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Psychosis-like experiences and distress among adolescents using mental health services

Emily Kline [a], Elizabeth Thompson [a], Kristin Bussell [b], Steven C. Pitts [a], Gloria Reeves [b], Jason Schiffman [a,*]

[a] University of Maryland, Baltimore County, Department of Psychology, United States
[b] University of Maryland, Baltimore, Department of Psychiatry, United States

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ABSTRACT

Although 'psychosis-like experiences' (PLEs) may reflect elevated risk for onset of serious mental illness, many individuals reporting PLEs are not truly at risk for developing clinical psychosis. Interview-based instruments that define and diagnose "clinical high risk" status attempt to distinguish between normative PLEs and attenuated symptoms indicating progression toward psychosis by probing whether such experiences create clinically relevant concerns. Two recently developed self-report measures, the Prodromal Questionnaire—Brief and the Prodromal Questionnaire-16, contain a 'distress scale' that helps assessors to gauge distress within a screening format. The aim of the current study is to examine the association of PLEs with distress within a sample of young people seeking mental health care and to investigate the usefulness of the distress scale in differentiating between participants who do and do not meet standardized criteria for a clinical high-risk syndrome. Sixty-six adolescents and young adults receiving mental health services completed the Prodromal Questionnaire—Brief and the Structured Interview for Psychosis Risk Syndromes. The screener was scored in ways that emphasized varying interpretations of respondents' distress ratings. Within this sample, focusing only on PLEs associated with distress yielded improved prediction of clinical high-risk status, and participants meeting high-risk clinical criteria were found to report more distress per PLE relative to participants with other psychiatric disorders. Findings suggest that including a distress scale within a screener aids in identifying a group more likely to meet clinical high-risk criteria. Further, PLEs that respondents describe as neutral or positive do not appear to be relevant for clinical high-risk screening.

1. Introduction

An emphasis on 'attenuated' psychosis symptoms has yielded some success with regard to predicting psychotic disorder development in samples of interest (Cannon et al., 2008; Fusar-Poli et al., 2012). A closely related construct, 'psychosis-like experiences' (PLEs; e.g., perceptual anomalies, unusual beliefs, distorted thinking) may also reflect elevated risk for onset of serious mental illness, however, many individuals reporting PLEs are not truly at risk for developing clinical psychosis (van Os et al., 2000; Kelleher et al., 2012). PLEs are common in the general population (7–8%; Shevlin et al., 2007; van Os et al., 2009; Gale et al., 2011) and are thought to represent the relatively normal end of the "psychosis continuum" (Strauss, 1969; Kwapil et al., 1999). For some, PLEs may represent culturally sanctioned religious beliefs, superstitions, or imaginative experiences that are normative within the context of culture, life stress, and/or developmental norms. Although PLEs have shown some association with distress and functional impairments in general population samples (Armando et al., 2010), PLEs are not automatically assumed to have a negative clinical impact; some experiences, such as feeling a divine presence or being "watched over" by loved ones may be neutral or even positive for individuals reporting such experiences.

Despite considerable construct overlap, interview-based instruments that define and diagnose clinical high-risk (CHR) status attempt to distinguish between normative PLEs and attenuated symptoms indicating progression toward psychosis by probing whether such experiences create clinically relevant concerns. For example, the Structured Interview for Psychosis Risk Syndromes (SIPS; Miller et al., 2003) emphasizes that symptoms in the 'high-risk' severity range will typically cause distress and disruptions to daily life (McGlashan et al., 2010). Alongside patients' level of insight, the intensity and frequency of symptoms, and whether respondents report altering behavior in response to symptoms, distress constitutes one of multiple dimensions considered important within the SIPS for determining whether symptoms are likely forerunners of more serious illness.

Despite interview-based assessments' emphasis on distress, self-report or screening measures aiming to assess psychosis risk status typically focus on whether or not respondents have experienced PLEs,

Abbreviations: PLE, psychosis-like experience; CHR, clinical high risk; PQ, Prodromal Questionnaire; SIPS, Structured Interview for Psychosis Risk Syndromes; ROC, receiver operating characteristic; PPV, positive predictive value; NPV, negative predictive value.

* Corresponding author at: University of Maryland, Baltimore County, Department of Psychology, 1000 Hilltop Circle, Baltimore, MD 21250, United States.

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rather than attempting to gauge how stressful respondents find such experiences (e.g., Heinimaa et al., 2003; Miller et al., 2004; Ord et al., 2004; Loewy et al., 2005). As such, most self-report measures do not possess a mechanism to differentiate innocuous PLEs from potentially pathological attenuated symptoms. The Community Assessment of Psychic Experiences (CAPE) is one measure that attempts to distinguish distressing from non-distressing PLEs. Researchers administering the CAPE to both psychiatric and general population samples found that patient groups indicated more PLEs as well as greater distress associated with these experiences, however, the CAPE was not explicitly designed to identify individuals at CHR (Hanssen et al., 2003). Two CHR-specific self-report measures, the Prodromal Questionnaire—Brief Version (PQ-B; Loewy et al., 2011) and the Prodromal Questionnaire-16 (PQ-16; Ising et al., 2012), include 'distress scales' on which participants are prompted to report the level of subjective distress associated with each positively endorsed PLE. Within validation samples, the PQ-B and PQ-16 appear to be somewhat effective for selecting an enriched group with relatively high likelihood of meeting interview-based CHR criteria (Loewy et al., 2011; Ising et al., 2012; Jarrett et al., 2012; Kline et al., 2012), and preliminary evidence from a single study suggests that the use of the distress scale adds incremental value toward CHR status prediction beyond the "yes/no" form of the original items (Loewy et al., 2011).

Despite the emphasis on distress in most conceptualizations of the clinical high-risk syndrome, the use of a "distress scale" within screening measures has received little attention in and of itself. Further, the question of whether screening for non-distressing PLEs helps to predict CHR status remains unresolved. The aim of the current study is to examine the association of PLEs with distress within a sample of young people seeking mental health care and to investigate the usefulness of the distress scale in differentiating between participants who do and do not meet SIPS-based criteria for a clinical high-risk syndrome. We hypothesize that consideration of the distress scale will add incremental validity to self-report screening when predicting CHR status, and that individuals who meet interview-based criteria for a psychosis risk syndrome will rate their PLE distress as higher relative to participants with other psychiatric disorders.

2. Methods

2.1. Procedure

Data collection took place through the Youth FIRST research program at the University of Maryland, Baltimore County (UMBC) and the University of Maryland, School of Medicine. All research procedures were approved by both institutions' Institutional Review Boards. Participants were recruited through community clinics and were eligible to participate if they were between ages 12–22, receiving mental health services, and (for minors) had a stable guardian to provide consent. The majority of participants received referrals to the study from community mental health providers who noted concerns about possible 'prodromal' or psychotic-like symptoms. Referrals came from a university child and adolescent psychiatry clinic, school-based clinicians, a child psychiatric inpatient unit, and multiple private practice offices in the community. No other preliminary screening procedures were used prior to the first study visit. After providing informed consent/assent, participants completed the PQ-B and completed a SIPS interview with study staff.

2.2. Materials

2.2.1. Prodromal Questionnaire—Brief version (PQ-B; Loewy et al., 2011)

The PQ-B is a 21-item self-report questionnaire that evaluates the presence of PLEs as well as the distress associated with specific experiences. Participants respond "yes" or "no" to items asking whether they have experienced specific PLEs. For "yes" responses, participants indicate agreement with the following statement on a 5-point Likert scale: "when this happens, I feel frightened, concerned, or it causes problems for me." Although the phrasing of this follow-up prompt instructs respondents to consider either distress and/or impairment, the PQ-B authors refer to these ratings as a "distress scale." Distress ratings are scored from one (strongly disagree) to five (strongly agree).

Within the current study, PQ-B screening totals were calculated several ways. "PQ-raw" scores indicating number of PLEs endorsed were summed by totaling the number of "yes" responses. "PQ-total" scores were summed by totaling the Likert scale distress ratings for each endorsed experience. "PQ-distress" scores were tabulated by counting the number of items for which a participant endorsed distress and/or impairment (i.e., indicated "agree" or "strongly agree" on the distress scale). Thus for PQ-distress totals, items that were endorsed but not rated as causing distress were not counted toward participants' total scores.

Participants' "average distress" was calculated by dividing each participant's PQ-total by his or her PQ-raw score, to provide a measure of each participant's average degree of distress per item endorsed. This variable had a potential range of zero (for participants endorsing no PLEs) to five (for participants who marked "strongly agree" on the distress scale for every endorsed PLE).

2.2.2. Structured Interview for Psychosis-Risk Syndromes (SIPS; Miller et al., 2003; McGlashan et al., 2010)

The SIPS is a semi-structured interview and is the most widely used assessment instrument for evaluation clinical high-risk states. The SIPS scales include a total of nineteen symptom constructs (5 positive, 6 negative, 4 disorganized and 4 general) that are evaluated based on the presence, duration, and severity of specific experiences and behaviors. Each item is rated on a scale of 0 (symptom is absent) to 6 (extreme or psychotic symptom intensity). The positive symptom section of the SIPS emphasizes clinically relevant positive symptoms, which may resemble PLEs, but must also cause impairment or distress in order to count toward a psychosis-risk syndrome diagnosis. The SIPS contains diagnostic criteria for three "psychosis risk syndromes," schizotypal personality disorder (SPD), and psychosis.

Staff were trained to administer the SIPS by attending a two day training with the SIPS authors at which they were 'certified' to use the instrument by achieving 90% agreement with gold-standard scores on practice cases. Those who could not attend the training trained by reading vignettes provided by the SIPS authors, rating taped interviews, observing two or more interviews, and leading at least two interviews while being observed by an experienced interviewer. New interviewers were considered reliable once their ratings and diagnoses matched those of the observing interviewer over at least two cases. Cases were reviewed weekly within team meetings with study investigators to increase agreement on ratings and diagnoses (see Kline et al., 2012). Current team symptom reliability is ICC = .76, and agreement for diagnosis is perfect (kappa = 1.0).

Within the current study, the positive symptoms subscale of the SIPS (PSOPS) was used as a continuous measure of psychotic symptom severity. Diagnostic groups were dichotomized based on SIPS diagnoses, with any psychosis-risk syndrome diagnosis representing a positive case. Consistent with the North American Prodromal Longitudinal Study, participants under 18 meeting criteria for SPD were counted as positive cases. Participants identified as having a psychotic disorder at the time of assessment were excluded from the current sample.

2.3. Participants

The current sample includes 66 youth and young adults with a mean age of 16.75 (SD = 3.08) years. Sixty-eight percent of the sample was female (n = 45) and the racial composition of the sample was 3% American Indian, 1% Asian, 39% African American, 43% Caucasian, and 14% multiracial or "other."