Positive-, negative- and disorganized symptom drivers of cognitive/executive dysfunction in ultra high risk state for psychosis.

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Learning Goal:
To explore how positive-, negative-, and disorganized symptoms in young subjects with ultra high risk for psychosis drive cognitive deficits.

Abstract Text:
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Background
Ultra high risk (UHR) for psychosis is a state defined by subthreshold psychotic symptoms. Different studies have demonstrated a cognitive decline in UHR subjects regarding a wide array of cognitive functions (executive functions, general intelligence, verbal and visual memory, verbal fluency, attention, working memory, social cognition). However, it is still unclear if cognitive deficits in UHR subjects are associated with any specific type of symptoms. As in psychotic disorders, symptoms in UHR subjects are usually described as positive, negative or disorganized, but at a subclinical level. This study aimed to elucidate the relationship between cognitive functions and subclinical positive, negative and disorganized symptoms in UHR subjects with a specific focus on executive functions.

Methods
"The Structural Interview for psychosis syndromes" (SIPS) and a neuropsychological test battery were administrated to 53 UHR subjects (female=31) with a mean age of 17.7 (SD 4.6). Partial Spearman’s rho correlations with age and gender as covariates were conducted to establish the associations between levels of positive-, negative- and disorganized symptoms and cognitive functions including executive functions.

Results
We found elevated levels of positive symptoms to be markedly associated with impairments in executive functions. Increased levels of disorganized and negative symptoms were associated with impaired language functions. Compared to subjects with high levels of positive and disorganized symptoms, subjects with elevated levels of negative symptoms demonstrated better performance on certain aspects of visuospatial abilities and cognitive flexibility.

Discussion
Deficits in cognitive functioning in UHR subjects might be driven by specific symptom patterns, e.g.,, executive functions by positive symptoms. Clinical implications of our findings are discussed briefly.