CONCEPT PAPER TEMPLATE

Provisional Paper Title:	Trajectories of Suicidal Ideation Throughout the Life Course
Proposing Author:	Daniel Coppersmith
Author's Phone, Fax or E-mail:	daniel.coppersmith@nih.gov
Date:	
P.I. Sponsor (if the proposing author is a student or colleague of an original PI)	Dr. Shyamala Nada-Raja

Objective of the study:
The Dunedin Study offers the unique opportunity to examine the evolution of suicidal ideation throughout the life course in a representative community sample that does not suffer from high rates of (potentially informative) missing data. The two proposed aims of this paper are:
1) To identify 23-year trajectories of suicidal ideation from adolescence to adulthood.
2) To explore how demographics, mental health history, and life events predict trajectory membership.

Data analysis methods:
First, we will describe suicidal ideation at each age and use phi-correlations to explore correlations over time and use intra-class correlations (ICC) as a first step to quantify variability in suicidal ideation within individuals. This analysis will allow us to understand how much suicidal ideation varies between-person versus within-person over long periods of time.

Second, we will apply latent growth mixture modeling (LGMM) to identify unique latent trajectories of suicidal ideation (Chen & Cohen, 2006; Jung & Wickrama, 2008). For this analysis, we will use information on self-reported past-year suicidal ideation collected at the five assessment times: ages 15, 18, 21, 26, 32, and 38. We will use goodness-of-fit statistics to identify the most parsimonious solution that provides an adequate explanation of the data (we anticipate that no more than five such classes will be needed). Standardized methods for modeling binary outcomes will be followed (Curran et al., 2010). This analysis will provide insights into the types of trajectories found for suicidal ideation and the relative proportions of each sub-type within the sample.

Third, we will compare latent trajectory classes using more in-depth measures of recent suicidal ideation (duration, frequency) available at ages 26 and 32 (not including the measures used to construct the classes). We will use regression analyses to compare classes on the suicidal ideation outcomes. This analysis will allow us to understand in more depth the specific characteristics of the trajectories of suicidal ideation and provide some form of validation for these trajectory classes.

Fourth, we will use a 3-step mixture modeling procedure to explore predictors and also outcomes of trajectory group membership (Asparouhov & Muthén, 2014). The distinction between predictors and outcomes will be determined by temporal sequence with age 38 variables always being outcomes and earlier variables being used as statistical predictors. We will be cautious in attributing causality when these variables are not available before the age 15–38 period used to identify the trajectory groups. So later measures are used as proxy measures for the earlier exposure or the models are examining, at least partial, cross-sectional associations rather than examining consistency with a causal model.

Variables needed at which ages:

Self-harm variables: Past year suicidal ideation (ages 15, 18, 21, 26, 32, and 38), Frequency of suicidal ideation (ages 26, 32), Duration of suicidal ideation (ages 26, 32), Past year suicide attempt (ages 15, 18, 21, 26, 32), lifetime history of self-harm (ages 26, 32), lifetime history of exposure to family suicide (ages 26 & 32), lifetime history of exposure to friend suicide (ages 26 & 32).

Demographic variables: sex, SES (ages 15, 18, 21, 26, 32, and 38), employment status (ages 15, 18, 21, 26, 32, and 38), education (ages 15, 18, 21, 26, 32, and 38), marital status (ages 18, 21, 26, 32, and 38).

Mental health variables: history of depressive disorder (ages 15, 18, 21, 26, 32, and 38), history of anxiety disorder (ages 15, 18, 21, 26, 32, and 38), history of substance use disorder (ages 15, 18, 21, 26, 32, and 38), history of any trauma (ages 15, 18, 21, 26, 32, and 38)

Significance of the study (for theory, research methods or clinical practice):

Suicidal ideation is a prevalent phenomenon with an estimated lifetime prevalence of 9.2% Zealand (Nock et al., 2008). Despite decades of research on suicidal ideation, we still lack knowledge about some of its most basic properties (Franklin et al., 2017). Numerous previous studies have examined trajectories of suicidal ideation, but all have crucial limitations. These prior studies are either over relatively short periods of time (i.e. 18 months; Prinstein et al., 2002), among specific populations that do not generalize well to broader populations (Goldston et al., 2016), or use simplistic statistics (Garrison et al., 1991). An overall limitation of much prior work is that they do not provide knowledge of individual variation in the development and persistence of suicidal ideation over time.

The current study would represent the longest, largest, and most representative study yet on trajectories of suicidal ideation. The results would be informative for understanding of the phenomenology of suicidal thoughts. Furthermore, the application of advanced statistical modeling has the potential to reveal a high-risk population that could be useful for targeted suicide prevention programs.

References:

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CONCEPT PAPER RESPONSE FORM

A. To be completed by the proposing author:

Provisional Paper Title:	Trajectories of Suicidal Ideation Throughout the Life Course
Proposing Author:	Daniel Coppersmith
Other Contributors:	Shyamala Nada-Raja, Evan M. Kleiman, Andrew R. Gray, & Terrie E. Moffitt
Potential Journals:	
Intended Submission Date	

Please keep one copy for your records and return one to the proposing author

B. To be completed by potential co-authors:

☐ Approved   ☐ Not Approved   ☐ Let's discuss, I have concerns

Comments: _____

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Please check your contribution(s) for authorship:

☐ Conceptualising and designing the longitudinal study
☐ Conceptualising and collecting one or more variables
☐ Data collection
☐ Conceptualizing and designing this specific paper project
☐ Statistical analyses
☐ Writing
☐ Reviewing manuscript drafts
☐ Final approval before submission for publication
☐ Acknowledgment only, I will not be a co-author

Signature: _____

Date: _____