

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

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Sponsoring Investigator (if the proposing author is a student, a post-doc or a colleague): N/A

Proposed co-authors: Antony Ambler, Timothy Matthews & E-Risk investigators

Provisional Paper Title: **Cybervictimization and its association with mental health problems in young adulthood: Findings from a genetically sensitive longitudinal cohort study**

Date: 02 August 2018

Objective of the study and its significance:

A recent study reported the association between cyber bullying and adolescent wellbeing (Przybylski & Bowes, Lancet Child Adolesc Health, 2017) from a nationally representative sample of 120 115 15-year-olds in England. Data were collected as part of the What about Youth Study, which was conducted by the UK Health and Social Care Information Centre.

Prevalence rates of cyberbullying (4%) were lower than that of offline bullying (30%), including physical, verbal, and relational bullying. 406 (<1% total) reported only cyberbullying.

Examination of the average mental well-being score among adolescents in this survey indicated that well-being monotonically declined as a function of combination of bullying experienced. Those adolescents reporting no bullying reported the highest levels of well-being and those reporting both forms of bullying reported the lowest. Results indicated that those reporting both significant traditional and cyberbullying experienced lower well-being. Cyberbullying remained associated with poorer well-being after adjusting for the effects of traditional bullying but accounted for only 0.1% of variance in well-being scores, compared with 5.0% for traditional bullying. Implications of all the available evidence

The present study will further these findings by reporting data from E-Risk, a genetically-sensitive longitudinal cohort study, nationally representative of the UK population. We will report on the associations accounting for prior mental health problems and a range of other forms of victimization. We will also report on the nature of the association between cyber victimization and mental health problems, controlling for familial factors.

The aims of this study are:

- 1) Describe and characterize cybervictimization during adolescence in UK contemporary cohort
- 2) Estimate the associations between cybervictimization and mental health problems in young adulthood
- 3) Control for (a) the confounding effects of sex, low IQ and SES; (b) prior mental health problems;

(c) other forms of violence victimization in young adulthood.

- 4) Verify whether the effects of cyber victimization are stronger for girls and for those participants with prior mental health problems. the associations between cybervictimization and mental health problems in young adulthood.
- 5) Assess whether the impact of cybervictimization on mental health problems operate via an environmental pathway.

Statistical analyses:

We will use a series of logistic regressions

Variables Needed at Which Ages (names and labels):

Study:

familyid	Unique family identifier
atwinid	Twin A ID
btwinid	Twin B ID
rorderp5	Random Twin Order - P5
torder	torder True Twin Order
risks	risks Sample Groups
cohort	Cohort
sampsex	sampsex Sex of Twins
zygosity	zygosity Zygosity - Current from October 2016

Age 5:

totinte5	Mother + Teachers TRF Internalising Scale - Elder
totinty5	Mother + Teachers TRF Internalising Scale - Younger
totexte5	Mother + Teachers CBCL Externalising Scale - Elder
totexty5	Mother + Teachers CBCL Externalising Scale - Younger
totexteb5	Total Mum & Teacher Externalising Scale - ex bully item - Elder twin
totextyb5	Total Mum & Teacher Externalising Scale - ex bully item - Younger twin
seswq35	seswq35 Social Class Composite
iqe5	iqe5 Pro-rated IQ score - Elder

Age 12:

totemoe12	Total Mum & Teacher Emotional Scale (Ex Somatic) - Elder twin
totexte12	Total Mum & Teacher Externalising Scale - Elder twin
cdie12	CDIE12 Depression Scale - CDI - Elder
cdicate12	Clinically significant depression (CDI \geq 20) - P12 - Elder
masce12	masce12 Anxiety Scale - masc - Elder
masccate12	Extreme anxiety (\geq 95th percentile) - P12 - Elder
dxCD_empt12	CD dx @12, 5+ crit, mum or teacher, Elder, 2015
harme512	harme512 Child Harm Phase 5-12 - Elder twin
sharmsuice12	Self-Harm/Suicidal Behaviour - P12 - Elder
TotCDdx_empt12	Count of CD dxs from 5 to 12, mum/tchr, Elder

Age 18:

vctzcone18	Conventional victimisation severity - P18 - Elder
vctzcony18	Conventional victimisation severity - P18 - Younger
vctzconce18	Conventional victimisation severity (3 cat) - P18 - Elder

vctzconcy18	Conventional victimisation severity (3 cat) - P18 - Younger
vctzmale18	Maltreatment victimisation severity - P18 - Elder
vctzmaly18	Maltreatment victimisation severity - P18 - Younger
vctzmalce18	Maltreatment victimisation severity (3 cat) - P18 - Elder
vctzmalcy18	Maltreatment victimisation severity (3 cat) - P18 - Younger
vctzpere18	Peer victimisation severity - P18 - Elder
vctzpery18	Peer victimisation severity - P18 - Younger
vctzperce18	Peer victimisation severity (3 cat) - P18 - Elder
vctzpercy18	Peer victimisation severity (3 cat) - P18 - Younger
vctzsexe18	Sexual victimisation severity - P18 - Elder
vctzsexy18	Sexual victimisation severity - P18 - Younger
vctzsexce18	Sexual victimisation severity (3 cat) - P18 - Elder
vctzsexcy18	Sexual victimisation severity (3 cat) - P18 - Younger
vctzfame18	Family victimisation severity - P18 - Elder
vctzfamy18	Family victimisation severity - P18 - Younger
vctzfamce18	Family victimisation severity (3 cat) - P18 - Elder
vctzfamcy18	Family victimisation severity (3 cat) - P18 - Younger
vctzinte18	Internet victimisation severity - P18 - Elder
vctzinty18	Internet victimisation severity - P18 - Younger
vctzintce18	Internet victimisation severity (3 cat) - P18 - Elder
vctzintcy18	Internet victimisation severity (3 cat) - P18 - Younger
vctznege18	Neglect victimisation severity - P18 - Elder
vctznegy18	Neglect victimisation severity - P18 - Younger
vctznegce18	Neglect victimisation severity (3 cat) - P18 - Elder
vctznegcy18	Neglect victimisation severity (3 cat) - P18 - Younger
vctzviolce18	Overall violence severity - P18 - Elder
vctzvioly18	Overall violence severity - P18 - Younger
vctzviolce18	Overall violence severity (3 cat) - P18 - Elder
vctzviolcy18	Overall violence severity (3 cat) - P18 - Younger
polyvctze18	Poly-victimisation count - P18 - Elder
polyvctzy18	Poly-victimisation count - P18 - Elder
polyvctzce18	Poly-victimisation 4 cat (0,1,2,3+) - P18 - Elder
polyvctzcy18	Poly-victimisation 4 cat (0,1,2,3+) - P18 - Younger
dxmdee18	dxmdee18 Major depressive episode, dsm4 - P18 - Elder
dxmdey18	dxmdey18 Major depressive episode, dsm4 - P18 - Younger
dxgade18	dxgade18 Gen Anxiety Disorder, dsm4_based - P18 - Elder
dxgady18	dxgady18 Gen Anxiety Disorder, dsm4_based - P18 - Younger
sharme18	sharme18 Self harm - P18 - Elder
sharmy18	sharmy18 Self harm - P18 - Younger
suicate18	Suicide attempted - P18 - Elder
suicaty18	Suicide attempted - P18 - Younger
dxptsdcue18	PTSD Current dx, dsm4 - P18 - Elder
dxptsd5cue18	PTSD Current dx, dsm5 - P18 - Elder
dxptsdcuy18	PTSD Current dx, dsm4 - P18 - Younger
dxptsd5cuy18	PTSD Current dx, dsm5 - P18 - Younger
cdmode18	cdmode18 Moderate Conduct Disorder (>=5 count) - P18 - Elder
cdmody18	cdmody18 Moderate Conduct Disorder (>=5 count) - P18 - Younger

References cited:

Przybylski, A., & Bowes, L. (2017). Cyberbullying and adolescent well-being in England: A population-based cross-sectional study. *Lancet Child & Adolescent Health*. ([doi.org/10.1016/S2352-4642\(17\)30011-1](https://doi.org/10.1016/S2352-4642(17)30011-1)).

Data Security Agreement

Provisional Paper Title	Cybervictimization and its association with mental health problems in young adulthood: Findings from a genetically sensitive longitudinal cohort study
Proposing Author	Louise Arseneault
Today's Date	August 2 nd 2018

Please keep one copy for your records

(Please initial your agreement)

- LA I am familiar with the King's College London research ethics guidelines (<https://www.kcl.ac.uk/innovation/research/support/ethics/about/index.aspx>) and the MRC good research practice guidelines (<https://www.mrc.ac.uk/research/policies-and-guidance-for-researchers/good-research-practice/>).
- LA My project has ethical approval from my institution.
- LA I am familiar with the EU General Data Protection Regulation (<https://mrc.ukri.org/documents/pdf/gdpr-guidance-note-3-consent-in-research-and-confidentiality/>), and will use the data in a manner compliant with its requirements.
- LA My computer is (a) encrypted at the hard drive level, (b) password-protected, (c) configured to lock after 15 minutes of inactivity, AND (d) has an antivirus client which is updated regularly.
- LA I will treat all data as "restricted" and store in a secure fashion.
- LA I will not share the data with anyone, including students or other collaborators not specifically listed on this concept paper.
- LA I will not merge data from different files or sources, except where approval has been given by the PI.
- LA 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 the study PI for strategies for dealing with data sharing requests from Journals.
- LA 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.
- LA I will submit analysis scripts and new variable documentation to project data manager after the manuscript gets accepted for publication.
- LA I will delete the data after the project is complete.
- LA **For projects using location data:** 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)
- LA **For projects using genomic data:** I will only use the SNP and/or 450K data in conjunction with the phenotypes that have been approved for use in this project at the concept paper stage.

Signature:Louise Arseneault

CONCEPT PAPER RESPONSE FORM

A. To be completed by the proposing author

Proposing Author: Louise Arseneault

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

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Potential co-authors: Antony Ambler, Timothy Matthews & E-Risk investigators

Potential Journals:

Intended Submission Date (month/year):

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: