the third month.

The clinic functions in a way that patients may view their diagnoses that are listed on the billing sheet at the end of each encounter/appointment. After Depressive Disorder NOS was listed, Kate made mention of it, and also asked, “But I still have psychosis, right?” When asked about the significance of this diagnosis, Kate said, “Well, it means there’s a reason why I’m sick.” It became clear that the diagnosis itself may have been reinforcing the sick/dependency role, and may have been masking the true nature of Kate’s symptoms to her, which could have been interfering with treatment. Therefore, as it was not felt that Kate was truly psychotic, and the diagnosis itself may have been interfering with treatment, the diagnosis of Psychotic Disorder NOS was eliminated. The diagnosis of Depressive Disorder NOS remained throughout most of treatment, briefly being eliminated during months 19-22. GAD and Depressive Disorder NOS remained throughout most of treatment (see Table 1).

## 5. FORMULATION AND TREATMENT PLAN

### *A Psychodynamic Perspective*

Based on the model by Lukianowicz (1969), the following possible psychodynamic formulation was developed to understand the “purpose” of Kate’s hallucinations, and thus, how to minimize them. In psychodynamic terms, we concluded that the following are possible but not necessarily the definitive “aims” of Kate’s symptoms:

- 1) *Escape mechanism to elude fear/anxiety or from intolerable reality.* Kate’s hallucinations were a way to avoid the reality of her parents’ infantilization of her as well as her own failure to make age-appropriate gains in independence and autonomy. They may also have served to escape her fear of a potential relapse of her father’s addiction, which she believed would be due to her own anger.
- 2) *Wish-fulfilling mechanism to achieve satisfaction denied in real life.* The child-like fantastical nature of Kate’s hallucinations could be an unconscious mechanism to entice her parents to “save” or “protect” her, which Kate felt had not occurred when she was a child; the function would be to fulfill her dependency needs on her parents.
- 3) *Externalized fear/anxiety, leading to relief.* If we take the previous two suppositions as plausible partial explanations for Kate’s hallucinations, then it would be conceivable that Kate had anxiety about her parents’ ability to satisfy her dependency needs. Especially as Kate is traversing adolescence, she must determine how much her parents can still “do” for her, and what she needs to do for herself. This may extend to the ability to self-soothe, perhaps a skill she never fully developed.
- 4) *Expression of intolerable hostile feelings/wishes.* Kate’s hallucinations took on remarkably violent and frightening elements, usually of some bad source trying to consume or kill her or her family. This could be seen as an externalization of Kate’s anger towards her parents. She acknowledged these feelings were contradictory to her belief of “honor thy mother and father.” Kate also felt the need to suppress her anger due to her fear that upsetting her father would cause him to relapse.
- 5) *Expression of feelings of guilt or fear of punishment.* As mentioned, Kate felt guilty about her hostile feelings towards her parents, and felt overly responsible for the emotional health of her family. Kate may have felt the need to be “punished” for these hostile feelings, so her hostile thoughts were turned against herself.
- 6) *Neurotic reliving of a traumatic event.* The case could be made that Kate’s “traumatic event” was a protracted lack of parental support during her father’s

active alcohol addiction. This could be seen as similar to the wish-fulfilling mechanism as described above. The hallucinations themselves could be viewed as an attempt to avoid the feelings of anger and disappointment Kate had difficulty accepting. If her parents could be there for her now because of her hallucinations, Kate would not have to tolerate her feelings about their unavailability for her when she was younger.

These hypothesized themes were the foundation on which both individual and parents therapy were structured. The goal was to diminish both the source of the hallucinations and the factors that would reinforce their presence. As the above etiologies for non-psychotic hallucinations are *unconscious* defense mechanisms, one of the main goals of therapy was to bring these conflicted feelings into conscious awareness, in order to decrease the hallucinations (Bender & Lipkowitz, 1940). Additionally, if the hallucinations “worked” in their function by fulfilling the patient’s above unconscious needs, the hallucinations would continue. Therefore, parents therapy was also utilized to work with the parents on not inadvertently reinforcing the hallucinations and on encouraging more age-appropriate behavior, expression of feelings, and diminishing needs for dependency.

### *A Cognitive-Behavioral Perspective*

From a cognitive-behavioral point of view, Kate and her parents needed to develop a more mature system of functioning. Specifically, in terms of distress tolerance and emotional regulation, Kate needed to develop more mature ways of handling her feelings, and the parents needed to respond to her more maturely by not reinforcing her dependence on them.

The psychodynamic and cognitive-behavioral perspectives converged on the same goals for therapy: 1) identification and expression of feelings, both for Kate and her parents; and 2) having the parents not do for Kate what she could do for herself.

## **6. COURSE OF THERAPY**

The family agreed to weekly individual therapy for Kate and weekly separate therapy sessions for the parents, although as shown in Table 2 this schedule was eventually tapered back, as progress was made. The total therapy process lasted 29 months. All therapy sessions were conducted by the first author (MAS). The possible drawback to this arrangement was Kate perceiving a lack of privacy or confidentiality, or a sense of double agency by the therapist, that is the therapist pursuing the agenda of the parents, which could be in conflict with the best interests of the child or adolescent (Martin & Volkmar, 2007). The benefits were a sole source of information to prevent possible splitting. Kate’s confidentiality regarding her underlying feelings was maintained. However, when appropriate, Kate was encouraged by the therapist to be honest and direct with her parents about her feelings.

The parent sessions were aimed at helping the parents to promote age-appropriate behaviors for Kate, encouraging them to promote Kate’s appropriate expression of emotions, and helping Kate to be more autonomous, independent, and responsible for herself, while not

reinforcing the hallucinations. Individual therapy sessions were aimed at increasing awareness, identification, and appropriate expression of Kate's feelings and unconscious wishes, as well as to encourage appropriate decision-making and self-calming strategies.

### ***The First 14 Months***

#### **Individual Therapy with Kate**

Therapy with Kate was initially a combination of supportive therapy and CBT, focusing on psychoeducation and improving Kate's coping skills and anxiety tolerance to help her manage her hallucinations. I explained to Kate that her hallucinations were likely "her brain's way of handling too much stress," with the analogy made to developing headaches or panic attacks. Just as headaches do not necessarily imply the existence of an intracranial abnormality, Kate's hallucinations, although "real" by their existence, were not necessarily due to a hallucination-causing abnormality such as schizophrenia. Kate was also told that as she learned to handle stress better, her hallucinations would subside, and that one of the key sources of stress for her was her feeling unable to discuss or tolerate her own emotions. In addition, Kate was taught relaxation and self-calming strategies, such as vivid imagery, self-talk, and deep breathing to handle her acute episodes of hallucinations as if they were panic attacks.

Kate was initially reluctant to accept that her hallucinations were "not real." We did explore the veracity of the hallucinations, and whether there was evidence for or against supporting the hallucinations. I explained to Kate that her hallucinations were akin to "really strong anxious thoughts or worries, but that these were opinions and not facts." On one occasion, Kate reported experiencing auditory hallucinations that were telling her there was a conspiracy to murder her and her parents with snipers who were hidden in the house. We used CBT techniques to discuss whether or not there was evidence for such a conspiracy, without directly challenging Kate on whether or not the hallucinations were "real," as Kate did in fact experience the hallucinations. Kate was asked if she had ever seen any individuals with guns in her house, if she or her parents sustained any injuries or gunshots, whether there was evidence of gunshots in the house (bullet holes/casings), whether or not she had already been shot, and "what were the snipers waiting for?" if she had not been shot yet. The message was that despite her continuing worry that something bad would happen to her family, nothing ever did. This appeared to help Kate realize that even if she had hallucinations, she did not have to believe what the hallucinations told her were factual.

Aside from using CBT to target acute anxiety, panic, and hallucinatory episodes, therapy was largely psychodynamic and expressive, in order to uncover Kate's unconscious reasons for producing the hallucinations. Kate frequently endorsed hallucinations of a violent nature, suggesting that anger was the underlying emotion not being expressed. Kate had been keeping a journal of her hallucinatory experiences and allowed her parents to read it. This also speaks to some level of attention-seeking behavior, and thus another way in which the hallucinations were reinforcing to Kate.



Several weeks into treatment, Kate acknowledged to the therapist the existence of a second "secret journal" that was more representative of "the real her." When asked why she had a second journal, Kate acknowledged that she had difficulty trusting people with her feelings. She said that she often did not feel that other people "understood" or "approved" of her feelings, so she would give people "a small amount" and see how they reacted.

Kate also said that the secret journal was "boring stuff" about her. This implied Kate felt that others, such as her parents, did not take an active interest in her true feelings, but also that Kate herself felt her own feelings and thoughts did not carry as much worth and value as did her hallucinations. Her openness to share her other journal with her parents, despite the negative connotations of her hallucinatory experiences, may have been reinforcing to Kate that made her feel special in some way. Kate was asked to bring in the "secret journal" to therapy with her, with the understanding that the contents would be kept confidential. The secret journal, in fact, contained many of Kate's true thoughts and feelings, including her long-standing resentment towards her father, particularly after he started receiving treatment for his addiction. As an example, Kate wrote about how she and her mother attended Al-Anon meetings, and Kate remembered expressing frustration at her father, but being criticized for "not being more supportive." Kate felt that her father, now in recovery, was "trying to act like nothing happened." She also admitted to anger towards her mother for "making excuses for [her father]" and not being more available to her. She identified having difficulty with expressing anger, which appeared to be the common theme of her hallucinatory experiences, such as her or her parents being murdered.\*

Kate also expressed regret and longing for a lost childhood when she "never got to be a little kid." Kate's perception was that her mother was always "dealing with [her father's] addiction," and "didn't have time for her." A similar occurrence happened in current time and brought up similar feelings that allowed Kate to discuss them. During treatment, Kate developed a knee sprain from playing an extracurricular sport and had to wear a knee brace. She was supposed to follow-up with her pediatrician, but during the same time, her father developed shoulder and back pain, and a lump was found in his axillary region. Kate's mother told her that her "father might have cancer, and that takes precedence over your knee." As Kate had to be driven to her appointments by her parents, one of her parents was usually present during the first few minutes of the appointment; the parent would provide an update, and then leave with the remaining time spent with the therapist and Kate alone. During this time, Kate tended to draw attention to her knee pain and brace if one of her parents was present. In private, Kate acknowledged feeling slighted, and again brought up feelings of taking a back seat to her father's illness. This allowed Kate to discuss her feelings of "missing out" on several aspects of her childhood, including her father not "taking care of her" due to his drug and alcohol use, and her mother for "always putting \_\_\_ [her father] first."

Kate also discussed resentment about her father being "sick" and not working and "not having to do anything." However, Kate would at times act in a similar fashion, whether complaining of her knee injury, headaches, or nausea/GI upset, and would often ask to stay home from school. Kate was confronted on her similar sick role and attention-seeking behaviors, and "what would she want her father to do." In this way, Kate was validated, but encouraged to not

let her physical symptoms interfere with her daily functioning, de-emphasizing the sick role. Kate expressed frustration, but agreement.

Kate expressed longing for another sibling who would have “made her feel less lonely” and perhaps served as someone to “take care of her.” As Kate began speaking more about these previously repressed feelings, she spoke of her hallucinations less, and her parents heard less about them.

Kate was taught about the relationship between her ability to express her feelings and her hallucinations. Specifically, she was told that her voices were her body’s response to handling stress, particularly when she had difficulty expressing her feelings. The analogy was made to getting a headache when you are stressed, which is a more socially-accepted conversion of symptoms of psychic anxiety into a physical symptom. Kate understood this, but still acknowledged feeling anxious about expressing her feelings, particularly anger.

This was brought up to Kate, who agreed with having difficulty expressing anger. Kate gave several reasons for this, including that it conflicted with the religious tenant of “honor thy parents” and her belief that it was “just not the right thing to do.” Kate was told that many teenagers express anger at their parents, and this is developmentally appropriate. Kate, however, said “I don’t have most teenager's parents.” When asked to elaborate, Kate said that she feared her anger would “ruin everything” and of upsetting her father, and that if he became “emotionally unstable” he would relapse into drug or alcohol addiction and it would be “her fault” (Kate claimed her father said as much to her).

In regards to expressing anger towards her mother, Kate said she recognized that she [Kate] was “the good one” and that her mother needed her to “achieve great things to make up for my father.” Kate expressed feeling guilty if she were to make her mother upset, as she already “had to deal with my father,” and worried that her mother would have a “nervous breakdown” if Kate became angry with her or upset her.

I challenged Kate as to whether or not she was truly so “powerful” that her anger could in fact “ruin everything” and “destroy” her family. I pointed out that Kate's previous hallucination/delusion that there was a “conspiracy she was supposed to stop” was based on her belief that something on such a grand scale was the sole responsibility of a 16-year-old; and that this latter belief could be contributing to her hallucinations. I emphasized that Kate must continue to be more honest and express her feelings to diminish the voices. Kate seemed receptive to this, as she acknowledged the voices were most intense when she was stressed.

Kate was told she did not have schizophrenia, as evidenced by her insight into her illness and lack of other psychotic symptoms. The diagnoses indicated on Kate’s billing sheet also seemed to serve some significance. At the end of Kate’s appointments, Kate was given her billing sheet to promote autonomy and independence, and it was her responsibility to bring the billing sheet to the clinic check-out counter. As mentioned, Kate’s initial diagnoses were psychotic disorder NOS and generalized anxiety disorder. After we discussed that Kate did not

have schizophrenia and tapered her antipsychotic medication, she asked why she was “still psychotic” according to the billing sheet.

After three months of outpatient therapy, I reviewed my formulation with my supervisors and realized that one of the aims of Kate's hallucinations may have been to reinforce the sick role and be “taken care of.” It became apparent that to some degree, these appointments, her medications, and even her diagnoses were also reinforcing of the sick role. As much as possible, attempts were made to minimize this effect. Therefore, after three months of outpatient therapy, the diagnosis of psychotic disorder NOS was removed from the billing sheet and replaced with depressive disorder NOS.

### Therapy with Kate's Parents

Therapy with the parents initially occurred once a week without Kate’s presence and focused on psychoeducation regarding the nature of Kate’s hallucinations and that we did not believe Kate had schizophrenia. This included psychoeducation about schizophrenia and an explanation that other than hallucinations, Kate did not exhibit symptoms of psychosis. The parents were told there were likely many factors reinforcing the hallucinations, mainly unexpressed anger, guilt, anxiety, and frustration. The parents were told that as Kate became more comfortable talking about her feelings the hallucinations would dissipate.

The parent sessions were also aimed at helping the parents to avoid inadvertently reinforcing the hallucinations, and to realize that Kate did not require protection or “saving” from her own feelings. The parents became aware that any attempt on their part to convince Kate that her hallucinations were “not real” or to minimize her anxiety was met with argument and frustration from Kate, as she often tried to convince her parents that “they were real.”

I suggested to Kate’s parents that her requests for reassurance about her anxieties were actually unconscious ploys to engage them in argument to express Kate’s underlying frustration and anger.

A major theme of parent therapy was guiding the parents to treat Kate in a more age-appropriate manner, lessening Kate’s dependency on them, and to not “protect” or “save” Kate from situations which she could manage on her own. Examples included Kate’s father taking her home from school if Kate complained of a stomachache, or Kate’s mother needlessly reminding her to study for exams in school. Kate’s father, in particular, had difficulty in “allowing [Kate] to feel bad” during times she seemed genuinely frightened and anxious about her hallucinations and delusional beliefs.

In this light, I explained to the parents that it would be more developmentally appropriate and healthy for Kate to express anger and frustration at them for not being able to “protect” her from everything, rather than at their continued efforts at trying to do so. I discussed that in actuality, the parents had been making attempts to prevent Kate from becoming angry or upset, which had in fact been backfiring and also giving Kate a mixed message about the appropriateness of her own emotions. My advice was intended to help the parents understand

that Kate may have had a significant amount of unconscious anger that would be better expressed than left suppressed.

As an example, Kate seemed fearful of sleeping in her own room, as the hallucinations told her there was a man with a gun in her closet. Kate's mother, in attempting to reassure her, would go into her room and open the closet door to show Kate there was no man. However, I discussed with the mother how this could be inadvertently reinforcing Kate's anxiety and need for her mother to reassure and comfort her. Additionally, I pointed out that if her mother really knew there was nothing in the closet, she wouldn't have to open it to prove it. What the mother thought was reassuring was actually strengthening Kate's that she couldn't know for herself whether or not the content of the hallucination was true.

In fact, the parents' attempts to reassure Kate usually met with argument from Kate, rather than the appreciation that the parents were expecting. This sometimes led to arguments, as the parents became frustrated when Kate did not accept their efforts at comfort. Kate would then acknowledge frustration at her parents for "not being able to make her feel better" about her hallucinations. This further emphasized the conversion-like nature of these symptoms as expressing underlying anger and frustration. Kate was confronted with the fact that "only she could make herself feel better." Although this frustrated Kate, she acknowledged that this was true.

I gave support to the parents in tolerating Kate's frustration, which served as a model for Kate in tolerating her own anger. Kate herself was confronted on seeking help from her parents, yet always being frustrated with their advice, and that Kate must learn to help herself.

In time, therapy with the parents also focused on identification and expression of their own feelings, serving as a model on how to better understand Kate. Kate's mother, in sessions without the father present, was able to discuss some of the frustration she experienced during the father's active addiction process.

The father admitted to "never wanting Kate to feel bad" because of his guilt over his addiction and "not being there for her when she was younger." The father also acknowledged guilt for his wife having to "deal with him," and that he was "lucky she hasn't divorced [him]." We discussed the importance of acknowledging their own personal feelings (the mother's anger and the father's guilt) in the process of reducing Kate's hallucinations, as Kate was struggling with accepting these very same feelings within herself.

I emphasized to the parents that normal age-appropriate behavior for an adolescent occasionally involves anger directed towards the parents as a means of identity formation and for reducing feelings of dependency. As her father allowed Kate to become "more mature and responsible," he began to view Kate's potential anger towards him as a more appropriate and important developmental milestone for Kate and less specifically about what he felt were his own prior failings as a father. The father was given encouragement that allowing Kate to express her feelings now was the best way he could "make up" for what happened.

This culminated during an individual session that Kate was brought to by her father. The father drove Kate to the appointment and was prepared to drop her off, but they began talking at the beginning of the session and the conversation was allowed to continue. Kate was able to tell her father she was angry and resentful about his addiction history. Kate's father verbalized understanding with her and empathized with her wondering why she "wasn't enough" for him to quit his addiction and seek help earlier. He apologized. Kate admitted she "didn't know if she was ready to forgive him," to which her father said this was "OK." This turned out to be an important milestone in their relationship and in both of their abilities to express and tolerate each other's feelings.

After this exchange, Kate's father would often not come to the parent sessions, as he started finding several obligations, groups, volunteer opportunities, and job interviews to occupy his time, and he spent less time at home "not doing anything." I encouraged the father to engage in these activities, and interpreted these actions as the father relinquishing his attempts to undo his guilt by projecting them onto Kate, and instead focusing more on himself and providing more for his family in other ways.

After this point, parent sessions were frequently spent with Kate's mother alone. Over time, the mother's tendency to avoid acknowledging feelings was flushed out. Therapy with the mother usually involved allowing her to express repressed feelings about her husband, and that she had been angry enough to consider leaving him during his addiction. She also discussed the "need to take care of everyone" to avoid the sense of losing control, and her frustration of feeling like "the only adult in the house." We focused on the parallel process between herself and Kate—that is, the similarities between the mother's relationship to her husband and Kate's relationship to him—and the importance of acknowledging feelings. In time, Kate's mother was also able to begin a dialogue with Kate's father about their past and how his addiction affected her. They began to take walks in the evenings and spent more time together, and during this time the mother talked about what it was like for her while the father was in active addiction.

Kate's mother still, at times, struggled with "not doing for Kate what she could do for herself" and had difficulty resisting the temptation to interfere with Kate's homework, grades, and social life. Kate's mother, after acknowledging avoiding her own feelings and being responsible for others, was encouraged to find a hobby for herself that specifically was not "for" anybody other than herself. This would allow her to focus less on Kate's schoolwork and shifted her focus onto fulfilling her own emotional needs. Over time Kate's mother did show signs of "letting go" and exhibited mental preparation for Kate to go to an out-of-state college.

Towards the end of therapy, while the mother did not find a hobby, she became more involved with important projects at her work, sometimes demanding her time on the weekends. Kate's father had become more active in volunteer activities and was able to find employment. Kate no longer brought up hallucinations. Kate's mother also began to realize how she came across as critical towards Kate by "not having any faith in her." Her mother made attempts to be more supportive and less controlling of Kate, for example by not reminding her about school exams, homework/essays, or college applications. At the beginning of her senior year of high



school, Kate had switched friendship groups and became friends with two girls with whom she more closely identified, showing that Kate had truly begun to form her own identity.

### ***Medication Management***

It was fortunate that as the primary therapist I also served as Kate's psychiatrist. As mentioned, there was a significant amount of reinforcement that Kate received from being in the "sick role." At the same time that the diagnosis of psychotic disorder NOS was eliminated, a plan to taper off Kate's risperidone was discussed with Kate and her parents. Kate admitted to side effects of weight gain and sedation. Although there is some evidence that atypical antipsychotics may have been ameliorating some anxiety symptoms (Lorenz, Jackson, & Saintz, 2010), as the psychiatrist I felt it was best to taper off the risperidone due to the side effects and reinforcement of the "psychotic" sick role. The medication was slowly tapered and discontinued over several months as outlined Table 3. In response, there was no recurrence or exacerbation of Kate's auditory hallucinations, delusions, or other psychotic symptoms.

Although hallucinations and psychotic symptoms diminished, Kate experienced 2-3 legitimate panic attacks (shortness of breath, chest pain, sweating, shaking) while in church around the 14<sup>th</sup> month. As Kate was now 17.5 years old, we concluded that she might need a more "adult" dose of an SSRI as she continued to have anxiety symptoms. Kate and her parents were asked about the possibility of increasing Kate's citalopram for the purposes of anxiety, and all were in favor. Therefore, citalopram was increased to 15 mg for one month, and finally to 20 mg, which remains Kate's current dose.

### ***At the 15th Month***

During the 15<sup>th</sup> month of therapy, at which time therapy had already been scaled back to every other week, a significant event in the family happened: Kate's father suffered a relapse of his addiction. Kate's father shared this with the therapist and Kate's mother initially, but the parents were reluctant to tell Kate, fearful of how she would handle it. I met with the father initially and encouraged him to tell Kate during the next session. As Kate previously expressed fear that discussing her feelings would upset her father and lead to a relapse, I felt it was important to aggressively address this distortion and emphasize that Kate was not to blame.

Kate and her father came to the next session, and her father told Kate he had relapsed and had been misusing his replacement opiate medication. Kate's facial expression was that of horror and shock, not anger. Her father apologized, and acknowledged she was likely angry, but that he had told his Addiction Medicine specialist, was going to meetings, and would "get back on track." Kate remained silent. When the therapist asked Kate what she was thinking, she said "I yelled at [him]. We had an argument last week, and I yelled at him."

As predicted, Kate seemed to be taking the blame for her father's relapse. Her father, to his credit, told Kate that it was "his fault," not hers. To further this point, the father acknowledged that his relapse had started before this argument with Kate had occurred, therefore it could not be her fault. Kate seemed to take this at face value.

I then decided to see Kate weekly for the time being to evaluate her adjustment to this revelation. For the first few weeks, Kate demonstrated observable and verbal anger at her father, but no exacerbation of psychotic symptoms. She also expressed anxiety about whether or not she could trust her father after this latest relapse. When the therapist asked her to be honest and trust herself, Kate said,

I can't trust myself either, I believed hallucinations that aren't real, I can't trust me either!

Given Kate's symptom history, this seemed like a reasonable fear to have, and was more representative of a normative age-appropriate separation-individuation process of learning how to trust herself over her parents in certain situations. Kate was challenged that she would have to start taking some chances and trusting herself, even if her decision turned out wrong.

The next week, Kate cancelled her appointment. In conversation with Kate's parents, Kate had cancelled the appointment on her own because she was "doing well with everything and had a lot of homework that night." The following week, Kate confronted the therapist with the previous challenge of "making her own decisions," and she felt it was more important to finish her homework that night. After this, appointments were again reduced to every other week. Kate's mother was also better able to express her own anger, and told the father if he did not make steps to maintain sobriety, then she would leave the house.

### ***At the 18th Month***

At the 18<sup>th</sup> month, Kate asked the therapist to reduce appointments to once a month. In conversing with her parents, they were in agreement with this decision. In particular, Kate's mother said that Kate had mentioned this to them several times, and that Kate "has to think about the heavy stuff" during her appointments, and appeared to be doing well at home. The mother also intimated that the appointments were now reinforcing to Kate that she was "sick," which made Kate "more depressed." This was considered a major breakthrough in treatment, as Kate appeared ready and willing to give up the need for the sick role. In months 19 and 20, Kate ceased endorsing any depressive symptoms, and thus this diagnosis was eliminated; generalized anxiety disorder remained.

### ***The Final Nine Months (Kate Turns 18)***

At the 21<sup>st</sup> month, Kate was turning 18 years old. This transition was discussed in great detail with Kate and her parents, as she would legally be an adult. Kate gave permission to remain in touch with her parents regarding medication management, but the overall plan was that Kate was going to be more responsible for her own mental healthcare. Kate's appointment in month 21 was her first appointment as a legal adult. Kate wished to continue Citalopram 20mg for anxiety, and wanted to continue appointments on a once-monthly basis. She specifically declined having her parents participate in parent therapy sessions, saying "I can do this on my own." Kate was encouraged to involve her parents at her own discretion.

During month 22, Kate came to an appointment by herself. She had gotten her driver's license and could now take herself to her own appointments. She was in the process of trying to recruit scholarships for college and had been involved in social activities with her friends. She described one "episode" two weeks prior during which she became paranoid that her father was "trying to kill her." However, she reported that she "talked to her mother about it," and realized that immediately before having these thoughts, she was at a friend's house and was being picked up by her father. She remembered feeling angry and embarrassed by her father and wished she could stay at her friend's house longer. Kate was informed about the concept of projection, and how she perceived her father was angry at her by "wanting to kill her," when in fact she was angry at him, and she admitted the thought occurred to her that she wanted her father to "disappear." She continued to endorse feeling guilty about her emotions towards her father. As appointments were now once a month, Kate was offered the opportunity to return sooner for another appointment due to this recent "relapse" in symptoms, but Kate declined.

During the Month 23 appointment, Kate reported an increase in anxiety, worsening mood, tearfulness, and hallucinations that were "more intense," resulting in difficulty sleeping and diminished appetite. She endorsed the recurrence of "hallucinations" of a violent nature, although she said these may have been her own imagination. The example she provided was she would be petting the pet cat, and the thought of killing the cat would "pop into her head." She made no actual effort to harm the cat.

Not coincidentally, Kate described that since the last visit, she was making a greater effort to "get along" with her father as she had felt guilty about "wanting him to disappear." I explained to Kate that the violent "hallucinations" could be thought of as suppressed anger while Kate gave a greater effort to improve her relationship with her father; Kate admitted to feeling "more confused about how she is supposed to feel." There were no noted safety concerns. Kate was again offered the opportunity to come to more frequent appointments, which she initially declined. This was identified as a method by which Kate may have been re-enacting a dependency scenario with the therapist, which, if it played out similarly with her parents, she would reject help and choose to "solve her own problems." Being aware of this possible scenario, Kate was offered a low dose of quetiapine (25mg) due to her recent worsening symptoms, including sleep and appetite. Kate consented to the medication, but said she wanted to discuss it with her parents before she started it. Due to the possibility of a new medication, she was asked to return for an appointment in two weeks, with which she was in agreement. Depressive Disorder NOS was re-added to her active diagnoses.

At the next appointment two weeks later, Kate came accompanied by her father and brought her father into the room. The parents had read about quetiapine and had decided to not fill the prescription, and rather decided to "just let her be." The father left and the majority of the appointment was spent with Kate. She was confronted with her worsening symptoms, which were connected to the fact that trying to get along better with her father was not being honest with herself about her true feelings. Kate said, "I think my thoughts are so turned against myself, I can't focus on him." She continued to endorse feeling invalidated, but then was confronted with her pattern of rejecting help and how this is self-invalidating. She agreed to another appointment in two weeks.

During month 24, Kate reported feeling less depressed and tearful and denied any hallucinations, and had actually been expressing more anger at her parents. We again discussed the correlation between her underlying anger and her hallucinations, and Kate admitted to still feeling guilty “most of the time” about her feelings.

She came back two weeks later, and again denied hallucinations, but did report feeling “depressed.” Kate was able to say the feelings of sadness she experienced stemmed from wanting more attention from her parents, and her perception was that “they only pay attention if something is wrong.” Kate acknowledged that wanting attention from her parents may play a role in producing symptoms. Kate again agreed to come back in two weeks.

During the next appointment, Kate reported having stomach upset with nausea and vomiting between appointments. Kate discussed the two responses she got from her parents, her father who was "enabling" and encouraged her to stay home from school, and her mother who seemed to "ignore" her and encouraged her to "toughen up." Kate was encouraged to find her own “middle” and trust herself. As an example, Kate reported having wanted to take a nap before during her homework. Her father told her to nap “as long as she needed and not worry about the homework if she wasn’t feeling well,” while her mother told her there “was no time for napping” and her homework needed completion. Kate was challenged on finding her own “middle,” and she reported she would nap for one hour, then finish her homework. Kate was encouraged on the ability to make her own decisions. At this time, Kate said she had been doing well and asked to return to monthly appointments.

During Month 26, Kate came unaccompanied to her monthly appointment. She reported obtaining enough scholarship money to attend the out-of-state school to which she had been accepted. We began planning for termination of therapy services, with her last appointment being roughly two weeks before she left for college, with an invitation to return for appointments when she was home on break.

The following month, Kate reported getting a summer job filing medical records. She continued to report infrequent hallucinations, hearing voices “not that often” so she “just ignored them.” She also described two near-panic attacks that she was able to abort using self-calming techniques.

At her month 28 appointment, which was one month before her expected termination date, Kate endorsed feeling more anxious and dysphoric with a return of hallucinations, visualizing “an 18<sup>th</sup>-century French revolutionary soldier pointing a gun at me.” When asked about recent triggering events, Kate described that her mother was being overly critical and pessimistic towards Kate in the months leading up to her departure for college. Kate acknowledged that as she had limited time with her parents left before leaving for college, she was trying to “keep the peace” and not cause conflict.

Kate was confronted with building up resentment as she tended to other people’s feelings and not her own, and she was encouraged to vent more about her frustrations. Kate was also given the feedback that she appeared less stressed when she appropriately expressed anger.

Kate's affirmative response was, "Well, now that you mention it, yes." Kate was offered and agreed to return for weekly appointments for the next month, focusing on adequate expression of feelings, before she left for college.

The next week, Kate described a frustrating situation that occurred with her mother that week. Kate had gone out to check the mail, and had tripped trying to avoid stepping in dog excrement that was in the road. On her return to the house with a scraped knee, her mother asked what happened. Kate described avoiding the dog excrement, and her mother began asking for details specifically about the dog excrement; Kate's explanation was they had a dog and mother was "trying to find out if it was our dog's excrement." Kate explained that she "didn't look that carefully" and had merely tried to avoid stepping in it. Her mother's response was, "How are you going to get through college when you can't even pay attention to such important details?"

I commented that Kate's facial expression implied her thoughts that her mother was making "too big a deal of something that was literally and figuratively dog excrement." Kate laughed at this. She also reported that her mother had been saying she expects Kate to "flunk out after a year" and return home. Kate acknowledged this was hurtful, but again continued to voluntarily spare her mother's feelings out of fear Kate would "lose control" if she got angry. Kate was encouraged to be more vocal about her feelings, citing the ramifications to her own mental health if she did not. I offered Kate the opportunity to invite her mother to a parents session to discuss how these statements affect Kate, but Kate declined this.

The next week, Kate came to the appointment seemingly excited and pronounced that she "got in an argument." Kate described an argument occurring in a local retail store as she and her mother tried to pick out a towel rack for her dorm room, and apparently her mother had disapproved of the towel rack Kate picked out for herself. Kate reportedly told her mother, "It's just a towel rack! Do you really not trust me with a towel rack?!" Mother tried to defend her choice of towel rack, and Kate continued to state, "It's a towel rack!" until her mother purchased Kate's desired choice.

Kate's facial expression while telling this story was of pride and accomplishment. Kate also described having dinner at a friend's house and being "amazed" that their family could have minor arguments and vocalize frustrations and then "be totally fine." When asked how her family was different, Kate said,

Nobody says anything. Everyone holds everything in, doesn't say anything, doesn't let each other be mad, but then acts passive aggressively. It's really annoying, and I wish we could just say stuff.

We discussed the implications for how her relationship with parents might be different while she is out-of-state for college, and that Kate could choose to adjust how she relates to her parents, perhaps feeling more capable of expressing frustration towards her parents with a greater degree of geographical separation between them. Kate said she was doing well, and wanted to cancel the appointment the following week to focus on packing for college; she would have one more scheduled appointment.



At her last appointment in Month 29, Kate was able to describe an argument she had with her mother during which she seemed to express herself adequately. Kate noted it did not seem to affect her mother or alter her course in the argument, but Kate "at least felt better." Kate felt "proud of herself" for standing up to her mother, but felt "disheartened" she was not able to alter her mother's point of view. This was reframed to Kate as encouragement that Kate's anger was not as "dangerous" as Kate had previously feared, and that her mother did not have a "nervous breakdown" because Kate had an argument with her. Kate said this was "true" and seemed adequately satisfied.

Kate also discussed concerns that her relationship with her parents would affect her ability to form sustaining relationships with others, and that she probably had "trust issues." I acknowledged that relationships with parents tend to be models for future relationships, but that she had a good awareness of this, and could always pursue counseling while at college if she felt it necessary. In this context, I talked with Kate about how she might discuss her symptoms were she to seek psychiatric care elsewhere, such as at college. There was concern she may be misdiagnosed with schizophrenia. Kate said she would describe her symptoms as anxiety or panic attacks, but would also discuss the hallucinations if these symptoms worsened.

Kate was given a three-month supply of her citalopram 20mg (which her insurance allowed for) with the expectation she would continue to get the medication from the student clinic at her college. Kate was also told she could return to see me if she was home from college on break, to which she replied, "Oh, I will." Kate thanked me for helping her, and I encouraged Kate to continue helping herself.

## **7. THERAPY MONITORING AND USE OF FEEDBACK INFORMATION**

As the therapist I (the first author, MAS) started seeing Kate and her parents during the first year of my Child and Adolescent Psychiatry Fellowship training. The 29 months of therapy detailed above began with the final three months of the first year of fellowship. It then encompassed the full second year of fellowship, and the first 14 months of my position as a faculty member. My supervision occurred on a weekly basis for one hour with a senior child psychiatry faculty member, until I became a faculty member. Using both a CBT and a psychodynamic approach, analysis of the sessions, self-reflections, and weekly supervision were all aimed at designing sessions towards two goals. These included: (a) decreasing Kate's discussion with her parents about hallucinations and delusions so as to reduce the reinforcement of these symptoms; and (b) focusing on and reinforcing more age-appropriate behaviors for Kate, including the encouragement of more age-appropriate conflicts with parents, as the avoidance of conflict was considered fuel for the pseudohallucinations.

I was supervised by the second author (RB) for the first six months of treatment. Due to training schedules, the trainees were required to switch supervisors at this time. The new supervisor was the third author (MLN). In this supervision we focused mostly on continued evaluation of the patient's symptoms to determine consistency with the theoretical formulation that Kate had pseudohallucinations, that is, that her symptoms were not truly psychotic, but were

representative of a conversion-disorder presenting as psychiatric symptoms rather than neurological symptoms. Supervision also focused on continuing to rule out schizophrenia or another such psychotic disorder that would necessitate continued treatment with an antipsychotic. In addition feedback from peers and other professionals was sought through discussion during Case Conferences with other Child Psychiatry fellows and faculty from the Child Psychiatry and Child Clinical Psychology Departments.

## **8. CONCLUDING EVALUATION OF THE THERAPY'S PROCESS AND OUTCOME**

### *Qualitative Progress*

Progress in treatment was determined by the reduction in time during individual and parents sessions focusing on Kate's hallucinations and delusions, and by Kate being able to acknowledge that her hallucinations were not real. Quantitative data on the amount of time spent discussing hallucinations, or a hallucination log, was not kept. The main reason for this was to keep within the framework on not providing reinforcement for the hallucinations and thus the "sick role." Being that Kate had already been keeping a journal of her experiences she shared with her parents, it was felt that focusing more on the frequency and intensity of the hallucinations would exacerbate, not ameliorate the symptoms.

During her last appointment, Kate acknowledged that she still occasionally experienced hallucinations, but that she "just ignored them." When asked about the content of auditory hallucinations, Kate said, "I really can't hear exactly what they are saying, I tune them out." She did not discuss them with her parents or her friends, and the experiences did not seem to be negatively affecting her. There was a possibility that the distress that was previously being communicated by hallucinations was being channeled through other psychosomatic means, as Kate had become more somatic and experiencing headaches and stomachaches. It is possible that her conversion reaction has manifested in a more socially acceptable physical symptom.

As she also continued to have episodes of excessive worrying accompanied by fatigue, irritability, and muscle tension, Kate retained the diagnosis of Generalized Anxiety Disorder. Thus, although the therapy helped to channel Kate's anxiety into more acceptable forms, the intensity of her anxiety remained in the clinical range. As discussed, sessions with the parents were for all intents and purposes eliminated after Kate turned 18 years old. It is possible that continuing to work with the parents could have helped decrease Kate's anxiety even further. Another reason for her continued anxiety may have been Kate's unconscious motivation to remain in the sick role.

### *Change on Quantitative Measures*

Kate also completed quantitative questionnaires (see Table 4). As described above, we hypothesized that the function of the psychotic-like symptoms was to help Kate avoid the conflict created by her internal feeling states of anger, anxiety, and sadness. If this were true and

therapy was successful, as the pseudohallucinations and delusional symptoms diminished, Kate would have less conflict about her feelings and would be more comfortable expressing them.

During her initial hospitalization, Kate completed the Beck Depression Inventory-II (BDI-II; Beck, Brown, & Steer, 1996) and the Screen for Child Anxiety Related Emotional Disorders (SCARED; Birmaher et al., 1997) to assess her acknowledgement of sadness and anxiety, respectively. These rating scales were repeated during outpatient therapy, and we also utilized the Clinical Anger Scale (CAS; Snell, Jr. et al., 1995) to assess her acknowledgement of anger at 1 month and and 12 months.. Results on these measures are shown in Table 3.

At the beginning of her hospitalization Kate's scores on the BDI-II and SCARED were the highest, at 29 (moderate) and 51 (well above the clinical cut-off), respectively. Her scores then decreased dramatically TO 6 and 22, respectively, by the end of her hospitalization, a span of only four days. A possible explanation for this phenomenon is an increase in anxiety and depression due to the fact of being hospitalized, and a decrease that may have been due to Kate's efforts at being discharged from the hospital.

After one month of outpatient treatment, Kate's hallucinations were still prominent. Her BDI had gone up to 12 (mild), her SCARED was down some to 17 (below the clinical cut-off), and her CAS-was 17-mild.

After 12 total months of treatment, and diminished hallucinations, her BDI increased to 19 (borderline), her SCARED increased to 48 (well above the clinical cut-off), and her CAS . increased to 26 (moderate). The increase of all her scores at the same time that she showed improvement in her psychotic symptoms was consistent with our hypothesis that the function of the psychotic-like symptoms was to avoid feelings of anger, anxiety, and sadness, with the elevated scores indicating Kate's improved ability to be aware of, accept, identify and express negative feeling states

At 18 months, her BDI decreased to 14 (mild) and her SCARED decreased to 36 (still above the clinical cut-off). (The CAS was not repeated due to Kate's limited availability.) The reduced scores were consistent with clinical judgment about Kate's levels of these emotional states. This is somewhat mirrored by subsequent changes in her psychiatric diagnoses. Depressive Disorder NOS dipped beneath the clinical level at month 18, and the diagnosis was removed during months 19-22. As discussed above, the diagnosis of GAD remained throughout treatment, consistent with her score on the SCARED remaining elevated above the clinical level.

### *Discussion*

Kate, a 16-year-old adolescent, was initially referred to an inpatient psychiatric hospital after reporting to her pediatrician the presence of auditory hallucinations with what was initially presumed to be persecutory delusions. To target these serious symptoms, she was placed on an antipsychotic medication. Indeed, her reported hallucinations and bizarre "delusional" beliefs merited consideration for a diagnosis of brief psychotic disorder or schizophreniform disorder. However, she lacked other core symptoms of a psychotic syndrome, namely lack of insight or

thought disorder. Subsequent longitudinal observation as an outpatient and careful consideration of her overall symptom presentation and the family dynamics seemed to point to a diagnosis of “pseudohallucinations” as conversion symptoms as well as several plausible explanations for their emergence. The antipsychotic that was initially started was tapered and discontinued after nine months (see Table 2), with psychotic symptoms diminishing and remaining in remission. The individual and family factors contributing to pseudohallucinations were addressed through intense weekly individual and parents therapy over a 12-month period, with therapy then being tapered off over a period of another 6 months, down to regularly scheduled monthly individual appointments (see Table 1).

Still to consider is what predisposed Kate to developing the auditory hallucinations and presumed persecutory delusions. There have been several studies evaluating non-psychotic hallucinations in children and adolescents. One of the earliest is Bender and Lipkowitz’s “Hallucinations in Children” (1940). They noted that children who developed non-psychotic hallucinations tended to be isolated from their parents, either physically or emotionally with “either actual or prolonged disapproval of conduct” (1940). In these cases, Bender and Lipkowitz contended that hallucinations in these children express repressed experiences, wishes, and conflicts that could be expressed in “the usual free conscious outlets, and that, if they are handled carefully, they can be used to help the child solve his conflicts and contribute to better social adjustments” (1940). The most common conflict in these cases tended to be ambivalent attitudes toward their parents and feelings of guilt in regard to their own feelings. As previously discussed, Kate fit this mold. She had repressed anger towards each of her parents, but felt guilty and ashamed of such feelings.

Another aspect to consider is that Kate appeared to develop delusional thinking in response to her hallucinations. There appears to be risk factors for this symptom development as well. Escher et al. (2002) evaluated 80 children and adolescents who reported hallucinations and did not seem to be psychotic. Of these, 16% appeared to develop secondary delusions. Risk factors associated with the development of delusional thinking included passive illness behavior (not proactively seeking appropriate treatment), baseline anxiety or depression, baseline stressful life events, and the perceived influence of the voices on the child’s emotions and behavior. Kate had experienced previous stressful life events (her father’s alcoholism and treatment), and exhibited passive illness behavior during the early course of therapy. As previously mentioned, most of Kate’s hallucinations took an angry or hostile tone, which was likely a projection of Kate’s repressed anger that she found consciously unacceptable. As Escher notes, the presence of unwanted or unacceptable emotions may make hallucinatory experiences seem more significant or more intrusive, prompting the individual to search for explanations (2002). In turn, this may reflect an underlying subjective perception of uncontrollability of the experience, which could lead to delusion formation. Escher also notes that many such cases were brought about by a triggering event (2002), which was never elucidated in Kate’s case.

As mentioned above, at the end of therapy Kate rarely spoke of her hallucinations, and when asked, said that she “just ignores it.” Kate has insight that her hallucinations and delusions are not real. She was overall, doing very well, about to start college out-of-state on scholarship and maintaining appropriate friendships. As can be surmised, she continues to struggle with her

relationship with her parents. In discussing the possible reasons for Kate's success, the family's insurance allowed for both medication management and psychotherapy with a physician provider, which is not always the case. It is possible that split treatment between a physician and another therapist may have driven a less-informed medical doctor to prescribe higher doses of medication or continue to prescribe antipsychotics. The family's work schedule was flexible enough to allow for twice weekly appointments for a year, as the parents would bring Kate once a week appointments and the parents would also come separately once a week. The parents were generally very willing to participate in therapy and made significant effort to be involved. As far as adolescents go, Kate was highly invested in treatment and improvement, and also committed to taking herself to appointments when she was able to.

Kate was cognitively intelligent, and could grasp concepts of multiple psychotherapy modalities. As discussed, a framework based on the weaving of psychodynamic and cognitive-behavioral strategies were used throughout treatment; CBT for Kate and her parents was used to more immediately minimize symptoms of anxiety, panic, and hallucinations, whereas a psychodynamic approach was used to explore repressed unconscious material that fueled the development of such symptoms. Kate's parents represented an interesting dynamic, in which father was more in tune with emotional processes (and in times seemed to be overwhelmed by his own) but perhaps missed on several CBT concepts; he was able to acknowledge Kate's anger and frustration, but could not quite see how taking her home from school was behaviorally reinforcing Kate's sick role. Kate's mother responded more to cognitive behavioral strategies, and grasped an understanding of not behaviorally reinforcing Kate's sick role or dependency, but mother herself struggled to identify and express her own feelings and had difficulty emotionally connecting with Kate. Kate herself commented on this dynamic as being a source of stress in relating to her own emotions, as she perceived mixed messages from her parents about whether to "wallow in pity" like her father or "suck it up and ignore it" like her mother. It is perhaps for this reason why the combination treatment of CBT and psychodynamic therapy was successful; Kate likely saw in the physician/therapist a balance between emotional exploration and validation (psychodynamic/father) and behavioral activation and use of coping skills (CBT/mother). This was discussed with Kate, who was encouraged to find a middle ground within her.

Unfortunately, success cases like Kate's are likely increasingly rare. Not coincidentally, most of the research utilized in dissecting this case and formulating a treatment plan was published in the 1980s or earlier. This trend of increasingly "superficial" discussion of symptomology is likely partially fostered by the growing trend of managed care, directing psychiatrists and patients more towards medication management treatment, with less psychotherapy (Sudak & Goldberg, 2012). Additionally, Kate and her parents deserve a significant amount of credit for committing to such an intense therapeutic treatment regimen. As Kate could not drive at the start of therapy, this involved the parents driving to appointments twice a week (one for them and one for Kate) for practically an entire year. They rarely cancelled sessions and were flexible with times.

There is concern that psychiatrists are not probing as "deeply" as they used to, as treatment options are becoming less varied and more confined to a selection of antidepressants



and antipsychotics. However, this case exemplifies the importance of careful exploration of symptoms, associated factors, and family dynamics that could change the course of diagnosis, prognosis, and treatment, along with the associated stigma of having hallucinations. This patient nearly received a diagnosis of schizophrenia, the prognosis of which is graver, requiring treatment with antipsychotics with a more deleterious side-effect profile. More research is needed regarding the current understanding of "pseudohallucinations," whether or not these symptoms are being adequately discriminated from true psychotic syndromes, and whether appropriate treatment is being selected.

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**Table 1. Kate's Diagnoses, Months 1-29**

DIAGNOSIS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
<i>Psychosis NOS</i>	X	X	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>GAD</i>	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<i>Depressive Disorder NOS</i>				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	-	-	X	X	X	X	X	X	X

**Table 2. Course and Frequency of Therapy, Months 1-29**

# OF MONTHLY SESSIONS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
<i>Kate</i>	4	4	4	4	4	4	4	4	4	2	2	2	2	2	4	2	2	1	1	1	1	1	2	2	1	1	1	3	1
<i>Parents</i>	4	4	4	4	4	4	4	4	4	2	2	4	4	2	2	2	1	1	1	1	0	0	1	0	0	0	0	0	0

**Table 3: Kate's Psychotropic Medications, from Months 1-29**

MEDICATION DOSE (MG)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	23	24	25	26	27	28	29	
Citalopram	10	10	10	10	10	10	10	10	10	10	10	10	10	15	20	20	20	20	20	20	20	20	20
Risperidone	1	1	1	0.75	0.5	0.5	0.25	0.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Quetiapine																25 (not filled)							

**Table 4. Kate's Performance on Feeling State Rating Scales\***

RATING SCALE	Time 1 (Start of hospitalization)	Time 2 (End of hospitalization)	Time 3 (1 month outpatient)	Time 4 (12 months outpatient)	Time 5 (18 months outpatient)
BDI-II (Depression)	29	6	12	19	14
SCARED (Anxiety)	51	22	17	48	36
CAS (Anger)	-	-	17	26	-

**\*Scale ranges**

BDI-II: < 10 = nonsignificant; 11-16= mild; 17-20 = borderline; 21-30 = moderate; 31-40 = severe; > 40 = extreme

SCARED: Clinical cut-off score of 25, so that scores  $\geq 25$  may indicate presence of Anxiety Disorder; and scores > 30 are more specifically indicative of Anxiety Disorder.

CAS: < 13 = minimal; 14-19 = mild; 20-28 = moderate; >29 = severe