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## Defining ‘Treatment as Usual’ for Attenuated Psychosis Syndrome: A Survey of Community Practitioners

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### Abstract

Schizophrenia and related disorders are often preceded by a period of attenuated psychosis-type symptoms, referred to as the “Attenuated Psychosis Syndrome.” Research suggests that many individuals experiencing attenuated symptoms seek and receive mental health services. The type of services and specific strategies employed, however, is as yet unknown.

**Objective**—The current study explores ‘treatment as usual’ for individuals with Attenuated Psychosis Syndrome through a national survey (N=303) of clinical psychologists, psychiatrists, and general practitioners.

**Methods**—Practitioners responded to vignettes representing cases with full, attenuated, and no psychotic symptoms, and were asked to select interventions they believed would be helpful and harmful for each character.

**Results**—Responses suggested that practitioners treat Attenuated Psychosis Syndrome similarly to full-threshold psychosis.

**Conclusions**—Further development and dissemination of practice guidelines may be helpful to providers encountering this patient population.

### Introduction

Attenuated Psychosis Syndrome is characterized by subthreshold psychosis-like positive symptoms (e.g., perceptual and cognitive disturbances), negative symptoms (e.g., avolition, flattened affect), and general symptoms such as anxiety and deterioration in functioning (1). Attenuated Psychosis Syndrome is of interest to researchers hoping to understand the early course of psychotic symptoms, as most individuals experience attenuated symptoms prior to onset of a full psychotic disorder (1). Recent research efforts have focused on empirically conceptualizing this period and improving prediction models to aid in earlier identification of illness (2–4).

In addition to signifying heightened risk for a psychotic disorder, attenuated symptoms are associated with current distress. Attenuated Psychosis Syndrome is not formally recognized as a disorder in the current diagnostic system (DSM-IV-TR; 5), yet a growing body of

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literature suggests that this syndrome is associated with impaired functioning and treatment seeking (1–4, 6). Notably, clinicians responding to vignettes depicting attenuated symptoms judge the individual described to have a DSM-IV-TR disorder as often as when responding to vignettes depicting full-threshold psychosis (7).

Clinical trials have yielded promising results for the treatment of Attenuated Psychosis Syndrome with psychosocial and pharmacological interventions (8); however, dissemination of practice recommendations has been minimal. Guidelines have been issued by the American Psychiatric Association (APA)<sup>1</sup> and the International Early Psychosis Association Writing Group (9). The APA advises a conservative approach, whereby clinicians encountering “prodromally symptomatic” patients should monitor and assess until symptoms remit or evolve into a “diagnosable and treatable mental disorder.” The International group recommends monitoring symptoms, treating comorbid syndromes such as depression or substance abuse, and psychoeducation (9). This group cautions against the use of pharmacological treatment with antipsychotic medications for most individuals with attenuated symptoms, as the harms of antipsychotics medications may outweigh potential benefits (10).

Despite the growing body of intervention research, little is known about practitioners’ current practices with regard to this population. The extent to which practice recommendations are followed in the community is unclear, especially given the lack of a coherent evidence base or appropriate diagnostic label for these symptoms. The current study explores practitioners’ reported approach to the treatment of attenuated symptoms using a vignette methodology. Practitioners’ responses are intended to reflect “treatment as usual” outside of the research context, where most help-seeking individuals with attenuated symptoms receive community-based care.

## Methods

We targeted a national sample of clinical psychologists (n=500), psychiatrists (n=500), and general practitioners (GPs) (n=500) for participation. The sample of psychologists was drawn from the membership directory of the American Psychological Association, Center for Workforce Studies. Samples of psychiatrists and GPs were obtained from the directory of the American Medical Association through their database licensee, Direct Medical Data. The study was approved by the University of Hawaii at Manoa institutional review board, the American Psychological Association Committee on Workforce Studies, and Direct Medical Data. Data were collected in 2008.

We created four ‘cases’ of fictional individuals (Diego, Paul, Mike, and Claire). Each vignette described one of the four individuals at one of the three levels of symptoms (fully psychotic, attenuated, or no psychotic symptoms), for a total of 12 vignettes. The vignettes were reviewed by five graduate students trained to administer the most widely used psychosis risk diagnostic instrument. Raters estimated the GAF score of the individual depicted in each vignette and compared the vignettes to a set of criteria used to develop vignettes. Graduate student raters agreed on symptom ratings for all vignettes, and GAF scores fell in the intended range. Vignettes were then reviewed by 11 experts in the field of psychotic disorders. At least 80% of expert raters described each vignette as representing the intended conditions “well” or “very well.” See online appendix for vignette excerpts.

A checklist of 50 treatment components followed each vignette. The checklist was comprised of pharmacologic and psychosocial interventions reflecting a broad mix of

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<sup>1</sup>Available at <http://psychiatryonline.org/content.aspx?bookid=28&sectionid=1665359#45859>

strategies. The treatment checklist was compiled from portions of other lists including a measure assessing beliefs about interventions (11); a checklist created by the Hawaii Department of Health;<sup>2</sup> practice guidelines created by the International Early Psychosis Association (9); and consultation with mental health professionals.

Data collection took place via a mail/web mixed mode survey. Efforts were made to keep the presentation of the information as similar as possible across formats. Surveys were mailed to potential participants with an option to participate online via a link printed on the survey booklet.

Participants were mailed a pre-notice letter, and one week later, received the survey along with a cover letter and postage-paid return envelope. Each survey packet contained vignettes depicting three of the four different cases and questions following each vignette. Twelve versions of the survey were created. Each survey included one vignette describing psychosis, one describing attenuated symptoms, and one describing no psychosis. The order of the level of symptoms depicted in vignettes was counterbalanced to control for order effects. Each vignette was represented equally across the 12 survey versions. Surveys were put in repeat order and assigned to individuals on the mailing list sequentially.

Instructions were provided for participants to read each vignette and review the checklist that followed. Participants were asked to mark interventions that they felt would be helpful for the character in the preceding vignette, then asked to review the checklist again and mark interventions they believed to be contraindicated for the individual depicted in the vignette.

## Results

The sample contained 303 responses, with an overall response rate of 21%. Psychologists, psychiatrists and GPs constituted 43% (n=130), 32% (n=98) and 24% (n=72) of the sample respectively. Three respondents did not identify their field of practice. Missing data across variables ranged from 1–8% and were excluded listwise per analysis.

The mean age of respondents was 52.6 years (SD=10.9); 52% were male; 86% were white. All participants reported that they were licensed to practice in their field. They reported an average length of 21.1 years (SD=10.8) as active practitioners. With respect to the counterbalancing of vignettes, no significant differences in patterns of responding were detected for character or order of presentation within the survey.

Each of the 50 treatment components included in the checklist elicited a variable number of ‘helpful’ or ‘harmful’ endorsements. Due to the study’s aims of investigating ‘treatment as usual,’ the fifteen treatment components that elicited over 30% (n > 90) endorsements in either direction (helpful or harmful) for the Attenuated Psychosis Syndrome vignettes were selected for further analysis (see online appendix for figures depicting response choices).

Chi-square statistics were calculated to evaluate the frequency with which these components were selected as ‘helpful’ or ‘harmful’ (as opposed to not selected) for the attenuated symptoms vignettes relative to the ‘no symptoms’ and ‘psychosis’ vignettes. Significant overall differences in endorsement rates among the three symptom conditions were found for ten of the treatment components and the ‘no treatment’ option (see Table 1). Post-hoc comparisons examined significant differences between treatment component endorsements for each symptoms condition. All treatments selected as ‘helpful’ by over 30% of respondents were chosen significantly more frequently for the attenuated symptoms

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<sup>2</sup>Available at <http://hawaii.gov/health/mental-health/camhd/library/pdf/paf/paf-001.pdf>

condition relative to the no symptoms condition. Significantly more practitioners rated cognitive coping as helpful for the attenuated symptoms vignettes relative to the psychosis vignettes. Antipsychotic medication, family support groups, and case management were considered to be helpful more frequently for the psychosis vignettes than the attenuated symptoms vignettes.

Among the six treatment components identified as 'harmful' by over 30% of respondents, significant overall differences in endorsement rates between the symptom conditions were found for electroconvulsive therapy (ECT), hypnosis, and no treatment. Practitioners rated hypnosis and no treatment as harmful significantly more often for the attenuated symptoms vignettes compared to the no symptoms vignettes. ECT was considered harmful significantly more often by practitioners responding to the attenuated vignettes relative to the psychosis vignettes.

Among the medication treatment options for the attenuated symptoms case, antipsychotics were recommended more often than other medication classes. Antidepressants were chosen as helpful for attenuated symptoms cases by 67 respondents (23%) and harmful by 35 respondents (12%). Anti-anxiety medications were rated as helpful by 33 participants (11%) and harmful by 34 participants (12%). Sedatives were recommended by 12 respondents (4%) and advised against by 73 respondents (25%).

No pattern of differences emerged upon examination of attenuated symptoms treatment recommendations across the three provider types. GPs endorsed fewer components relative to psychiatrists and psychologists. Psychiatrists rated cognitive coping and psychoeducation as helpful more frequently than psychologists and GPs, and psychologists rated psychoeducation as helpful more frequently than GPs. Psychologists rated case management as helpful more frequently than the other two groups and ECT as harmful more frequently than psychiatrists. The groups did not differ in endorsements of antipsychotic medication.

## Discussion

The most frequently rated 'helpful' treatment components provide insight into treatment as usual for Attenuated Psychosis Syndrome. Antipsychotic medication was the most commonly chosen component by practitioners responding to attenuated symptoms vignettes. This finding is consistent with findings that 25% of participants meeting research criteria for high-risk status were receiving antipsychotic medications at study intake (12) and that providers tend to consider Attenuated Psychosis Syndrome vignettes to represent a psychotic disorder (7).

In light of these results, it is relevant to note that few trials have provided evidence for the efficacy of antipsychotic medications for the treatment of attenuated symptoms (8). Experts in the field have discouraged the prescription of antipsychotics for these patients pending further safety and efficacy testing (12). Given the particular vulnerability of young people to motor- and obesity-related side effects (10) and the lack of agreement regarding reliable diagnostic criteria for attenuated or high-risk states, prescribers might be well-advised to take a conservative stance when considering antipsychotic medications.

Cognitive coping was the second highest rated 'helpful' treatment component for the Attenuated Psychosis Syndrome vignettes. To date, two RCTs have supported the effectiveness of enhancing coping skills through cognitive therapy for preventing or delaying the onset of psychosis among high-risk individuals (8, 13), and cognitive therapy is recommended by experts for Attenuated Psychosis Syndrome, due in part to a low side-effect profile (12). Cognitive therapy may be well-suited to the treatment of attenuated symptoms due to its emphasis on challenging distorted perceptions, ignoring 'unhelpful'

thoughts, and active reframing of stressors during a time of illness progression when insight is relatively intact.

Family involvement and psychoeducation were the third and fourth most frequently recommended treatments for the attenuated symptoms vignettes. These components echo the recommendations of the International Early Psychosis group. Given the typical timing of psychosis onset, families are likely to play a large role in helping to support treatment and ensure their relative's safety. Psychoeducation may be a particularly effective tool for increasing client and family engagement, and is often neglected in traditional clinical settings (14).

Comparing responses for the attenuated symptoms and no-symptoms cases suggests that practitioners approached treatment for these cases with very different conceptualizations. Practitioners named restraint, catharsis, and hypnosis as harmful significantly more frequently for the attenuated symptoms case relative to the no symptoms case. These findings may reflect a perception that individuals with attenuated symptoms could be more vulnerable to iatrogenic effects. Finally, 'no treatment' was considered harmful significantly more often for the attenuated symptoms condition relative to the no symptoms condition, implying that practitioners viewed the character with attenuated symptoms as being in greater need of services.

Comparisons between responses for attenuated symptoms vs. psychosis vignettes suggest that practitioners approached treatment for these conditions fairly similarly. Intensive treatment options (antipsychotic medications, support groups, case management) were recommended more often for vignettes presenting with psychosis relative to attenuated symptoms. Cognitive coping was selected more often for attenuated symptoms than for psychosis, possibly reflecting practitioners' opinion that the greater insight associated with attenuated symptoms would enable the effectiveness of cognitive techniques to. With regard to treatments judged to be harmful, few significant differences emerged between the attenuated symptoms and psychosis vignettes. ECT was selected as harmful more often for attenuated symptoms than for psychosis, perhaps reflecting a perception of this treatment as appropriate for only the most severe and treatment-refractory cases, consistent with best-practice guidelines for schizophrenia (14).

Findings of the current study are limited by the response rate. The overall response rate for practitioners targeted in our sample was 21%, with differing rates among the types of practitioners surveyed. It is likely that respondents differ from refusers, which may limit the generalizability of findings. Responding was likely influenced by variables such as practitioner experience, type, setting, and familiarity with psychosis. The majority of the sample was white and older, raising the possibility that responding was related to these characteristics as well. Participants were fairly representative of APA and AMA's membership with regard to age; however, white practitioners were over-represented. Further, AMA and APA membership might not wholly represent all practitioners (many practitioners may not be members), leaving our results perhaps less representative of the population of providers we intended to study.<sup>3</sup> The practitioner response rates are very consistent with at least one previous mailed survey design, in which response rates were 40%, 35%, and 20% for psychologists, psychiatrists, and GPs respectively (15).

Despite the likelihood that the current sample is not precisely representative, we believe that this sample is sufficient to achieve the aims of the current study. Lower response rates may

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<sup>3</sup>Member demographics of APA and AMA available at <http://www.apa.org/workforce/publications/02-member/table-1.pdf> and <http://www.ama-assn.org/assets/meeting/2011a/a11-clrpd-reports.pdf>

at least in part be due to non-responding from clinicians unfamiliar with or uninterested in early psychosis. As these practitioners may be less likely to treat such patients, our sample may actually yield a more informed, if less representative, opinion.

The use of vignettes to survey clinical practices also conveys limitations, in that vignettes lack the complexity of real-life cases and may elicit optimized responses. The treatment checklist conveyed limitations as well, in that it contained such a large number of response options that several treatment components were rarely selected.

## Conclusions

Updated, concise best-practice recommendations reflecting the most recent findings from the field of Attenuated Psychosis Syndrome treatment research would be helpful to community practitioners encountering this client population. Diagnostic reliability may represent an obstacle to the dissemination of best practices. Practitioners might benefit from training on the identification and treatment of attenuated symptoms. Although not without possible cons, the potential inclusion of Attenuated Psychosis Syndrome, along with diagnostic criteria differentiating this disorder from schizophrenia and other full-threshold psychoses, in the forthcoming DSM5 might also help clinicians differentiate sub- from full-threshold psychotic symptoms.<sup>4</sup>

## Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Table 1

Ratings of treatment components for each symptom condition

Treatment Component	No Symptoms	Attenuated Symptoms	Psychotic Symptoms	$\chi^2$	p
Components endorsed by over 30% as 'helpful' for treating attenuated symptoms					
Antipsychotic Medication	4 (1%) <sup>a</sup>	201 (69%) <sup>b</sup>	263 (90%) <sup>c</sup>	511.989	<.001
Behavior Modification	25 (9%) <sup>a</sup>	97 (33%) <sup>b</sup>	98 (33%) <sup>b</sup>	63.274	<.001
Cognitive Coping Skills	42 (14%) <sup>a</sup>	127 (43%) <sup>b</sup>	88 (30%) <sup>c</sup>	60.329	<.001
Family Involvement	47 (16%) <sup>a</sup>	142 (48%) <sup>b</sup>	144 (49%) <sup>b</sup>	88.975	<.001
Psychoeducation	26 (9%) <sup>a</sup>	115 (39%) <sup>b</sup>	112 (38%) <sup>b</sup>	84.821	<.001
Supportive Listening	66 (23%) <sup>a</sup>	103 (35%) <sup>b</sup>	81 (28%) <sup>b</sup>	11.76	.003
Family Support Group	46 (16%) <sup>a</sup>	114 (39%) <sup>b</sup>	169 (58%) <sup>c</sup>	109.527	<.001
Individual Support Group	25 (9%) <sup>a</sup>	99 (34%) <sup>b</sup>	138 (47%) <sup>c</sup>	106.299	<.001
Case Management	3 (1%) <sup>a</sup>	92 (31%) <sup>b</sup>	138 (47%) <sup>c</sup>	163.957	<.001
Components endorsed by over 30% as 'harmful' for treating attenuated symptoms					
Electroconvulsive Therapy	167 (57%) <sup>a</sup>	152 (52%) <sup>a</sup>	113 (39%) <sup>b</sup>	25.004	<.001
Restraint	164 (56%) <sup>a</sup>	185 (63%) <sup>b</sup>	161 (55%) <sup>b</sup>	8.337	.016
Catharsis	73 (25%) <sup>a</sup>	105 (36%) <sup>b</sup>	123 (42%) <sup>b</sup>	18.444	.001
Exposure	74 (25%) <sup>a</sup>	89 (30%) <sup>a</sup>	107 (37%) <sup>a</sup>	7.992	.018
Hypnosis	67 (23%) <sup>a</sup>	105 (26%) <sup>b</sup>	128 (44%) <sup>b</sup>	27.783	<.001
No Treatment	23 (8%) <sup>a</sup>	142 (48%) <sup>b</sup>	154 (53%) <sup>b</sup>	156.757	<.001

p = probability from 2×3 chi-square table

N=293 valid responses

Values that share a superscript do not significantly differ at p<.01.