Prevalence of Attenuated Psychotic Symptoms and Their Relationship With *DSM-IV* Diagnoses in a General Psychiatric Outpatient Clinic

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ABSTRACT

Objective: Attenuated psychosis syndrome (APS) is being proposed for inclusion in Section III of *DSM-5* for those impaired by subthreshold psychotic symptoms that are not better accounted for by another diagnosis and not meeting criteria for a psychotic disorder. The rationale is to identify patients who are at high risk for transition to a psychotic disorder in the near future. However, the potential impact of using this new diagnosis in routine clinical practice settings has not been carefully examined.

Method: As part of the Rhode Island Methods to Improve Diagnostic Assessment and Services (MIDAS) project, a treatment-seeking psychiatric outpatient sample (n = 1,257) recruited from June 1997 to June 2002 completed a self-report measure of psychiatric symptoms and afterward were administered structured clinical interviews. For the current post hoc study, we investigated the prevalence rate of endorsing attenuated psychotic experiences to identify patients who could potentially meet criteria for APS.

Results: After the exclusion of those with lifetime *DSM-IV* psychotic disorders, psychotic experiences remained highly prevalent in the sample (28% reported at least 1 psychotic experience during the past 2 weeks), and rates were similar across all major *DSM-IV* diagnostic categories. Only 1 patient (0.08%) reported psychotic experiences but did not meet criteria for another current *DSM* disorder; however, this individual endorsed other nonpsychotic symptoms of greater severity. Psychotic experience endorsement was positively correlated with nearly all other nonpsychotic symptom domains, and multivariate analysis showed that general clinical severity predicted endorsement of psychotic experiences (*P* values < .001).

Conclusions: We could not identify any patients who clearly met criteria for APS alone in our sample. Psychotic experiences appear to be common in outpatients and represent nonspecific indicators of psychopathology. Diagnosing APS in the community could result in high rates of false-positives or high rates of APS "comorbidity" with other nonpsychotic disorders, leading to the increased use of antipsychotic medications without clear need. Therefore, the clinical utility of adding APS to the diagnostic system remains highly questionable.

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The *DSM-5* Psychotic Disorders Work Group has proposed a new diagnosis named *attenuated psychosis syndrome* (APS) to describe individuals who are impaired by attenuated psychotic experiences but who do not meet criteria for a current or past psychotic disorder.[1–3] In addition, these individuals must be distressed, impaired, or treatment-seeking, and the symptoms cannot be better explained by another current disorder. The original rationale for the inclusion of APS was the earlier identification of patients who are at risk for transition to a full psychotic disorder in the near future. However, the proposed APS diagnosis has deeply divided clinicians and researchers.[2–6] Proponents argue that the diagnosis would promote further research on psychosis proneness, research shows that psychotic experiences predict future transition to psychosis, and patients are distressed by symptoms and thus require treatment.[7] However, opponents have countered that transition rates are relatively low even in higher-risk samples (10%–30%), no proven efficacious or safe treatments exist, and the diagnosis would produce unnecessary stigma.[7]

Woods et al[8] set out to validate an earlier version of the prodromal criteria for first-episode psychosis. They found that prodromal patients could be differentiated from normal controls and other clinical groups (eg, help-seeking controls) on a number of clinical variables and that 40% converted to a psychotic illness within 2.5-year follow-up. However, prodromal patients had high rates of comorbidity with other common disorders (eg, 69% had a mood/anxiety diagnosis). Compared with the findings of Woods et al,[8] other studies have reported more modest estimates of transition to psychosis ranging from 10%–20% in other specialty settings.[9] Furthermore, the proposed *DSM-5* criteria for APS differ from those used in forerunner studies, including restriction to 3 types of psychotic symptoms with intact reality testing and omission of criteria for schizotypal personality disorder or a family history of psychosis with functional deterioration.[3] Also, research increasingly has found that psychotic experiences in general are relatively common in clinical and nonclinical samples.[10–13] Thus, critics have noted that there is little evidence to date to establish APS as a separate illness entity or even a lesser form of psychosis in most cases.[3]

Woods et al[2] recently noted that there is no research to date addressing whether current *DSM-IV* diagnoses adequately capture those who would meet criteria for APS. Previous research on APS has mainly been collected at specialty, high-risk psychosis clinics and thus may overestimate the syndrome's prevalence and clinical utility.[9] In initial *DSM-5* field trial testing, the reliability of the APS criteria could not be adequately established, and thus the diagnosis is now being considered for inclusion in Section III, denoting the need for further study.[14] At this point, critical data are lacking to specify whether or not the APS diagnosis describes a unique patient population that would fail to be captured by the current

Clinical Points

- Attenuated psychotic experiences, the key feature of the newly proposed attenuated psychosis syndrome (APS) diagnosis, were present in 28% of patients without a formal psychotic disorder and similarly prevalent across major diagnostic categories, including mood and anxiety disorders.
- The APS criteria fail to capture a unique clinical population in routine practice settings, which could lead to a large number of patients receiving a new diagnosis of a comorbid psychotic-spectrum disorder.
- Implementing the APS diagnosis in clinical practice could lead to an increased used of treatments (eg, antipsychotic medications) that do not have favorable risk-benefit profiles for these patients.

DSM-IV system.[2] It is also critical to understand how the APS criteria overlap with other current psychiatric diagnoses. There is little research on this topic to date, especially in routine clinical practice settings. Therefore, the aims of the current study from the Rhode Island Methods to Improve Diagnostic Assessment and Services (MIDAS)[15] project were (1) to determine the prevalence of psychotic experiences in general psychiatric outpatients, (2) to understand the relationship between psychotic experiences and other symptom domains to determine their specificity, and (3) to examine the prevalence and clinical characteristics of those who could potentially meet criteria for APS.

METHOD

Sample

Participants included 1,257 adults presenting for treatment at the outpatient practice of the Rhode Island Hospital Department of Psychiatry. The sample was recruited from June 1997 to June 2002 and consisted of 781 women (61%) and 476 men (39%), with a mean age of 37.2 years (SD = 12.3). The majority of the sample was white (n = 1,090; 86.7%), followed by black (n = 54; 4.3%), Portuguese (n = 49; 3.9%), Hispanic (n = 39; 3.1%), other or mixed ethnicities (n = 14; 1.1%), and Asian (n = 11; 0.9%). A total of 46% (n = 584) of the patients were married or cohabitating, and 67% (n = 838) had a high school degree/equivalency or greater education. The most frequently occurring current Axis I *DSM-IV* diagnoses in the sample were depressive disorders (n = 835; 66.4%) and anxiety disorders (n = 831; 66.1%).

Measures

The Psychiatric Diagnostic Screening Questionnaire (PDSQ)[16] is a 125-item self-report measure used to screen for psychiatric diagnoses. Respondents dichotomously rate symptoms (presence = "yes" or absence = "no") across 15 symptom domains, including major depression, dysthymic disorder, posttraumatic stress, bulimia nervosa, obsessive compulsive, panic, mania, psychosis, agoraphobia, social phobia, alcohol abuse/dependence, drug abuse/dependence, generalized anxiety, somatoform, and hypochondriasis. The PDSQ shows evidence of good internal consistency, test-retest reliability, and convergent and discriminant validity, as well as adequate sensitivity and specificity.[17–21] Gibbons et al[22] reported that the PDSQ 15 symptom categories showed validity by identifying distinct categories of illness. The psychosis subscale was used in the current study to identify patients who reported psychotic experiences over the past 2 weeks based on 6 items: hallucinations (1 item), general delusions (1 item), paranoia (2 items), control by an external force (1 item), and special powers or abilities (1 item). The internal consistency of the psychosis subscale in the current study was acceptable (Cronbach $\alpha = 0.65$).

The Structured Clinical Interview for *DSM-IV* (SCID-I)[23] and Structured Interview for *DSM-IV* Personality (SIDP-IV)[24] were used to diagnose current *DSM-IV* Axis I and II disorders, respectively. However, the full SCID-I and the SIDP-IV borderline and antisocial criteria only were administered to the first 100 patients. The remaining patients were administered the full SCID-I and SIDP-IV assessments. Additional items were included from the Schedule for Affective Disorders and Schizophrenia.[25] Social functioning (past month) was rated from 1 (superior) to 7 (grossly inadequate). Suicidal ideation (past 2 weeks) was rated from 1 (not at all) to 7 (very extreme). Time out of work (past 5 years) was rated from 1 (virtually no time out of work) to 9 (worked none or practically none). Patients not expected to work (eg, students, those disabled for medical reasons) were excluded from this analysis. Also, additional items were assessed as part of the SCID-I, including current Global Assessment of Functioning (GAF) based on the diagnostic interviews, number of past psychiatric hospitalizations, and number of past suicide attempts.

Family history of psychiatric diagnoses was based on patient interviews using the Family History Research Diagnostic Criteria.[26] Diagnoses assessed included psychotic disorders for all of the first-degree relatives of patients in the study.

Procedure

All patients provided informed consent based on procedures approved by the local institutional review board. These data were collected as part of the MIDAS project, which represents an integration of research methods into a community-based outpatient practice affiliated with an academic university.[15] Individuals presenting for an intake appointment were asked to participate in a diagnostic evaluation before meeting with their treating clinician. The practice treats individuals with medical insurance on a fee-for-service basis (including Medicare but not Medicaid). Not all patients presenting to the practice participated in the study, due to patient preference for a less time-consuming standard clinical interview or lack of available diagnosticians. Patients also were excluded from participation due

to (1) being under the age of 18 years or (2) having a diagnosis of mental retardation or other cognitive disorder (eg, dementia) because another aim of the project is to study the reliability and validity of self-administered questionnaires. However, no differences on demographic characteristics or self-report symptom questionnaires were observed among patients who did and did not participate in the diagnostic evaluation.[16,27]

Patients first completed the self-report PDSQ to screen for psychotic experiences and then were interviewed using the SCID-I and SIDP-IV to identify the full range of *DSM-IV* diagnoses, including psychotic disorders. Diagnosticians were trained for a period of 3 months, which included receiving training from the principal investigator (M.Z.), observing at least 5 interviews, and administering 15 to 20 interviews while being observed and supervised. Diagnosticians were then required to demonstrate exact or near-exact reliability with a senior diagnostician for 5 consecutive interviews. Diagnosticians received ongoing supervision. Based on joint interviews (n = 65) conducted over the course of the entire project, interrater reliabilities ranged from $\kappa = 0.64$ for substance use disorders to $\kappa = 1.0$ for obsessive compulsive and somatoform disorders. Reliability for any personality disorder from 47 joint interviews was $\kappa = 0.90$.

We were able to assess most of the currently proposed criteria for APS.[1] We fully assessed the criteria for characteristic symptoms (delusions, hallucinations, and/or disorganized speech in attenuated form with intact reality testing, but sufficiently severe and/or frequent that the symptom is not discounted or ignored), differential diagnosis, and exclusion of lifetime psychotic disorder. We were able to partially assess the frequency/currency criterion (symptoms have been present in the last month and occurred at least once per week, on average, in the past month). Based on our assessment, the symptom had to occur at least once in the past 2 weeks. We also partially assessed the distress/disability/treatment-seeking criterion (symptoms are sufficiently distressing or disabling to the patient and/or parent/guardian to lead them to seek treatment). In the current study, patients were treatment seeking and in distress, but it was unclear whether this specifically was in reference to psychotic experiences. The only criterion we were unable to assess formally was related to progression of the symptoms (symptom must have begun in or significantly worsened in the past year).

Statistical Analyses

Patients were categorized based on endorsement of at least 1 psychotic experience item from the PDSQ. We defined current psychiatric disorders as meeting full criteria or criteria for partial remission. We also examined correlations among the PDSQ psychosis subscale and other symptom subscales. Patients with versus without psychotic experiences were compared on available clinical severity indicators (eg, GAF) using independent-samples *t* tests or χ^2 tests as appropriate. Finally, a hierarchical logistic regression analysis was conducted to identify the clinical variables that best predicted psychotic experience status in multivariate analysis. All tests were 2-tailed, and α was set a priori at .01 to reduce error due to multiple comparisons.

RESULTS

Prevalence of Psychotic Experiences

We excluded patients diagnosed with current or past *DSM-IV* psychotic disorders from analyses (n = 39; 3.1%). Patients diagnosed with a psychotic disorder had significantly higher scores on the PDSQ psychosis subscale than those without a psychotic disorder ($t_{1,256} = 8.62$, $P < .001$). Of the remaining sample (n = 1,218), 28.3% (n = 345) endorsed at least 1 psychotic experience over the past 2 weeks. A total of 12.2% (n = 149) endorsed the hallucination-related item, and 24.0% (n = 292) endorsed at least 1 of the delusion-related items. A total of 8.1% (n = 98) endorsed both hallucination and delusion items concurrently. The mean number of psychotic experiences endorsed was 1.7 (SD = 1.0; n = 345).

Figure 1 depicts the prevalence rates of patients endorsing at least 1 psychotic experience, as well as the rates for endorsement of hallucination versus delusion items. Endorsements of any psychotic experiences by diagnostic category were as follows: somatoform disorders (49%), personality disorders (46%), bipolar disorders (45%), eating disorders (39%), impulse-control disorders (38%), anxiety disorders (34%), depressive disorders (32%), substance use disorders (31%), and adjustment disorders (7%). Figure 1 also indicates that for the major disorders, rates of psychotic experience delusions (27%–44%) were higher than rates of psychotic experience hallucinations (15%–20%) across diagnostic categories.

We found that 2.5% (n = 31) of the sample did not endorse any psychotic experiences or meet criteria for any current *DSM* disorder. More importantly, only 1 patient (0.08%) endorsed psychotic experiences but did *not* meet criteria for a current psychiatric disorder based on the SCID-I or SIDP-IV. This patient endorsed current psychotic experiences (2 PDSQ psychosis items) but did not meet criteria for another current *DSM-IV* disorder. However, a diagnosis of APS would have been unlikely even in this case, because the patient also endorsed 38 other non–psychotic experience PDSQ symptoms and had past diagnoses of alcohol dependence and depression not otherwise specified. Thus, the APS diagnosis alone could not be applied to any patients in the sample, which prevented us from formally examining specificity of the APS diagnosis in the sample.

Association Between Psychotic Experiences and Clinical Severity

Table 1 shows positive correlations between psychotic experiences and the other symptom domains on the PDSQ (except for the alcohol abuse/dependence subscale). The PDSQ psychosis scale was moderately correlated with total PDSQ subscales (minus the psychosis subscale) ($r = 0.46$, $P < .001$).

Figure 1. Prevalence of Endorsement of at Least 1 Psychotic Experience by Diagnostic Category

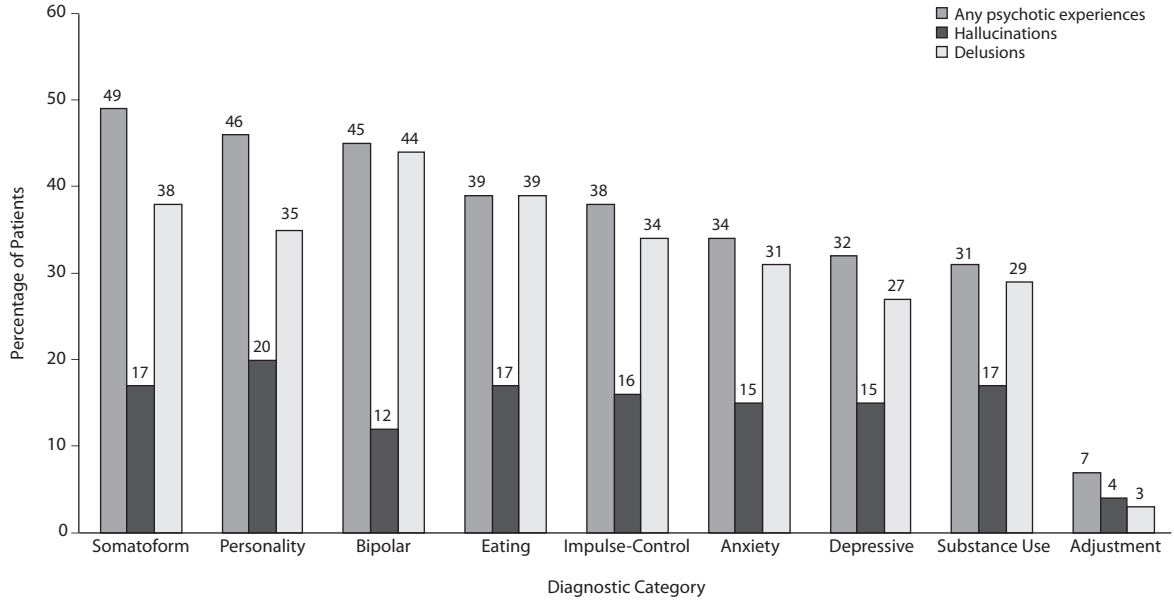

Table 2 shows that psychotic experience patients were less likely to graduate high school, less likely to be married/cohabitating, more likely to be members of racial/ethnic minorities, and more likely to be younger (P values < .01). Furthermore, patients with psychotic experiences demonstrated significantly lower current GAF scores, poorer current social functioning, more time out of work, more psychiatric hospitalizations, more suicide attempts, higher levels of current suicidal ideation, and higher numbers of current psychiatric diagnoses (all P values < .01). There was no significant difference between those with versus without psychotic experiences who reported a family history of a psychotic disorder in first-degree relatives (P = .92).

Table 1. Correlations Between Psychotic Experiences and Other Symptom Domains

PDSQ Domain	Psychosis Subscale: Total Score	Psychosis Subscale: Hallucination Item	Psychosis Subscale: Delusion Items
Major depressive disorder	0.295*	0.201*	0.280*
Dysthymia	0.215*	0.150*	0.202*
Posttraumatic stress disorder	0.288*	0.215*	0.265*
Bulimia	0.178*	0.146*	0.157*
Obsessive-compulsive disorder	0.390*	0.253*	0.376*
Panic disorder	0.347*	0.226*	0.332*
Mania	0.288*	0.216*	0.265*
Agoraphobia	0.332*	0.176*	0.287*
Social phobia	0.292*	0.176*	0.287*
Alcohol abuse/dependence	0.057	0.011	0.065
Drug abuse/dependence	0.131*	0.093*	0.122*
Generalized anxiety disorder	0.246*	0.185*	0.226*
Somatoform	0.226*	0.156*	0.214*
Hypochondriasis	0.264*	0.175*	0.252*
Total (minus psychosis subscale)	0.463*	0.309*	0.441*

*P < .01.
Abbreviation: PDSQ = Psychiatric Diagnostic Screening Questionnaire.

Results from the hierarchical regression analysis are shown in Table 3. Demographic variables (age, high school graduate or higher educational level, racial/ethnic minority status, and married/cohabitating) were entered in the first step, and clinical variables (total PDSQ score, GAF score, total number of current diagnoses, social functioning, suicidal ideation severity, number of suicide attempts, and number of psychiatric hospitalizations) were added in the second step. In step 1 ($\chi^2_4 = 83.24$, $P < .001$), having lower levels of education and being a member of a racial/ethnic minority predicted psychotic experience status (P values < .01). The model explained 9.5% of the variance in psychotic experience endorsement. In step 2 ($\chi^2_7 = 250.51$, $P < .001$), higher total PDSQ scores, lower GAF scores, and lower educational attainment predicted psychotic experience endorsement (P values < .01). The final model explained 34.5% of the variance in psychotic experience endorsement and had a sensitivity of 89.9% but a specificity of 43.8%.

DISCUSSION

Results show that current psychotic experiences are common and reported by 28% of general psychiatric outpatients who did not have a lifetime psychotic disorder. This finding is consistent with research in previous samples showing a high degree of co-occurrence between anxiety and mood disorders and psychotic experiences.[13,28,29] Although patients with current psychotic experiences were more clinically severely ill and impaired as reported elsewhere,[30–33] these symptoms appear to be best viewed as nonspecific indicators of psychopathology that span multiple diagnostic categories. Interestingly, van Nierop et al[34] showed that even

Table 2. Comparisons of Demographic and Clinical Variables in Patients With Versus Without Psychotic Experiences

	Psychotic Experiences	No Psychotic Experiences	Test Statistic
Demographics			
Sex, female, n (%)	226 (65.5)	532 (60.9)	$\chi^2_1 = 2.26$*
Married/cohabitating, n (%)	137 (39.7)	438 (40.1)	$\chi^2_1 = 10.75$*
Racial/ethnic minority, n (%)	67 (19.4)	97 (11.1)	$\chi^2_1 = 14.71$*
High school education or greater, n (%)	174 (50.4)	645 (73.8)	$\chi^2_1 = 61.25$*
Age, mean (SD), y	35.4 (11.4)	38.0 (12.5)	$t_{1,215} = 2.51$*
Clinical characteristics			
First-degree relative with psychotic disorder, n (%)	11 (3.2)	29 (3.4)	$\chi^2_1 = 0.01$
Total no. of psychiatric hospitalizations, mean (SD)	0.7 (1.2)	0.4 (1.0)	$t_{1,216} = 3.69$*
Total no. of suicide attempts, mean (SD)	0.9 (4.0)	0.4 (2.0)	$t_{1,217} = 2.81$*
Current suicidal ideation, mean (SD)[a]	1.4 (1.4)	0.9 (1.2)	$t_{1,217} = 6.37$*
Current social functioning, mean (SD)[b]	3.3 (1.3)	2.9 (1.1)	$t_{1,216} = 5.54$*
Work impairment from psychiatric illness, mean (SD)[c]	2.9 (2.0)	2.1 (1.5)	$t_{1,122} = 6.95$*
Current Global Assessment of Functioning score, mean (SD)	49.3 (8.6)	56.6 (9.6)	$t_{1,217} = 12.14$*
Total no. of diagnoses, mean (SD)	4.2 (2.6)	2.7 (2.0)	$t_{1,217} = 11.11$*

[a]Rated from 1 (not at all) to 7 (very extreme). [b]Rated from 1 (superior) to 7 (grossly inadequate). [c]Excluding students or those unable to work for medical reasons. Rated from 1 (virtually no time out of work) to 9 (worked none or practically none).
*$P < .01$.

Table 3. Hierarchical Logistic Regression Predicting Psychotic Experience Endorsement

	B	SE	Wald	*P*	Exp(*B*) (95% CI)
Step 1					
Age	−0.013	0.006	5.20	.023	0.99 (0.98–1.00)
Race/ethnicity	0.516	0.180	8.20	.004*	1.68 (1.12–2.38)
Education	0.992	0.134	54.54	.000*	2.67 (2.01–3.51)
Marital status	0.324	0.139	5.43	.002	1.38 (1.05–1.82)
Step 2					
Age	−0.011	0.007	2.72	.099	0.99 (0.98–1.00)
Race/ethnicity	0.318	0.211	2.27	.132	1.37 (0.91–2.08)
Education	0.679	0.155	19.27	.000*	1.97 (1.46–2.67)
Marital status	0.342	0.157	4.78	.029	1.40 (1.04–1.92)
PDSQ total score	0.049	0.005	101.88	.000*	1.05 (1.04–1.06)
GAF score	−0.048	0.010	22.75	.000*	0.95 (0.95–0.97)
No. of diagnoses	−0.071	0.042	2.72	.098	0.93 (0.86–1.01)
No. of hospitalizations	−0.048	0.069	0.47	.492	0.95 (0.83–1.09)
Current suicidal ideation	−0.091	0.064	2.00	.157	0.91 (0.81–1.04)
No. of suicide attempts	0.028	0.026	1.16	.282	1.03 (0.98–1.08)
Current social functioning	0.062	0.067	0.86	.354	1.06 (0.93–1.21)

*$P < .01$.
Abbreviations: GAF = Global Assessment of Functioning, PDSQ = Psychiatric Diagnostic Screening Questionnaire.

individuals with *false-positive* self-reported psychotic symptoms showed greater severity compared with those without self-reported psychotic symptoms. Furthermore, psychotic experience endorsement in our sample was associated with higher levels of symptomatology across nearly all diagnostic domains (except alcohol use disorders). Overall, the presence of psychotic experiences was best predicted by the total severity of current symptoms and overall level of functional impairment. Most importantly, we could not identify any individuals in our sample of 1,257 patients for whom a diagnosis of APS alone most likely would have been made.

In addition to the APS criteria proposed for *DSM-5*, Woods et al[8] defined prodromal risk that included a family history of psychosis and schizotypal personality disorder. However, family history of psychosis did not differentiate those with versus without psychotic experiences, and no patients in our sample were diagnosed with schizotypal personality disorder and had a family history of psychosis. Therefore, even considering these expanded criteria would not have changed our findings. Other potential criteria have also been proposed for identifying psychosis risk, such as brief but intermittent psychotic symptoms[35–37] or certain neuropsychological profiles,[38,39] that require further study.

In addition to absolute prevalence, one must also consider specificity. To illustrate this using another disorder, only 3 patients in our sample were diagnosed with schizophreniform disorder, but this diagnosis identified a unique population whose symptoms could not be better explained by other diagnoses. Furthermore, the diagnosis did not result in excessive overlap with other common disorders. It is important to note that our data do not demonstrate that patients with APS alone do not theoretically exist in the community. However, they may not be sufficiently disturbed by or have sufficient insight to seek treatment for psychotic experiences alone.[40] Our findings are consistent with other research suggesting that the specificity of psychotic experiences is probably quite low.[12]

There are 2 primary explanations for endorsement of psychotic experiences in our sample. First, the presence of psychotic experiences for many of the patients can be understood to represent nonpsychotic symptoms related to other disorders. For example, patients with social phobia may endorse a paranoia-related item (eg, "Were you convinced that others were talking about you?") even though they are not judged to possess a threshold psychotic symptom. Alternately, the *DSM-IV* currently recognizes several disorders that may be characterized by individual psychotic symptoms. For example, patients with major depressive disorder with psychotic features have threshold psychotic symptoms (eg, hearing voices, paranoia), but only in the context of a depressive episode. Alternately, if we do not consider psychotic experience endorsement overlapping with other disorders to be false-positive cases as some have suggested,[8] then one must consider that up to 28% of psychiatric outpatients could meet criteria for APS in addition to other comorbid disorders that may be present. However, this would not fit with the aim of the APS diagnosis to identify a unique clinical population not meeting criteria for other disorders as indicated by the APS criteria regarding differential diagnosis and exclusion of lifetime psychotic disorder.[2]

The critical question for deciding whether to include APS as an official diagnostic entity is whether such signs are necessary and specific to the development of an independent illness. Our findings add to the literature suggesting that primarily defining APS by the presence of attenuated psychotic symptoms is problematic because they lack specificity. Robins and Guze's[41] classic criteria for developing valid diagnoses indicate that the new clinical population should be clearly differentiated from those with existing diagnoses. The APS criteria did not meet this criterion in our routine clinic setting. Other recent research shows that clinicians are likely to treat APS patients as having a threshold psychotic disorder, even though this is not an accurate understanding of the proposed diagnosis.[42] An inaccurate diagnosis of psychosis exposes patients to increased stigma, discrimination, and potentially harmful treatments.[3] Critics have warned that APS could have the result of establishing a newly diagnosable psychotic-spectrum disorder that would increase the use of treatments (eg, antipsychotic medications) that lack a favorable risk-benefit profile or even evidence of efficacy in this population.[3,7]

One potential limitation is that we did not formally assess criteria for APS in our sample as our data were collected before they were proposed. Nevertheless, we were able to address most of the other criteria. If these attenuated symptoms are common and nonspecific indicators of psychopathology in treatment-seeking samples, as the current findings show, then the other criteria are less relevant to understanding the utility of the diagnosis. The only criterion we were unable to assess was related to the timing of psychotic experiences (ie, whether they started or worsened within the past year). However, the logic of this criterion has been questioned.[3] For example, it could further increase false-positive diagnoses, as many individuals experience transient symptoms that may naturally remit. Alternately, this criterion could increase false-negatives, as individuals with longer-term psychotic experiences (eg, over 2 years) may be at higher risk for future progression to psychosis but not be captured.

As in the current study, other recent, large-scale studies also have used self-report measures to identify patients with psychotic experiences,[10–13,40,43,44] and research attests to their validity for this purpose.[45] Afterward, patients in our study were administered standardized diagnostic interviews to verify symptoms. However, it would be useful for future research to compare psychotic experiences of those in routine practice settings to those initially screened using clinical interviews.[46] Furthermore, the PDSQ psychosis subscale screens for only some potential psychotic symptoms; therefore, the rates of psychotic experiences in our sample most likely represent conservative estimates.

Previous research suggests that depression and psychotic experiences may represent a prodrome for schizophrenia in some cases.[47] As this is a cross-sectional study, we are unable to specify which, if any, patients with psychotic experiences subsequently met criteria for a psychotic disorder. However, our experience treating these patients subsequently at our clinic does not suggest that a significant number later met criteria for schizophrenia. Furthermore, it is critical to understand the performance of a diagnosis in clinical settings at the time it is given and not just in reference to what it may predict in the future. There has been recent discussion about deemphasizing risk prediction as a rationale for the APS diagnosis given its low predictive validity,[3] which makes examination of the performance of APS as a unique diagnostic entity even more critical.

Our sample ranged in age from young adult to elderly. Some may argue that our ability to identify APS might have been more successful if we had examined a younger sample. However, if included in *DSM-5*, APS would be diagnosable in any age group and thus must be examined in all potential patients. Furthermore, age was not a significant predictor of psychotic experience endorsement in our multivariate analysis, and other research suggests that age is not strongly associated with emergence of psychotic experiences or prediction of transition.[13]

The general population prevalence rate of subclinical psychotic experiences is estimated to be about 5%, and up to 90% of these experiences are transitory and dissipate over time.[48] We found that 28% of nonpsychotic, general psychiatric outpatients self-reported at least 1 current psychotic experience. Using more liberal criteria, a study by Yung et al[10] found that up to 99% of a sample of nonpsychotic adolescents in a mental health program reported 1 psychotic experience at least "sometimes" in their lifetime. The proposed APS criteria should identify a unique clinical population that otherwise would not be appropriately diagnosable in *DSM-IV*, which it did not achieve in our sample. Therefore, results of the current study are consistent with other sources of data that would lead us to conclude that the clinical utility of adding APS to the *DSM* remains highly questionable.

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To view the proposed criteria for attenuated psychosis syndrome, see the *DSM-5* Development Web site.
http://www.dsm5.org