

# Anhedonia as a mechanism linking sleep problems and suicidal thoughts:

## An intensive longitudinal study in high-risk adolescents

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### INTRODUCTION

Growing research indicates that sleep problems are a robust independent risk factor for suicidal thoughts and behaviors among adolescents. However, relatively little is known about how this risk is conferred.

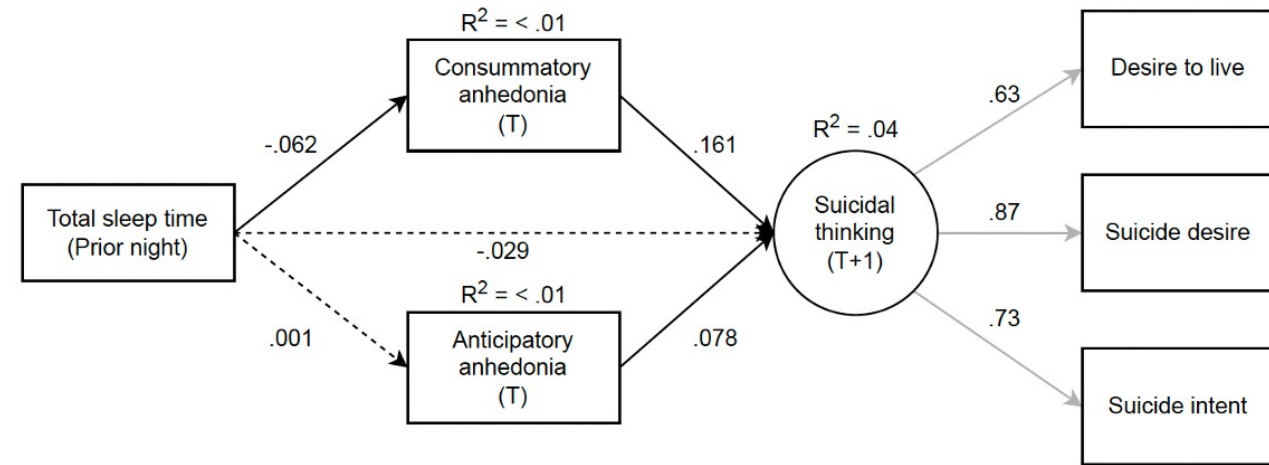
This study used an intensive longitudinal design to test anhedonia as a mechanism linking sleep problems and next-day suicidal thoughts in a clinically high-risk sample of adolescents.

### METHOD

Adolescents ( $n=48$ ;  $M_{age}=14.96$ ; 77.1% white, 64.6% female) completed an ecological momentary assessment (EMA) study design for 28 days following discharge from acute psychiatric care for suicide risk.

Daily sleep diaries were used to assess prior night total sleep time and sleep onset latency. EMA was used to assess consummatory anhedonia, anticipatory anhedonia, and suicidal thoughts multiple times per day.

A series of multi-level structural equation models (MSEM) were used to examine facets of anhedonia as parallel mediators of the association between sleep problems and next-day suicidal thoughts.



**Figure 1.** Results of the multi-level SEM testing consummatory and anticipatory anhedonia as full temporal mediators of the association between total sleep time and next-day suicidal thinking. Standardized estimates are shown. Black lines = structural model, grey lines = measurement model. Solid lines = significant at  $p < .05$ , dashed lines = not significant.

### RESULTS

Significant direct effects were found between sleep problems and consummatory anhedonia, consummatory anhedonia and suicidal thoughts, and anticipatory anhedonia and suicidal thoughts.

Consummatory anhedonia, but not anticipatory anhedonia, significantly mediated the association between sleep problems and next-day suicidal thoughts.

### DISCUSSION

Findings provide initial evidence of a potential mechanism linking sleep problems and next-day suicidal thoughts – anhedonia. Sleep problems may result in diminished capacity to experience pleasure the next day, which in turn may lead to suicidal thoughts.

Future research is needed to replicate these findings in larger samples and investigate how modifying anhedonia may mitigate suicide risk in youth.