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Exploration of clinical high-risk dropouts

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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. Ms. Stowkowy drafted the manuscript, and with Ms. Liu was responsible for data analysis. All authors contributed to and approved the final manuscript.

Conflict of interest

On behalf of all authors, the corresponding author states that there is no conflict of interest.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.schres.2017.09.018>.

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Dear Editors:

Research into those at clinical high-risk (CHR) of psychosis is steadily increasing. Since these young people are difficult to find, and at times difficult to retain in longitudinal studies that often require lengthy clinical and biomarker assessments, drop-outs are not uncommon. For example, in the EPOS study 25.6% of participants were lost to follow-up over an 18-month follow-up (Ruhrmann et al., 2010). Since a major aim of CHR research is to understand more about the development of psychosis, it is important to know whether those who dropout do so with increased symptoms and are potentially more likely to be later converters, or if they dropout because of a remission of their attenuated symptoms.

In the North American Prodrome Longitudinal Study (NAPLS-2), although there may be many reasons for drop-outs, we wanted to determine if there were specific demographic or clinical variables that might help us better identify possible dropouts and to explore if participants were more likely to dropout if symptoms improved or worsened. Since, these individuals are help-seeking, and often access treatment via research participation, we predicted that as symptoms resolved, participants would be more likely to dropout.

NAPLS-2 participants came from eight sites (Emory University, Harvard University, Calgary University, UCSD, UCLA, UNC at Chapel Hill, Yale University, Zucker-Hillside Hospital). The sample consisted of 764 CHR participants. Participants had a mean age of 18.5 years (SD = 4.23) and had on average 12.28 years of education (SD = 2.82). Fifty-seven percent were male, 94.9% single, 82.5% students, and 57.3% were Caucasian. NAPLS-2 was approved by Institutional Review Boards at all NAPLS sites. Participants provided informed consent or parental informed consent for minors.

The Structured Interview for Psychosis-risk Syndromes and the Scale of Psychosis-risk Symptoms (SOPS) (McGlashan et al., 2010) were used to determine criteria for a prodromal syndrome and severity of attenuated psychotic symptoms. Details on ascertainment, inclusion and exclusion criteria and measures have been described elsewhere (Addington et al., 2012) as have longitudinal details on symptoms (Addington et al., 2015). Social and role functioning were assessed using the Global Functioning Scales (GF:S & GF:R) (Cornblatt et al., 2007).

Within the two-year follow-up period of the study, 86 transitioned to psychosis, 288 completed the 2-year study and 272 dropped out prior to the 2-year end-point. Since recruitment was ongoing, 118 participants completed their assessments, but the study ended before they reached the 2-year follow-up. These participants were not included in the analyses below. The number of dropouts and when they completed their last assessment are presented in Table 1. Reasons for dropouts included 40.2% declined to continue, 33.6% repeatedly did not show or return calls, 16.6% were unable to be contacted (phone number or address invalid), 5% moved away, 1.2% ended up in residential treatment and could not continue and unknown reason for 3.4%. Results of analyses are available in the on-line supplementary material. Chi-square tests were used to compare categorical variables, and *t*-tests and ANOVA were used to compare continuous variables. Since, there were no differences in demographics, baseline SOPS and social or role functioning amongst the groups that dropped out at baseline, 6, 12, and 18 months (Supplementary Table 1) we combined all dropouts into one group. There were no differences amongst the dropouts, completers and converters on any demographics or functioning. Although the converters did have more severe attenuated psychotic symptoms at baseline, the dropouts and completers did not differ in symptoms (Supplementary Table 2). We examined change in symptoms over time, and observed that each of the dropout groups (6, 12, 18 months) and the completers all demonstrated significant improvement in all SOPS ratings over time (Supplementary Table 3).

Next, all dropout groups and the completer group were compared at 6, 12 and 18-month follow-ups to determine if SOPS ratings differed between those who completed the study, and those who left the study. Again, there were no differences, suggesting that at the last assessment prior to dropout, ratings on the SOPS did not differentiate the completers from the dropouts (Supplementary Table 4).

In summary, we were unable to observe any clinical, functional or demographic variables that might indicate the likelihood of dropping out. Furthermore, our examinations of SOPS ratings suggest that at the time of dropout, dropouts had neither more nor less severe SOPS symptoms, ruling out the possibility that these CHR individuals leave the study because of increased symptoms or improved symptoms. It is possible that there were too many assessments for many participants since assessments often occur over several days. See supplementary Table 5 for the Schedule of events. Although, in addition to covering all expenses, participants were reimbursed for participation and rewarded financially for completing the study. Thus, reasons for dropping out may therefore be idiosyncratic and related to more logistical concerns like transportation, work demands, and the like, but random with respect to clinical factors.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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The NIMH had no further role in study design; in the collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the paper for publication.

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Table 1

Frequencies of completers, non-completers and converters.

Completed 2-year study	288
Converter	86
Did not complete because study ended	118
Drop out	272
Remained for 18 months	22
Remained for 12 months	57
Remained for 6 months	52
Only completed baseline	141

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