

**ENVIRONMENTAL-RISK (E-RISK) LONGITUDINAL TWIN STUDY  
CONCEPT PAPER FORM**

Proposing Author: Jasmin Wertz

Author's affiliation, phone, and e-mail address: Jasmin Wertz, Duke University, jasmin.wertz@duke.edu

Sponsoring Investigator (if the proposing author is a student, a post-doc or a colleague): Avshalom Caspi, Terrie Moffitt

Proposed co-authors: Dan Belsky, Leah Richmond-Rakerd, Andrea Danese, Louise Arseneault

Provisional Paper Title: Young adult outcomes of Borderline personality related characteristics in early adolescence

Date: June 7, 2017

Objective of the study and its significance:

Borderline personality disorder is characterized by a pervasive pattern of instability in affect regulation, impulse control, interpersonal relationships, and self-image. Although Borderline personality disorder was initially thought to only exist in adults, diagnostic classification systems and clinical guidelines now recognize its existence in children and adolescents (APA, 1994, 2013; National Institute for Health and Clinical Excellence, 2009). Despite this development, surveys show that clinicians are hesitant to diagnose young people with Borderline personality disorder and to offer targeted treatment (Griffiths, 2011; Laurensen, Hutsebaut, Feenstra, Van Busschbach, & Luyten, 2013; Westen, Shedler, Durrett, Glass, & Martens, 2003). Among the reasons cited for this reluctance is the belief that personality disorder in adolescence is transient; that a degree of 'storm and stress' is normal during adolescence; and that a diagnosis could be stigmatizing (Laurensen et al., 2013). Recent research has gone some way in addressing these concerns, showing that Borderline personality symptomatology in young people is moderately stable, accompanied by significant impairments in psychosocial functioning and continuous with Borderline personality disorder in adulthood (Sharp & Fonagy, 2015; Winsper et al., 2015). Here we propose to further extend this research by investigating the young-adult outcomes of individuals who experienced Borderline psychopathology as adolescents. This study would be a follow-up to a 2012 E-Risk paper, which reported on the aetiology of mother-reported symptoms of Borderline personality disorder in E-Risk twins at age 12 (Belsky et al., 2012).

Although a few reports have examined the outcomes of adolescent Borderline personality disorder, a recent review concluded that these studies had problems such as sampling bias, high attrition and a restricted range of psychosocial outcomes (Winsper et al., 2015). Using data from the E-Risk study, we aim to draw a comprehensive picture of how adolescents with Borderline personality psychopathology fare at the beginning of adulthood. We selected outcomes that have previously been associated with Borderline personality disorder in adulthood, and organized them into three sets of outcomes that map onto our main aims:

*Aim 1) To examine associations between preadolescent Borderline personality symptoms and psychopathology in young adulthood.*

We aim to test whether Borderline personality symptoms at age 12 predict a summary measure of mental health problems in young adulthood, as well as individual diagnoses and symptoms of psychopathology more specifically, including PTSD, suicide and self-harm, substance abuse, depression, anxiety, conduct disorder, and psychosis.

*Aim 2) To examine associations between preadolescent Borderline personality symptoms and poor functional outcomes in young adulthood.*

We aim to examine outcomes that reflect poor functioning across several areas of life, including educational attainment, sexual health, life satisfaction, health behaviors such as cigarette smoking, social isolation and overall adjustment and personality; as reported by individuals themselves and by others who know them well.

*Aim 3) To examine associations between preadolescent Borderline personality symptoms and risk exposures between adolescence and early adulthood.*

We aim to test whether adolescents with Borderline personality symptoms at age 12 are at risk of experiencing victimization as they grow into young adulthood. We aim to examine a summary measure of victimization experiences during adolescence, as well as more specific types of victimization, including maltreatment, sexual victimization, peer/sibling victimization, internet/mobile phone victimization and crime victimization. Because evidence suggests that victimization also precedes Borderline personality disorder, we will account for childhood experiences of victimization when examining associations with adolescent victimization.

Previous research, including from the E-Risk cohort (Belsky et al., 2012) has shown that Borderline personality related characteristics in early adolescence are often accompanied by other mental health problems, including conduct disorder, depression and anxiety. In addition to our main aims, we therefore plan to examine whether Borderline personality symptoms predicts poor outcomes over and above comorbid psychopathology in adolescence.

Statistical analyses:

We will use regression analyses to examine whether Borderline personality disorder symptoms predict outcomes in young adulthood. The type of regression analyses will depend on the scale of the outcome variables. To account for earlier victimization exposure in Aim 3) and for comorbid psychopathology in adolescence in all aims, we will include these variables as additional covariates in our regression models.

Variables Needed at Which Ages (names and labels)

**Study: E-Risk**

*(Note: Although we would like to examine all of these outcomes, some analyses may not be possible due to sample size constraints).*

Phenotypic data		
Phase	Variables	Description
5	familyid	
	atwinid	
	btwinid	
	sampsex	Sex of participant
	sesw	SES continuous variable
12	BPDSCALEE12	BPD symptom scale older twin
	BPDSCALEY12	BPD symptom scale younger twin
	BPDNOSHE12	BPD symptom scale (w/o self-harm) older twin
	BPDNOSHY12	BPD symptom scale (w/o self-harm) younger twin
	DXCD_EMT12	Conduct disorder scale older twin
	CDIE12	Depression scale older twin
	harme512	Maltreatment between ages 5-12
	MASCE12	Anxiety scale older twin
18	ANYMHPE18	Any mental health problems
	SUICATE18	Suicide attempts
	SHARME18	Self-harm
	Suicidal ideation (not yet computed)	Suicidal ideation (combining items SHIdea1, -2 and -3)
	PTSD symptom scale (not yet computed)	PTSD symptom scale
	CDSXE18	Conduct disorder symptoms scale
	DRG5SXE18	Drug use disorder scale

PSYSYMPE18	Psychotic symptom count
GADSXE18	General anxiety disorder symptom scale
MDESXE18	Depression symptom scale
AUDSXE18	Alcohol use disorder scale
RW_MH18E	Mental health –research worker
PAR_MH18E	Mental health –parent
TWIN_MH18E	Mental health –twin
SOCISOE18	Social isolation
LIFESATE18	Life satisfaction
SMKFTNDE18	Fagerstrom Score for Nicotine Dependence
NEETE18	NEET Status
sex4	Age at first sexual intercourse (not yet computed)
sex6	How many sexual partners (not yet computed)
sex7	Is contraception used (not yet computed)
sex8	How often do you use a condom (not yet computed)
sex9	What other contraception do you use (not yet computed)
sex10	Was contraception not used because (not yet computed)
sex11	Sexual intercourse after night out (not yet computed)
STD summary score	Scale score of STD questions (not yet computed)
lifhea16e18	Did patient visit A&E in the last year?
Life history calendar - service use	Treatment for disorders other than ADHD (not yet computed)
Service use booklet scale	Summary measure (any use) (not yet computed)
BFIOE18	Openness to experience – interviewer report
BFICE18	Conscientiousness – interviewer report
BFIEE18	Extraversion – interviewer report
BFIAE18	Agreeableness – interviewer report
BFINE18	Neuroticism – interviewer report
Coder impression item-level data – personality	Coder impression items BP81, BP83, BP86, BP87, BP89, BP182, BP183
BFIOCO1E18	Openness to experience – co-informant1 report
BFICCO1E18	Conscientiousness – co-informant1 report
BFIECO1E18	Extraversion – co-informant1 report
BFIACO1E18	Agreeableness – co-informant1 report
BFINCO1E18	Neuroticism – co-informant1 report
BFIOCO2E18	Openness to experience – co-informant2 report
BFICCO2E18	Conscientiousness – co-informant2 report
BFIECO2E18	Extraversion – co-informant2 report
BFIACO2E18	Agreeableness – co-informant2 report
BFINCO2E18	Neuroticism – co-informant2 report
Co-informant report item level data – personality and mental health	Items Inf42, Inf45, Inf49, Inf50, Inf52, Inf53, Inf55, Inf56, Inf57, Inf60, Inf70
POLYVCTZE18	Poly-victimization count between ages 12-18
VCTZCONE18	Conventional victimization count between ages 12-18
VCTZMALE18	Maltreatment victimization count between ages 12-18
VCTZPERE18	Peer victimization count between ages 12-18
VCTZSEXE18	Sexual victimization count between ages 12-18
VCTZFAME18	Family victimization count between ages 12-18
VCTZINTE18	Internet victimization count between ages 12-18
VCTZNEGE18	Neglect victimization count between ages 12-18

References cited:

- APA. (1994). *Diagnostic and Statistical Manual of Mental Disorders (4th ed.)*. Washington, DC: American Psychiatric Association.
- APA. (2013). *Diagnostic and statistical manual of mental disorders (5th ed.)*. Washington, DC: American Psychiatric Association.
- Belsky, D. W., Caspi, A., Arseneault, L., Bleidorn, W., Fonagy, P., Goodman, M., Houts, R., & Moffitt, T. E. (2012). Etiological features of borderline personality related characteristics in a birth cohort of 12-year-old children. *Development and Psychopathology, 24*, 251–65.
- Griffiths, M. (2011). Validity, utility and acceptability of borderline personality disorder diagnosis in childhood and adolescence: Survey of psychiatrists. *The Psychiatrist, 35*, 19-22.
- Laurensen, E. M. P., Hutsebaut, J., Feenstra, D. J., Van Busschbach, J. J., & Luyten, P. (2013). Diagnosis of personality disorders in adolescents: A study among psychologists. *Child and Adolescent Psychiatry and Mental Health, 7*.
- National Institute for Health and Clinical Excellence. (2009). *Borderline personality disorder: Recognition and management*.
- Sharp, C., & Fonagy, P. (2015). Practitioner Review: Borderline personality disorder in adolescence - recent conceptualization, intervention, and implications for clinical practice. *Journal of Child Psychology and Psychiatry, 56*, 1266–1288.
- Westen, D., Shedler, J., Durrett, C., Glass, S., & Martens, A. (2003). Personality diagnoses in adolescence: DSM-IV axis II diagnoses and an empirically derived alternative. *American Journal of Psychiatry, 160*, 952–966.
- Winsper, C., Marwaha, S., Lereya, S. T., Thompson, A., Eyden, J., & Singh, S. P. (2015). Clinical and psychosocial outcomes of borderline personality disorder in childhood and adolescence: A systematic review. *Psychological Medicine, 45*, 2237–2251.

## Data Security Agreement

Provisional Paper Title	Young adult outcomes of Borderline personality related characteristics in early adolescence
Proposing Author	Jasmin Wertz
Today's Date	01.06.2017

***Please keep one copy for your records***

(Please initial your agreement)

\_JW\_ I am current on Human Subjects Training (CITI ([www.citiprogram.org](http://www.citiprogram.org)) or training in human subject protection through my post or courses.

\_JW\_ My project is covered by Duke or King's IRB OR I have /will obtain IRB approval from my home institution.

\_JW\_ I will treat all data as "restricted" and store in a secure fashion.

\_JW\_ I will not share the data with anyone, including students or other collaborators not specifically listed on this concept paper.

\_JW\_ I will not post data online or submit the data file to a journal for them to post. Some journals are now requesting the data file as part of the manuscript submission process. The E-Risk Study cannot be shared because the Study Members have not given informed consent for unrestricted open access. Speak to Terrie or Avshalom for strategies for dealing with data sharing requests from Journals.

\_JW\_ Before submitting my paper to a journal, I will submit my draft manuscript and scripts for data checking, and my draft manuscript for co-author mock review, allowing three weeks.

\_JW\_ I will submit analysis scripts and new variable documentation to project data manager after manuscript gets accepted for publication.

\_JW\_ I will return all data files to the Data Manager after the project is complete. Collaborators and graduates of DPPP may not take a data file away from the DPPP office. The data remains the property of the Study and cannot be used for further analyses without express, written permission.

\_JW\_ I will ensure geographical location information, including postcodes or geographical coordinates for the E-Risk study member's homes or schools, is never combined or stored with any other E-Risk data (family or twin-level data)

**Signature:** .....J. Wertz.....

**CONCEPT PAPER RESPONSE FORM**

**A. To be completed by the proposing author**

Proposing Author:

I have read the E-Risk data-sharing policy guidelines and agree to follow them

Provisional Paper Title: Young adult outcomes of Borderline personality related characteristics in early adolescence

Potential co-authors: Dan Belsky, Leah Richmond-Rakerd, Andrea Danese, Louise Arseneault

Potential Journals: Journals in developmental psychology, pediatrics, or psychiatry

Intended Submission Date (month/year): December 2017

***Please keep one copy for your records and return one to Louise (louise.arseneault@kcl.ac.uk)***

**B. To be completed by potential co-authors:**

Approved     Not Approved     Let's discuss, I have concerns

Comments:

Please check your contribution(s) for authorship:

- Conceptualizing and designing the longitudinal study
- Conceptualizing 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:** .....