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Parent–adolescent agreement on psychosis risk symptoms

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ABSTRACT

Despite practice guidelines recommending caregiver inclusion for assessment of mental health problems in adolescents, clinical high-risk (CHR) assessment tools that target attenuated psychosis symptoms rely solely on self-report. As many individuals in the clinical high-risk phase are expected to be adolescents, and programs of CHR research routinely recruit participants as young as twelve, parent input regarding adolescents' symptoms and functioning may help to inform clinical conceptualizations. No assessment tool targeting CHR symptoms has been developed for this purpose. We created a caregiver-report version of the 12-item Prime Screen-Revised and administered the measure to caregivers of 52 youth ages 12–19 referred by mental health providers for CHR study participation. Youth completed the Prime Screen-Revised as well as the Structured Interview for Psychosis Risk Syndromes (SIPS). Caregiver responses demonstrated poor agreement with youth ratings on Prime Screen-Revised ($r = .09$), but moderate agreement with clinician ratings ($r = .41$). The addition of caregiver screening data to youth self-report scores significantly improved a linear regression predicting clinician ratings. Using a threshold of four or more endorsements, the combined use of parent and adolescent responses accurately classified 75% of respondents with regard to SIPS-determined CHR status. Findings suggest that involving caregivers may help to improve the specificity of CHR screening and assessment procedures.

1. Introduction

The codification of a set of risk markers referred to as a "clinical high risk" state (CHR) or "attenuated psychosis syndrome" (APS) has advanced the possibility of developing targeted treatment to delay or prevent the onset of psychosis among individuals prodromal to schizophrenia and other psychotic spectrum disorders (Fusar-Poli et al., 2012). The inclusion of APS in section three of DSM-5 highlights the need to expand knowledge and practice for individuals thought to be most vulnerable to psychosis. Current research is focused on the goals of refining the CHR construct to limit the number of individuals falsely identified as being clinically high risk for psychosis, understanding the mechanisms governing the origins and progression of psychotic symptoms, and establishing interventions that are safe and effective for reducing both current distress and likelihood of future illness (Fusar-Poli et al., 2012).

The Structured Interview for Psychosis Risk Syndromes (SIPS; Miller et al., 1999) is the most widely used assessment tool used in North American efforts to identify CHR populations. Similar to its Australian predecessor, the Comprehensive Assessment of At-Risk Mental States (CAARMS; Yung et al., 2005), the SIPS emphasizes the appearance and worsening of attenuated positive symptoms (e.g., brief hallucinations, or unusual ideas), in addition to genetic risk and functional impairments, in its conceptualization of the CHR category. CHR criteria as defined by the SIPS form the basis of inclusion criteria for most programs of high-risk recruitment. Unfortunately, the interview requires considerable training and administration time. Thus, though considered the current gold standard as a highly specialized assessment tool for CHR status, the SIPS is impractical as a "first step" screener for symptoms that may indicate elevated clinical risk.

A few self-report measures have emerged as brief and low-cost methods for screening and monitoring psychosis risk symptoms (e.g., Heinimaa et al., 2003; Miller et al., 2004; Ord et al., 2004; Loewy et al., 2011). These tools have demonstrated good reliability and validity within validation samples. In a naturalistic clinical sample of help-seeking adolescents and young adults, three such tools demonstrated strong continuous agreement with the SIPS and adequate performance as screening tools for detecting potentially high-risk individuals (Kline et al., 2012a,b). Moreover, a few of these screening tools have been used for 'real-world' applications, for example in screening newly incarcerated men for mental health needs (Jarrett et al., 2012) and as a first-step online assessment in a high-risk recruitment protocol (Ising et al., 2012; Rietdijk et al., 2012).

Given that median age of psychosis onset occurs around 22 years (Kessler et al., 2007) and that as many as 20% of first-episode patients may be eighteen or younger (Schimmelmann et al., 2007), the onset of CHR symptoms for many individuals on a trajectory toward

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psychosis is likely to occur during adolescence. Although eliciting information from parents or other adult informants is considered best practice when evaluating mental health and functioning in youth (McClellan et al., 2001), no formal or standardized instruments have been developed for the purpose of gathering information from parents about CHR symptoms. Both the SIPS and the self-report tools that have been validated against it focus solely on self-reported information and clinician impressions. Further, the few assessment tools that do solicit information from parents about psychotic symptoms in adolescents demonstrate only modest inter-rater agreement between parents and adolescents (Nugent et al., 2013), and interview-based measures that assess full-threshold psychosis in children do not appear to be effective for eliciting parents' reports of children's attenuated psychotic symptoms (Kelleher et al., 2011). Given the weight typically afforded to parent-reported information in assessing youth referred for other mental health concerns, it is surprising that no parent-driven assessment tool targeting CHR symptoms has been validated. Especially when information provided by parents and youth diverges, caregivers serve as vital and knowledgeable resources for learning about adolescents' history, behaviors, daily activities, and functioning.

Structured involvement of parents in the initial screening and assessment process has the potential to improve the quality of clinical information gathered by clinicians and to focus further resources (e.g., time spent in face-to-face clinical interviews) where they are likely to yield the greatest benefit. The creation of a screening tool to be completed by parents or other caregivers could serve this purpose. To this end, the current study aims to determine the agreement of parent- and child-reported information within questionnaires assessing attenuated symptoms, and to evaluate the incremental utility of including parent data within a screening protocol. We hypothesize that parent–child agreement on symptoms will be moderate, and that the inclusion of parent-reported information will enhance the concordance of screening data with SIPS interview results.

2. Method

2.1. Procedure

All procedures were approved by the Institutional Review Boards of the University of Maryland, School of Medicine and University of Maryland, Baltimore County. A study staff spoke via telephone with interested caregivers and participants to provide information about the study and schedule an appointment. As the only entry criterion with respect to risk was that they were currently receiving mental health services, no preliminary screening procedures were used other than to confirm that potential participants were aged 12–22, were of majority age or had a legal guardian to consent for their participation, and were receiving services. At the study appointment, participants provided informed consent (for minors, assent) and then completed the Prime Screen-Revised (PS-R; Miller et al., 2004). Caregivers completed a modified version of the PS-R. Participants who had difficulties with reading and/or attention (10 youth, 2 caregivers) received assistance from a staff person available to read screen items and response options verbatim from the page.

Participants were then evaluated by study staff. As is typical in this type of research (e.g., Addington et al., 2012), before administering the SIPS, interviewers conducted comprehensive, semi-structured diagnostic interviews using the Kiddie Schedule for Affective Disorders and Schizophrenia, present and lifetime version (KSADS-PL; Kaufman et al., 2000). The KSADS-PL was administered in full separately to youth and caregivers. Although the SIPS was administered following the KSADS with youth alone, clinicians incorporated information from the KSADS about psychotic symptoms into final SIPS/SOPS ratings and diagnoses.

2.2. Participants

Participants were recruited through provider referrals and advertisements posted in community clinics. Many participants were referred for consultation by clinicians who suspected the emergence of psychotic symptoms. Eligible participants were between the ages of 12–22, currently receiving mental health services, and (for minors) had a stable guardian to consent for their participation and complete parent measures. All participants had begun receiving mental health services as minors, meaning that all caregivers played some role in initiating, consenting for, or otherwise supporting treatment decisions.

The current sample is comprised of 52 caregiver-youth dyads who completed both versions of the screener and the SIPS interview. Youth participants had a mean age of 15.13 ($SD = 2.09$) years. The youth sample was 54% female and racially diverse (50% African American, 37% Caucasian, 13% more than one race or 'other'). Six percent were Hispanic. Of the caregiver screens, 63% were completed by mothers, 13% by fathers, 10% by mothers and fathers together, 10% by grandparents, and 4% by some other caregiver (e.g., custodial aunt).

2.3. Materials

Materials included the Prime Screen-Revised (PS-R; Miller et al., 2004), a modified caregiver-report version of the PS-R (referred to as the CGPS-R), a demographics form, and the SIPS (Miller et al., 1999; McGlashan et al., 2010).

2.3.1. Prime Screen-Revised (PS-R)

The PS-R is a 12-item questionnaire containing statements describing attenuated or psychotic-like symptoms. Respondents are instructed to circle a number on a Likert-type scale indicating their agreement with each statement, ranging from zero ("definitely disagree") to six ("definitely agree"). The PS-R was validated against the SIPS in a validation sample of 36 participants; within this sample, a threshold of two or more responses of five or six ("somewhat"/"definitely" agree) to flag probable high-risk respondents yielded sensitivity of 0.90 and specificity of 1.00 (Miller et al., 2004). This threshold achieved more modest results within our own initial validation sample (sensitivity of .80, specificity of .48; see Kline et al., 2012b). The PS-R has a Flesh-Kincaid reading grade level of 6.8 and can be completed by advanced readers in about one minute and forty seconds.

2.3.2. Caregiver Prime Screen—Revised (CGPS-R)

We created a caregiver version of the PS-R designed to elicit caregivers' report of youths' symptoms. The measure was created by replacing the words "I," "me," and "my" with "he/she" and "his/her" within each item from the PS-R. See Table 1 for alternate forms of sample items as presented within each version.

2.3.3. Structured Interview for Psychosis Risk Syndromes (SIPS)

The SIPS is a semi-structured interview assessing attenuated psychotic symptoms and other symptoms associated with psychosis risk. The continuously-scored portion of the SIPS (Scale of Prodromal Symptoms, or SOPS) has four subscales subsuming 21 symptom constructs, each of which is scored by the interviewing clinician on a scale of zero (absent) to six (for positive symptom constructs, six indicates that a symptom is present and fully psychotic). The SIPS identifies current psychosis, psychosis risk syndromes and schizotypal personality disorder (SPD). In the largest ($N = 291$) longitudinal SIPS-based study to date, thirty-five percent of participants meeting SIPS criteria for a psychosis risk diagnosis transitioned to psychotic illness within 2.5 years (Cannon et al., 2008).

The five positive symptoms (unusual thought content, suspiciousness, grandiosity, perceptual abnormalities, and disorganized speech) assessed within the SIPS are most central to the risk syndrome