Data from "Perfectionism, Negative Motives for Drinking, and Alcohol-Related Problems: A 21-day Diary Study"

SEAN P. MACKINNON (iD)

CASSONDRA M. RAY

SAMANTHA M. FIRTH

ROISIN M. O'CONNOR (iD)

Author affiliations can be found in the back matter of this article

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ABSTRACT

Two datasets include self-report data from (a) a 21-day daily diary study (N = 263) and (b) a cross-sectional psychometric study (N = 139) of emerging adult drinkers. Data were collected from two Canadian cities, and represent unique, non-overlapping participants in both datasets. Questionnaires assessed perfectionism, reinforcement sensitivity, big five personality traits, alcohol consumption/problems, binge eating, social support, positive and negative affect, social anxiety, and drinking motives. Daily data were originally analysed using multilevel structural equation modelling and are stored in the Open Science Framework (*https://osf.io/gduy4/*). These data can be used to examine research questions related to personality, emotions, and alcohol consumption, including changes from day-to-day in many variables.

CORRESPONDING AUTHOR:

Sean P. Mackinnon

Dalhousie University Halifax NS, CA

mackinnon.sean@dal.ca

(1) OVERVIEW
CONTEXT

COLLECTION DATE(S)

Data from the daily diary study was collected between October 2016 and February 2017. Data from each participant was collected over 21 days. Many of the questionnaires used in data collection were adapted from their original form by asking participants to report on their thoughts, feelings, and drinking behaviours over "the past 24 hours" to fit our study design. Thus, a psychometric study was also conducted to test the reliability and criterion validity of these measures by comparing them to the original wording. Data from the psychometric study was collected between May and September of 2017.

BACKGROUND

Excessive alcohol consumption and alcohol-related problems are a significant public health concern for young adults (Adlaf, Demers & Gliksman, 2004). Research suggests that negatively reinforcing motivations may be important for a subgroup of problem drinkers (i.e., drinking to avoid negative experiences; Cooper et al., 2015). Many facets of perfectionistic personality are broadband risk factors for heightened negative affect (Dunkley, Mandel & Ma, 2014). Given strong links between perfectionistic personality and negative reinforcement (Slade & Owens, 1998), the present study was designed to examine the links between perfectionistic personality, negatively reinforcing drinking motives, and problematic alcohol use.

The primary research results from this study (Mackinnon et al., 2019) found that non-display of imperfection (i.e., a facet of perfectionism that includes concealing imperfect behaviours from others) had a serial indirect effect on alcohol-related problems through negative affect, coping motives (i.e., drinking to reduce negative emotions), and conformity motives (i.e., drinking to avoid negative social sanctions). Daily data were analysed using multilevel structural equation modelling, which allowed all daily dairy data to be incorporated into a single model (Preacher, Zyphur & Zhang, 2010). The psychometric study found that measures converted to a 24-hour timeframe had adequate reliability and correlated strongly with the original measures (Mackinnon et al., 2019).

Though the primary objectives of this study were met, there are numerous supplementary measured variables that may be of interest to other researchers. Daily diary research is of great value in the area of personality, as it allows researchers to more directly assess stability and change over time, and to make stronger causal statements when compared to cross sectional research (Bolger, Davis & Rafaeli, 2003). Thus, these data have strong potential for reuse.

(2) METHODS
SAMPLE

In the first data set, participants (N = 263) completed online questionnaires on perfectionism, personality, positive and negative affect, drinking motives and behaviours, social support and anxiety for 21 days (Mackinnon et al., 2019). This dataset was collected from two sites in Canada (Halifax and Montréal).

The second set of data (N = 139) contains many of the same questionnaires as the first (see *Table 2*), however, questionnaires were only administered to participants once and only to participants in Halifax. The second dataset was used to test the reliability and criterion validity of questionnaires that were modified to use a 24-hour timeframe in the first dataset. The two datasets are non-overlapping and consist of different participants.

Participants were eligible to participate if they were: (a) between 18–25 years old; (b) consumed 12+ drinks in the past year; and (c) had Internet access at home. All participants in the diary study completed the baseline questionnaire on day 1, and an average of 16.16 of 20 days (SD = 4.68) in the daily diary portion, with an average of 4.70 (SD = 3.80) days that included alcohol consumption. Overall, it was possible to have a maximum 5260 days of data in our design (263 participants * 20 daily measurements). Of these, 1236 were drinking days, 3015 were non-drinking days, and 1009 were missing data (i.e., no data for the entire day). In the psychometric study, 139 participants completed questionnaires once. Demographic information for participants can be found in *Table 1*.

MATERIALS

A list of questionnaires used are found in *Table 2*. Individual questions used for each questionnaire can be found on the OSF website: *https://osf.io/gduy4/*.

PROCEDURES

For the diary study, participants were given online questionnaires for 21 days, receiving baseline questionnaires on day 1, and daily questionnaires for the next 20 days. After participants finished the study, they were compensated with $2 in gift cards per each day of completed questionnaires or (alternatively) bonus credits toward a psychology course. Participants were permitted to compete make-up questionnaires if they missed a reporting day up to 24 hours past the deadline. On average, participants completed 7.87 (SD = 4.93) make-up days.

For the psychometric study, a different set of participants were asked to complete questionnaires online once. They were compensated by receiving half a bonus credit toward a psychology course, and/or having their email entered into a draw to win a $200 cash prize.

DEMOGRAPHIC	DIARY STUDY	PSYCHOMETRIC STUDY
Age	*M* = 21.37 (1.89)	*M* = 20.04 (1.53)
Female	79.8%	83.5%
Male	20.2%	15.8%
Sex Missing	0%	0.7%
Caucasian	78.3%	74.1%
African Canadian/Black	2.3%	4.3%
Asian	7.6%	7.2%
Middle Eastern	1.1%	3.6%
Hispanic	2.7%	0%
First Nations	0.8%	0%
Other/Mixed Ethnicity	6.5%	10.8%
Ethnicity Missing	0.8%	0%
Halifax	60.5%	100%
Montréal	39.5%	0%

Table 1 Demographic information for both datasets.

MEASURE	BASELINE	DAILY	PSYCHOMETRIC
Demographics	X		X
The Reinforcement Theory Personality Questionnaire (Corr & Cooper, 2016)	X		
Big Three Perfectionism Scale (Smith et al., 2016)	X		
Past 12 month alcohol consumption (Dawson, 2003)	X		X
Rutger's Alcohol Problem Index (White & Labouvie, 1989)	X		
Revised Drinking Motives Questionnaire (Grant et al., 2007)	X		
20-item Positive and Negative Affect Scale (Watson, Clark & Tellegen, 1988)	X		
Multidimensional Perfectionism Scale Short Form (Hewitt & Flett, 1991)		X	X
Perfectionism Cognitions Short Form (Mackinnon et al., 2014)		X	X
Perfectionistic self-presentation (Mackinnon et al., 2014)		X	X
Alcohol Use Questionnaire		X	
Drinking Motives Revised – Short Form (Kuntsche & Kuntsche, 2009)		X	X
Alcohol Problems Checklist (Simons et al., 2005)		X	X
State Social Anxiety (Mackinnon et al., 2014)		X	X
5-item Satisfaction with Life Scale (Diener et al., 1985)		X	X
PANAS Subscales (Watson, Clark & Tellegen, 1988; Mackinnon et al., 2014)		X	X
Ten Item Personality Measure (Gosling, Rentfrow & Swann, 2003)		X	X
Eating Disorder Diagnostic Scale: Binge eating subscale (Stice, Telch & Rizvi, 2000)		X	X
Lifestyles Questionnaire (smoking, caffeine, gambling, and marijuana use)		X	
State Perceived Social Support (Mackinnon, 2012)		X	X

Table 2 Materials used in each part of the study.

QUALITY CONTROL

Identifying information for participants was removed before analysis, therefore participant data could only be identified by an ID number. Furthermore, demographic variables that could potentially identify individuals in combination with other measures (i.e., ethnicity and age) were removed before data was made public.

Seventy-two participants were removed from analysis of the psychometric study. Reasons for omitting participants are outlined in the document "Omitted Participants" (*https://osf.io/yjv34/*) and include participants who did not meet the study's criteria, participants who did not wish to have their data analysed, and participants who completed less than half of the questions in the study.

There is substantial amount of missing data (~19% of the data are missing) in the daily diary dataset. Users should ensure they explore potential missing data mechanisms and predictors of missing data within their analyses. Assuming that the data are Missing Completely at Random may not be a reasonable assumption for all possible uses of the data.

ETHICAL ISSUES
No ethical issues were observed during this research. Studies were approved by Dalhousie University's Social Sciences and Humanities Research Ethics Board, and the daily diary study was also approved by Concordia University's Human Research Ethics Committee. Informed consent was obtained from participants prior to beginning the studies. Data were de-identified and demographic variables that might identify individuals are not available. Both ethics boards used the Tricouncil Policy Statement: Ethical Conduct for Research Involving Humans (TCPS 2) as the guidelines for reviewing research. These guidelines also meet the American Psychological Association's Ethical Principles of Psychologists and Code of Conduct.

(3) DATASET DESCRIPTION
OBJECT NAME
The following files are included:

- All data for the daily diary study ("Total Dataset.sav" or "Total Dataset.csv.")
- All data for the Psychometric study ("Psychometric Data.sav" or "Psychometric Data.csv").
- Codebook for the daily diary study, with all variable names described (Codebook.pdf).
- Codebook for the psychometric study, with all variable names described (Psychometric Codebook. pdf).
- All questionnaire items and raw materials administered to participants in the daily diary study (Baseline Measures.pdf and Daily Measures.pdf).
- All questionnaire items and raw materials administered to participants in the psychometric study. (Psychometric Measures.pdf).

DATA TYPE
The daily diary study data are in long format, with the baseline questionnaire responses included at the end of the same datafile. The psychometric data are in wide format. The data have been processed and cleaned with all subscale totals calculated, with all necessary syntax.

FORMAT NAMES AND VERSIONS
.CSV, .SAV, and .PDF

DATA COLLECTORS
Data were collected using an online platform developed by Interceptum (*https://interceptum.com*). Data collection using this online platform was administrated by Samantha Firth, a research assistant at Dalhousie University under the supervision of Dr. Sean Mackinnon.

LANGUAGE
All materials are in English.

LICENSE
The data have been deposited under a Creative Commons Attribution 4.0 International (CC BY 4.0) License.

EMBARGO
These data are not under embargo.

REPOSITORY LOCATION
All data can be accessed on the Open Science Framework at: *https://osf.io/gduy4/*.

PUBLICATION DATE
Data were uploaded to the Open Science Framework by October 10, 2017. Three publications have been generated from these data at the time of publishing this paper: A study on perfectionism, drinking motives, and alcohol problems (Mackinnon et al., 2019); a study examining the relationship between perfectionism and social anxiety (Kehayes & Mackinnon, 2019); and a structural equation modeling tutorial paper on how to use measurement invariance and cross-lagged panel models in lavaan using these data as an example (Mackinnon, Curtis & O'Connor, In press).

(4) REUSE POTENTIAL

This data may be useful for personality researchers interested in day-to-day fluctuations in personality and emotions. There are also many relationships between personality traits (e.g., perfectionism, big five, reinforcement sensitivity) and clinical outcomes (e.g., social anxiety, binge eating, alcohol problems, negative emotion states) that may be of interest. The data will be of particular use for studying alcohol consumption and problems, as all participants were selected to drink alcohol 12+ times per year. The daily diary dataset would be useful for psychometric work on the construct validity and reliability of questionnaires (e.g., multilevel factor analysis, generalizability theory).

FUNDING INFORMATION

COMPETING INTERESTS

The authors have no competing interests to declare.

AUTHOR CONTRIBUTION

Sean Mackinnon is an instructor at Dalhousie University. He oversaw and worked on data collection and analysis, worked on manuscript writing, and created the study design. Cassondra Ray was Dr. Mackinnon's honours student when data was collected. She worked on data analysis, manuscript writing, and helped with participant contact. Samantha Firth was Dr. Mackinnon's research assistant at Dalhousie University when the data was collected. She handled contact with participants and assisted with data analysis and manuscript writing. Roisin O'Connor is an associate professor at Concordia University. She assisted with writing the manuscript and helped with recruitment of participants from Montréal.

AUTHOR AFFILIATIONS

Sean P. Mackinnon [iD] *https://orcid.org/0000-0003-0921-9589*
Dalhousie University, CA

Cassondra M. Ray
Dalhousie University, CA

Samantha M. Firth
Dalhousie University, CA

Roisin M. O'connor [iD] *orcid.org/0000-0003-2455-983X*
Concordia University, CA

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