

Anxiety in youth at clinical high-risk for psychosis: A two-year follow-up

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Dear Editors

Individuals at clinical high-risk (CHR) for psychosis comprise a heterogeneous group with respect to symptoms and functioning both at presentation and at a later outcome. Even those who do not develop psychosis are troubled by comorbid symptoms and poor functioning (Addington et al., 2018). A recent commentary in this journal (Woods et al., 2021) reports on several papers demonstrating that longitudinally CHR individuals are troubled by unresolved attenuated psychotic symptoms (APS), functional deficits, persistent negative symptoms, and depression. It is argued that before adequate treatments can be developed, a specific core battery of outcome variables is needed.

Anxiety is also common in the CHR population with 24–53% having a comorbid anxiety disorder (Fusar-Poli et al., 2014). In the North American Prodrome Longitudinal Study-2 (NAPLS-2), we previously demonstrated that 51% of CHR participants had an anxiety disorder at baseline and although anxiety was unrelated to transition to psychosis, it was related to APS, in particular suspiciousness, and negative symptoms (McAusland et al., 2017). Despite high prevalence rates of anxiety among CHR samples, most studies only consider baseline anxiety or lump anxiety with depression. Here, we present NAPLS-2 data on the prevalence of anxiety.

Details of NAPLS-2 have been described elsewhere (Addington et al., 2012). This paper reports on the 267 NAPLS-2 participants at CHR for psychosis, based on the Structured Interview for Psychosis-risk Syndromes (SIPS) (McGlashan et al., 2010), who completed the 24-month follow-up and had not transitioned to psychosis. There were no significant differences in anxiety between those who dropped out and those who completed the 24-month assessment (Stowkowy et al., 2018).

Anxiety and other psychiatric disorders were diagnosed using the Structured Clinical Interview for DSM-IV and to follow DSM-5, anxiety disorders included general anxiety disorder, general anxiety disorder not otherwise specified, panic disorder, panic with agoraphobia, agoraphobia, social phobia, and specific phobia. Social anxiety was assessed with the Social Interaction Anxiety Scale (SIAS) (Mattick and Clarke, 1998), and general anxiety with the Social Anxiety Scale (SAS) (Zung, 1971). APS and negative symptoms were assessed with the SIPS.

In examining anxiety disorders at 24-months we observed three groups: no anxiety disorders (NO-ANX, $n = 167$, 62.5%), anxiety present but no other disorder (ONLY-ANX, $n = 48$, 18.0%), and anxiety and a comorbid DSM-IV disorder (e.g., depression, OCD, or PTSD) (ANX+, $n = 52$, 19.5%). See Table 1. The groups did not differ on demographics. A generalized linear mixed model analyses for repeated measures was conducted to examine anxiety ratings on the SIAS and SAS at baseline, 6, 12, 18, and 24 months. The NO-ANX group generally had lower ratings on both scales than the other two groups and was the only group showing improvement over time. A comparison of APS and negative symptoms at 24-months showed that the anxiety groups had more severe APS notably suspiciousness, perceptual abnormalities, and disorganized communication than the NO-ANX group. For negative symptoms, ANX+ had more severe negative symptoms than the NO-ANX group with differences in total score, avolition, and experience of emotions and self. These results are presented in Supplementary Material (Tables 1–5, Figs. 1–2).

Two years after the initial presentation, there is a high prevalence of anxiety disorders, with 38% having an anxiety disorder, and among them, 19.5% having a comorbid disorder. Prior ratings on anxiety measures suggest that for those with an anxiety disorder at 24-months, anxiety had been a long-standing problem. These preliminary results raise some considerations. First, self-reported anxiety at baseline may not indicate who will have a diagnosis of anxiety at 24-months. It has been suggested that both anxiety and APS may characterize a single condition, which is undifferentiated at the beginning until reaching a threshold point for a disorder (Fusar-Poli et al., 2014). Secondly, social phobia, the most common disorder, may appear in response to suspicious thoughts, or social phobia may trigger suspiciousness, or both might develop together in the early stages of illness (Michail and Birchwood, 2009). Thirdly, the experience of disorganized communication may create anxiety in CHR youth or conversely, anxiety may interfere with communication creating difficulties such as rambling or going off track (Fusar-Poli et al., 2014).

There are limitations. First, since NAPLS-2 was a naturalistic study, we could not address the different psychotropics used. Secondly, other diagnoses confound results although we added the ANX+ group.

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Table 1

Distribution of diagnoses at 24-months.

	Total sample <i>N</i> = 267 ^a	No anxiety <i>N</i> = 167	Only anxiety <i>N</i> = 48 ^a	Anxiety+ <i>N</i> = 52 ^a
	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)	<i>n</i> (%)
Anxiety disorders				
Social phobia	33 (12.4)	0 (0.0)	15 (31.3)	18 (34.6)
Specific phobia	26 (9.7)	0 (0.0)	14 (29.2)	12 (23.1)
GAD	27 (10.1)	0 (0.0)	12 (25.0)	17 (32.7)
GAD-NOS	29 (10.9)	0 (0.0)	13 (27.1)	14 (26.9)
Panic disorder	6 (2.2)	0 (0.0)	3 (6.3)	3 (5.8)
Panic with agoraphobia	5 (1.9)	0 (0.0)	2 (4.2)	3 (5.8)
Agoraphobia	1 (0.4)	0 (0.0)	1 (2.1)	0 (0.0)
Other disorders				
MDD	72 (27.0)	23 (13.8)	0 (0.0)	49 (94.2)
OCD	12 (4.5)	7 (4.2)	0 (0.0)	5 (9.6)
PTSD	7 (2.6)	4 (2.4)	0 (0.0)	3 (5.8)

Abbreviations: GAD, Generalized Anxiety Disorder; GAD-NOS, Generalized Anxiety Disorder not otherwise specified; MDD, Major Depressive Disorder; OCD, Obsessive Compulsive Disorder; PTSD, Post Traumatic Stress Disorder.

^a Note that numbers do not add up, some participants had more than one diagnosis.

Thirdly, it is difficult to ascertain if anxiety contributed to APS or vice versa. If the former, evidenced based treatments such as CBT or digital interventions (Pauley et al., 2021) for anxiety may help to reduce concomitant APS. Regardless, more than a third of CHR youth are presenting after two years with anxiety that appears to have been present for some time, supporting the need for ongoing assessment of anxiety including the SCID, SAS, and SIAS in this population to ultimately test the impact of relevant treatments.

Contributors

Drs. Addington, Cadenhead, Cannon, Cornblatt, McGlashan, Perkins, Seidman, Tsuang, Walker, Woods, Bearden, and Mathalon, were responsible for the design of the study and for the supervision of all aspects of data collection. Dr. Santesteban-Echarri drafted the manuscript, and with Ms. Liu was responsible for data analysis. All authors contributed to and approved the final manuscript.

Declaration of competing interest

The authors declare no conflicting interests.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.schres.2021.08.014>.

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