

E-Risk Study Concept Paper template

Provisional Paper Title: An investigation of the relationship between day of the week of birth and physical and psychological outcomes.
Proposing Author: Emily Wood
Author's Email: emily.wood@york.ac.uk
Academic supervisor: Click or tap here to enter text. (if the proposing author is a student)
E-Risk Sponsor: Prof Helen Fisher (if the proposing author is not an E-Risk co-investigator)
Today's Date: 8 th May 2024
Please indicate if you will require an E-Risk independent reproducibility check: <input type="checkbox"/>

Please describe your proposal in 2-3 pages with sufficient detail for helpful review.

Background & objective of the study:

“Monday’s child is fair of face,
 Tuesday’s child is full of grace,
 Wednesday’s child is full of woe,
 Thursday’s child has far to go,
 Friday’s child is loving and giving,
 Saturday’s child works hard for his living,
 And the child that is born on Sunday
 Is fair and wise and good and gay.”

Children in the United Kingdom have grown up with ‘Monday’s child’ nursery rhyme since at least the 19th century. The rhyme implies that the day of the week on which a child is born forecasts their physical and psychological traits. First recorded in 1833 (Bray, 1838), the rhyme remains familiar to people of all ages, and its messages are perpetuated in today’s popular culture. The 2022 Netflix series ‘Wednesday’ introduced the show’s namesake and protagonist, Wednesday Addams, a morbid and emotionally reserved adolescent with a dark, sarcastic personality, in the first episode titled ‘Wednesday’s child is full of woe’. The show crossed one billion viewing hours within 28 days of its release and debuted at number one in 83 countries on Netflix (Oganessian, 2022). Wednesday Addams’ imprint on popular culture predates the Netflix series: She was first created by the cartoonist Charles Addams in 1938, who named Wednesday based on the Monday’s Child nursery rhyme and introduced her as a member of the fictional Addams family, who delighted in the macabre and ignored conventional social rules and conduct. Other examples of the persistence of the predictions from ‘Monday’s child’ in popular culture include Will Young’s 2004 album ‘Friday’s Child’ which sold over 1.8 million copies worldwide and went 5x platinum in the UK (The Vogue, n.d.). The album features a single of the same title which describes Will Young’s affinity to the nursery rhyme: “Monday’s got a beautiful baby/ And Wednesday’s child can never win/ Little Saturday will work till he’s crazy/ But Friday’s child was born to give”, (Genius,

n.d.). David Bowie also referred to the rhyme in his 1999 song 'Thursday's Child' that reflected on his life, loves, and career. Though born himself on a Wednesday, Bowie identified with the long and onerous journey to happiness and success foreseen for children born on Thursdays (The Bowie Bible, 2019).

There is some preliminary evidence in support of the hypothesis that day of birth predicts children's differences in psychological characteristics. The Asante people, who are native to modern-day Ghana, believe that boys born on Mondays are quiet and peaceful in character, whilst boys born on Wednesdays are quick-tempered and aggressive (Jahoda, 1954). No significance is attributed to girls' day of birth (Jahoda, 1954). Analyses of the region's Juvenile Court records showed that fewer delinquent boys were born on Mondays than on any other day of the week (Jahoda, 1954). By contrast, boys born on Wednesdays were more often charged with committing "offences against the person", such as assault or fighting, compared with boys born on any other day (Jahoda, 1954). Thus, cultural beliefs about the influence of the day in the week of birth on character development may manifest in observable behavioural differences. This conclusion is also supported by a recent study that tested the traditional belief that children born in the Year of the Dragon under the Chinese zodiac (e.g., 2012, 2024, 2036) are destined for greatness and good fortune (Yu & Mocan, 2019). In data from a large and nationally representative social survey covering all provinces and both rural and urban areas in China (N ~ 3,000 to 13,000), children born in the Year of the Dragon were more likely to achieve higher scores in middle school and university entrance exams, and they were up to 7% more likely to earn a bachelor's degree than children born in other years (Yu & Mocan, 2019). Together, these findings suggest that prophecies of children's development and life outcomes based on the day of the week on which they were born can be empirically substantiated.

Several mechanisms may drive the association between children's day of birth and their psychological and physical characteristics. For example, parents may have internalised the type of messages that are conveyed in 'Monday's child' and thus, may inadvertently parent according to expectations that their child will behave in certain ways (e.g., Pinguart & Ebeling, 2020) depending on their day of birth. This hypothesis was supported in Yu and Mocan's (2019) study, wherein parents' expectations of their children accounted for the association between being born in a Dragon year and educational achievement. Children's psychological development, self-perceptions, and behaviour are shaped by their parents (Frome & Eccles, 1998; Reti et al., 2002) but also by their teachers (e.g., Friedrich et al., 2015) and peers (Henry & Rickman, 2007). Even children's indirect and overheard experiences of everyday social interactions can influence their behaviour, choices, and attitudes to others (Sai et al., 2020; Qin et al., 2021). Meanwhile, people's expectations shape their social behaviours and how they interact with children (Mortimore et al., 2002; Creswell et al., 2008). The messages of 'Monday's child' may exert influence in this way, with children being met with expectations that align with the predictions associated with the day in the week of their birth. In addition, children themselves may internalise the messages in 'Monday's child' and start behaving accordingly. Children born on Wednesdays may feel more prone than others to melancholy, worry, detachedness, or misfortune. Likewise, children born on Mondays may think of themselves as more attractive than children born on other days and thus, develop greater confidence and self-esteem (Diener et al), which in turn may make them more attractive to others (Ziegler-Hill & Myers, 2011). In summary, the messages from 'Monday's child' are likely to affect children's development because they shape children's own, their parents', and the wider society's expectations for the children's physical and psychological traits.

Yet, studies found no associations between life outcomes and being born on a Friday 13th, a date that in Western countries is believed, based on a Norse myth (Roach, 2019), to bring bad luck and misfortune. People born on the 13th of a month or on a Friday the 13th of a month were just as likely to be unemployed, earn low wages, or be single than people born on other days in analyses of a large UK population survey (Fidrmuc & Tena, 2015). Similarly, the number of admissions on a Friday 13th, on a full moon (associated in folklore with insomnia and insanity, i.e., lunacy), or on a Friday 13th with a full moon, did not differ from admissions other days in analyses of Swiss hospital records (Exadaktylos et al., 2001). Mortality rates in patients suffering acute coronary syndrome (e.g., a heart attack) were no higher on Friday 13th than on other days according to a South Wales hospital registry (Protty et al., 2016). These findings suggest rejecting the hypothesis that prevalent beliefs about dates forecast people's differences in meaningful ways.

Here, we will test whether the day in the week of a child's birth is associated with their physical and psychological traits, as implied by the 'Monday's Child' nursery rhyme. For each prediction of the rhyme, we identified corresponding psychometric measures in E-Risk, a longitudinal cohort study of 1,116 families with twin children born in 1994 and 1995 in England and Wales. We equated "fair of face" (i.e., Monday's child) to being perceived as more attractive or good-looking. In E-Risk, three independent coders rated twins on their perceived conventional attractiveness using a Likert scale at ages 5 and 7 and then the interviewers rated the twins on the same scale at ages 10 and 12; an average across the coders and time-points will be used as judgement of the child's physical attractiveness. At age 18, an interviewer rated an 'unattractive' item after an in-person interaction with each twin. This will be reverse coded and included in the attractiveness measure. Tuesday's child is "full of grace", which we equated with elegance, high agility, and strong motor skills. In E-Risk, teachers reported grades for children's physical education, which through competitive sport and physical challenges assesses competence to excel in a broad range of physically demanding skills, with stronger performance indicating greater fitness and motor ability (Department of Education, n.d.). We will supplement this measure with a single-item measure of 'well-poised, gracious, and confident', rated by an interviewer at age 18. Wednesday's child is "full of woe" we equated to having increased internalising problems, such that they have a tendency to be withdrawn and show increased anxiety, depression, and somatic symptoms. In E-Risk, parents completed the Child Behaviour Checklist (CBCL; Achenbach, 1991) which includes subscales for anxiety, depression, being withdrawn and somatic symptoms. We interpreted Thursday's child "has far to go" in the sense of having a long and successful future ahead, which we inferred from children's educational attainment at age 18. Friday's child is "loving and giving", meaning a child prone to prosocial behaviour, which was assessed in E-Risk via items from the Revised Rutter Parent Scale for School-Age Children (Sclare, 1997; Goodman, 1994). Saturday's child "works hard for a living" was indexed by teachers' judgements about children's motivation to work hard in class (e.g., Items from the Achenbach teachers report form, such as, 'how often do you give the child extra encouragement to take part?'; Achenbach et al, 1991). Additionally, at age 18, co-informants, such as the co-twin or mother, rated the extent to which the twin is a hard worker. Lastly, we interpreted "The child born on Sunday is fair and wise and good and gay" as children who excel on all fronts, including being attractive, sporty, experiencing less negative and internalising symptoms, achieving in education, prosocial, and hard working. Therefore, we would expect children who are born on Sunday to have the most favourable outcomes across all our measures.

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

The existing literature outlining the significance of time of birth for future outcomes yields mixed results. Previous research has shown that the timing of an individual's birth relates to their behavioural outcomes, including delinquency and academic achievement (Jahoda, 1954; Mocan &

Yu, 2019). However, there is no evidence to suggest that the number of the date that an individual is born (e.g., the 13th) has any association with their success in employment or relationships (Fidrmuc & Tena, 2015). In this study, we aim to contribute to this literature by testing whether day of birth can be associated with psychological traits.

This article is aimed at the BMJ open Christmas edition, which aims to take a light-hearted approach to research while still maintaining the scientific rigour and methodology of any peer-reviewed article. The Articles featured in the December edition are some of the most widely cited articles from the BMJ.

Data analysis methods:

Preliminary analysis:

Firstly, we will run descriptive statistics on the frequencies of births across the days of the week. There is some previous evidence that due to planned inductions and caesareans, fewer children are born on a Saturday or Sunday (Lerchl, 2005; 2008).

We will then run descriptive statistics for our covariates. In all models, we will include covariates that are known predictors of children’s differences in development, including socioeconomic status (SES; Bradley & Corwyn, 2002) and birthweight (Boardman et al., 2002). We shall also include gender as a covariate, which can lead to differences in development but also informs parents beliefs and expectations (Ardila et al., 2011; Herbert & Stipek, 2005). We will run descriptive statistics in order to test whether any of our co-variates systematically vary by day of birth.

Finally, as our outcomes were assessed at multiple age points (apart from educational attainment), we will calculate the average score across these age points for each outcome. For our hard-working measure, we will use multiple items about behaviour as reported by teachers. In order to maintain consistency in the directionality of responses, certain items within the questionnaire will be subjected to reverse coding prior to data analysis.

Main analysis:

We will use regression models to assess and compare whether a day of birth predicts children’s outcomes. The outcomes we have chosen to measure map onto the qualities suggested by the ‘Monday’s Child’ poem and are illustrated in Table 1. A separate model will be run for each child outcome.

Table 1: Measures corresponding to the Mondays Baby poem verses, and the ages at which they were collected.

Verse	Outcome	Age(s)
Monday’s child is fair of face	Attractiveness	5, 7, 10, 12, 18
Tuesday’s child is full of grace	Physical Education report	7, 10, 12, 18
Wednesday’s child is full of woe	Internalising Problems Scale	5, 7, 10, 12

Thursday's child has far to go	Highest Educational Attainment	18
Friday's child is loving and giving	Prosocial Behaviour	5, 7, 10, 12
Saturday's child works hard for a living	Hard working character report	5, 7, 10, 12, 18
The child born on Sunday, is fair and wise and good and gay	All the above	5, 7, 10, 12, 18

We will use the Lavaan package in R (Rosseel, 2012) to compute our models. This allows using full information maximum likelihood (FIML) estimation to deal with missing data, which we expect to be missing at random. To account for non-independence in the data due to data from different twins within the same family, we will cluster standard errors at the family level.

Research Question 1: Do the verses of Monday's child hold true: Is day of the week of birth associated with children's differences?

To test whether each verse predicts the expected outcome, we will construct binary variables of whether the child was born on a target day or not. Children born on Sunday will be excluded from all models fitted for RQ1, as they are hypothesised to exhibit favourable outcomes across all measures, which we will address in Research Question 2 below. Each target day is associated with one outcome. For example, to answer the question of whether Monday's child is 'full of grace', we will build a model with attractiveness as the outcome and a binary predictor of whether children are born on Monday (coded as 1) or born on any other day except Sunday (coded as 0; model 1). The p values and beta weights will be compared to assess if being born on the target day significantly predicts the outcomes, over and above a different day of birth.

In the next step, we will adjust our models for covariates including, family SES, birth weight and gender (model 2). We will then use the change in R2 to gauge how much more variance is now accounted for when variables that are not based upon day of the week, but previous empirical predictors of child development, are considered. We shall also interpret changes in the day of birth predictor's beta weights between this and the previous model, to determine whether the covariates adjusted our day of birth prediction on child outcomes.

Research Question 2: Does the final verse hold true: Is Sunday's child likely to experience favourable outcome?

To examine whether children born on Sundays tend to exhibit favourable outcomes across our selected measures, we will re-run the models, with a binary predictor variable of being born on Sundays (coded as 1) versus on any other day (coded as 0; model 3). As we shall run a model for each individual outcome (6 models in total), we shall adjust for the multiple model comparisons ($\alpha=0.5/6$) The p values and beta weights will be compared to assess if being born on a Sunday is a significant predictor of positive outcomes over and above a different day of birth.

As with the previous models we shall then add our co-variables (SES, birthweight and gender; Model 4) and interpret the change in R2 and change in beta weights.

Variables needed and at which ages:

Age 5:

Variable	Description
FAMILYID	Unique family identifier
ATWINID	Twin A ID
BTWINID	Twin B ID
SAMPSEX	Sex of Twins: In sample
ZYGOSITY	Zygosity
BWGRE5	Birthweight
SESWQ35	Family Socio-economic status
PATT3RE5	Twin's Physical Attractiveness
TOTINTE5	Internalising Problems sub-scale
PROEM5	Pro-Social Behaviour Scale
TRF4E5	TRF questionnaire: How hard is she or he working?
[New variable required]	Day of the week on which twin was born derived from DOB

Age 7:

Variable	Description
PATT3RE7	Twin's Physical Attractiveness
TRFPPEE7	Twins Physical Education Report
TOTINTE7	Internalising Problems sub-scale
PROEM7	Pro-Social Behaviour Scale
TRF4E7	TRF questionnaire: How hard is she or he working?

Age 10:

Variable	Description
TRFPPEE10	Twins Physical Education Report
TOTINTE10	Internalising Problems sub-scale
PROEM10	Pro-Social Behaviour Scale
TRF116E10	TRF questionnaire: How often do you act to curb disruptive behaviour
TRF117E10	TRF questionnaire: How often do you give child extra encouragement to take part?
TRF118E10	TRF questionnaire: "How often do you act to keep child's attention in class"
PAE1M10	Attractiveness rating

Age 12:

Variable	Description
TRFPPEE12	Twins Physical Education Report
TOTINTE12	Internalising Problems sub-scale
PROEM12	Pro-Social Behaviour Scale

TRF116E12	TRF questionnaire: How often do you act to curb disruptive behaviour
TRF117E12	TRF questionnaire: How often do you give child extra encouragement to take part?
TRF118E12	TRF questionnaire: "How often do you act to keep child's attention in class"
PAE1C12	Attractiveness rating

Age 18:

Variable	Description
EDUACHEVE18	Highest Education Attainment
CO1INF12E18	Hard worker (co-informant rating)
BP155E18 *	Well-poised, gracious, confident (interviewer rated)
BP156E18 *	Unattractive rating (interviewer rated)

* *Stefan these are not in the data dictionary so I've guessed at the potential variables names (basically they are items BP155 and BP156 from the coder impressions scale at age 18).*

References cited:

Achenbach, T. M. (1991). Manual for the child behavior checklist/4-18 and 1991 profile. Burlington, VT: University of Vermont Department of Psychiatry.

Ardila, A., Rosselli, M., Matute, E., & Inozemtseva, O. (2011). Gender differences in cognitive development. *Developmental Psychology*, 47(4), 984–990. <https://doi.org/10.1037/a0023819>

Boardman, J. D., Powers, D. A., Padilla, Y. C., & Hummer, R. A. (2002). Low birth weight, social factors, and developmental outcomes among children in the United States. *Demography*, 39(2), 353-368.

The Bowie Bible (2019). Thursday's Child. Retrieved 19 April 2024 from <https://www.bowiebible.com/songs/thursdays-child/>.

Bradley, R. H., & Corwyn, R. F. (2002). Socioeconomic status and child development. *Annual review of psychology*, 53(1), 371-399.

Bray, A. E. (1838). Traditions, legends, superstitions, and sketches of Devonshire on the borders of the Tamar and the Tavy, illustrative of its manners, customs, history, antiquities, scenery, and natural history. Volume 2. London, J. Murray.

Creswell, C., O'Connor, T. G., & Brewin, C. R. (2008). The Impact of Parents' Expectations on Parenting Behaviour: An Experimental Investigation. *Behavioural and Cognitive Psychotherapy*, 36(4), 483–490. doi:10.1017/S1352465808004414

Department of Education. (n.d.). National curriculum in England: Physical education programmes of study. GOV.UK. Retrieved 18 April 2024, from <https://www.gov.uk/government/publications/national-curriculum-in-england-physical-education-programmes-of-study/national-curriculum-in-england-physical-education-programmes-of-study>

Diener E., Wolsic B., Fujita F. (1995). Physical attractiveness and subjective well-being. *Journal of Personality and Social Psychology*, 69, 120–129.

Exadaktylos, A. K., Sclabas, G., Siegenthaler, A., Egli, S., Kohler, H. P., & Luterbacher, J. (2001). Friday the 13th and full-moon the "Worst case scenario" or only superstition? *American Journal of Emergency Medicine*, 4(19), 319-320.

- Fidrmuc, J., & Tena, J. D. D. (2015). Friday the 13th: The empirics of bad luck. *Kyklos*, 68(3), 317-334.
- Friedrich, A., Flunger, B., Nagengast, B., Jonkmann, K., & Trautwein, U. (2015). Pygmalion effects in the classroom: Teacher expectancy effects on students' math achievement. *Contemporary Educational Psychology*, 41, 1-12.
- Frome, P. M., & Eccles, J. S. (1998). Parents' influence on children's achievement-related perceptions. *Journal of Personality and Social Psychology*, 74(2), 435–452.
<https://doi.org/10.1037/0022-3514.74.2.435>
- Genius (n.d.). Friday's Child. Retrieved 19 April 2024 from <https://genius.com/Will-young-fridays-child-lyrics>
- Goodman, R. (1994). A modified version of the Rutter Parent Questionnaire including extra items on children's strengths: A research note. *Journal of Child Psychology and Psychiatry*, 35, 1483-1494.
- Henry, G. T., & Rickman, D. K. (2007). Do peers influence children's skill development in preschool?. *Economics of education review*, 26(1), 100-112.
- Herbert, J., & Stipek, D. (2005). The emergence of gender differences in children's perceptions of their academic competence. *Journal of applied developmental Psychology*, 26(3), 276-295.
- Jahoda, G. (1954). A note on Ashanti names and their relationship to personality. *British journal of Psychology*.
- Lerchl, A. Where are the Sunday babies? Observations on a marked decline in weekend births in Germany. *Naturwissenschaften* 92, 592–594 (2005). <https://doi.org/10.1007/s00114-005-0049-y>
- Lerchl, A. Where are the Sunday babies? III. Caesarean sections, decreased weekend births, and midwife involvement in Germany. *Naturwissenschaften* 95, 165–170 (2008).
<https://doi.org/10.1007/s00114-007-0306-3>
- Mortimore, P., Sammons, P., Stoll, L., Lewis, D., & Ecob, R. (2002). Teacher expectations. In *Teaching and learning in the primary school* (pp. 109-120). Routledge.
- Oganesyan, N. (2022, December 13). 'Wednesday' soars to 1 billion viewing hours in 3 weeks on Netflix Top 10. *TheWrap*. <https://www.thewrap.com/Wednesday-netflix-1-billion-hours-viewed/>
- Pinquart, M., Ebeling, M. (2020). Parental Educational Expectations and Academic Achievement in Children and Adolescents—a Meta-analysis. *Educ Psychol Rev* 32, 463–480.
<https://doi.org/10.1007/s10648-019-09506-z>
- Protsy, M. B., Jaafar, M., Hannoodee, S., & Freeman, P. (2016). Acute coronary syndrome on Friday the 13th: a case for re-organising services?. *Medical Journal of Australia*, 205(11), 523-525.
- Qin, W., Zhao, L., Compton, B.J., Zheng, Y., Mao, H., Zheng, J. and Heyman, G.D. (2021). Overheard conversations can influence children's generosity. *Developmental Science*, [online] 24(5), p.e13068. doi:<https://doi.org/10.1111/desc.13068>.
- Reti, I. M., Samuels, J. F., Eaton, W. W., Bienvenu III, O. Joseph., Costa Jr., P. T., & Nestadt, G. (2002). Influences of parenting on normal personality traits. *Psychiatry Research*, 111(1), 55–64.
[https://doi.org/10.1016/s0165-1781\(02\)00128-2](https://doi.org/10.1016/s0165-1781(02)00128-2)
- Roach, J. (2011, May 14). Friday The 13th Superstitions rooted in Bible and more.
<https://web.archive.org/web/20191009112626/https://www.nationalgeographic.com/news/2011/5/10513-friday-the-13th-superstitions-triskaidekaphobia/>

Rosseel, Y. (2012). lavaan: An R Package for Structural Equation Modeling. *Journal of Statistical Software*, 48(2), 1–36. <https://doi.org/10.18637/jss.v048.i02>

Sai, L., Liu, X., Li, H., Compton, B. J., & Heyman, G. D. (2020). Promoting honesty through overheard conversations. *Developmental Psychology*, 56(6), 1073–1079. <https://doi.org/10.1037/dev0000933>

Sclare, I. (1997). *The child psychology portfolio*. Windsor, Berkshire: NFER-Nelson Publishing Company

The Vogue (n.d.). Will Young. Retrieved 19 April 2024 from <https://thevogue.com/artists/will-young/>

Yu, H., Mocan, N. (2019). The Impact of High School Curriculum on Confidence, Academic Success, and Mental and Physical Well-Being of University Students. *J Labor Res* 40, 428–462 . <https://doi.org/10.1007/s12122-019-09295-y>

Zeigler-Hill, V., & Myers, E. M. (2011). An Implicit Theory of Self-Esteem: The Consequences of Perceived Self-Esteem for Romantic Desirability. *Evolutionary Psychology*, 9(2), 147-180. <https://doi.org/10.1177/147470491100900202> |

DATA SECURITY AGREEMENT

Provisional Paper Title: An investigation of the relationship between day of the week of birth and physical and psychological outcomes.
Proposing Author: Emily Wood
Today's Date: 4/1/2024

<input checked="" type="checkbox"/>	I am current on Human Subjects Training (CITI (www.citiprogram.org) or equivalent)
<input checked="" type="checkbox"/>	My project is covered by the Duke or King's ethics committee OR I have /will obtain ethical approval from my home institution.
<input checked="" type="checkbox"/>	I will treat all data as "restricted" and store in a secure fashion. My computer or laptop is: a) encrypted (recommended programs are FileVault2 for Macs, and Bitlocker for Windows machines) b) password-protected c) configured to lock-out after 15 minutes of inactivity AND d) has an antivirus client installed as well as being patched regularly.
<input checked="" type="checkbox"/>	I will not "sync" the data to a mobile device.
<input checked="" type="checkbox"/>	In the event that my laptop with data on it is lost, stolen or hacked, I will immediately contact Prof Helen Fisher (helen.2.fisher@kcl.ac.uk).
<input checked="" type="checkbox"/>	I will not share the data with anyone, including my students or other collaborators not specifically listed on this concept paper.
<input checked="" type="checkbox"/>	I will not post data online or submit the data file to a journal for them to post. <i>Some journals are now requesting the data file as part of the manuscript submission process. Study participants have not given informed consent for unrestricted open access, so we have a managed-access process. Speak to Prof Helen Fisher (helen.2.fisher@kcl.ac.uk) for strategies for achieving compliance with data-sharing policies of journals.</i>
<input checked="" type="checkbox"/>	I will delete all data files from my computer after the project is complete. Collaborators and trainees may not take a data file away from the office. This data remains the property of the Study and cannot be used for further analyses without an approved concept paper for new analyses.
<input checked="" type="checkbox"/>	I have read the Data Use Guidelines and agree to follow the instructions.

Signature: Emily Wood

CONCEPT PAPER RESPONSE FORM

A. To be completed by proposing author

Provisional Paper Title	An investigation of the relationship between day of the week of birth and physical and psychological outcomes.
Proposing Author	Emily Wood]
Other Contributors	Anna Brown, Florence Oxley, Kirsty Wilding, & Sophie von Stumm, Helen L Fisher, + other interested E-Risk investigators
Potential Journals	The BMJ Christmas Issue
Today's Date: 8 th May 2024	
Intended Submission Date: 31 st July 2024	

B. To be completed by the E-Risk steering committee and potential co-authors:

<input type="checkbox"/>	Approved
<input type="checkbox"/>	Not Approved
<input type="checkbox"/>	Let's discuss, I have concerns

Comments: [Click here to enter text](#)

Please check your contribution(s) for authorship:

<input type="checkbox"/>	Conceptualizing and designing the longitudinal cohort study
<input type="checkbox"/>	Conceptualizing data collection protocols and creating variables
<input type="checkbox"/>	Data collection
<input type="checkbox"/>	Conceptualizing and designing this specific paper project
<input type="checkbox"/>	Statistical analyses and interpretation (or reproducibility check)
<input type="checkbox"/>	Writing
<input type="checkbox"/>	Reviewing manuscript drafts
<input type="checkbox"/>	Final approval before submission for publication
<input type="checkbox"/>	Agreement to be accountable for the work
<input type="checkbox"/>	Acknowledgment only, I will not be a co-author

Signature:

Today's Date:

Please keep one copy for your records and return one to eriskstudy@kcl.ac.uk and the proposing author.