

Can expressive writing reduce the effects of stress from Hurricane Harvey on pregnant women and their unborn children?

Submission date 08/05/2020	Recruitment status No longer recruiting	☐ Prospectively registered ☒ Protocol
Registration date 20/07/2020	Overall study status Completed	☐ Statistical analysis plan ☒ Results
Last Edited 08/06/2021	Condition category Pregnancy and Childbirth	☐ Individual participant data

Plain English summary of protocol

Background and study aims

Every year, hundreds of millions of people around the globe are affected by natural disasters. In pregnant women, not only mental health can be affected by this stress, but also the pregnancy itself, as well as the developing brain of their unborn children. To alleviate these consequences, the study aims to test an intervention called “expressive writing”, where affected women write in a journal their deepest thoughts and feelings related to current and past trauma.

Who can participate?

Women aged 18-45 years old who were living in the Greater Houston area and pregnant at the time of Hurricane Harvey’s landing (August 25, 2017) or who conceived in the six months that followed.

What does the study involve?

All recruitment, questionnaires and interventions are done online. Participants are randomly allocated to one of three groups. Participants in the expressive writing group are asked to write for daily sessions of 20 minutes, across four days, about intimate trauma-related topics. Participants in the neutral writing group are instructed to write about factual topics for an equal number of sessions. Another group of participants has no writing task (control group). None of the participants receive feedback about what they wrote, and all texts are de-identified and remain confidential. Participants are sent online questionnaires at recruitment and at 2 months after the intervention, as well as 6 months after childbirth.

What are the possible benefits and risks of participating?

Possible benefits of participating include a reduction of maternal stress levels, better pregnancy outcomes and better future development of the unborn children. Risks are minimal and relate mostly to the transient stress that can be experienced while disclosing intimate thoughts and feelings during the writing sessions.

Where is the study run from?

University of Houston, Houston, Texas (USA)

When is the study starting and how long is it expected to run for?
September 2017 to November 2019 (updated 11/12/2020, previously: December 2020)

Who is funding the study?
The study is self-funded by its investigators.

Who is the main contact?:
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Additional identifiers**Protocol serial number**

STUDY00000657 (University of Houston IRB)

Study information**Scientific Title**

Randomized-controlled trial of expressive writing in pregnant women affected by Hurricane Harvey: effects on maternal distress and offspring development

Study objectives

1. Expressive writing will lead to a decrease in maternal symptoms of poor mental health compared to neutral writing or no writing as assessed two months after the intervention
2. Expressive writing will lead to better birth outcomes (less Caesarean delivery and less preterm birth), better growth and better cognitive, behavioural and motor performance in offspring

Ethics approval required

Old ethics approval format

Ethics approval(s)

Approved 08/12/2017, Institutional Review Board of the University of Houston (4302 University Dr., Houston, TX 77204, USA; avargas2@uh.edu; +1 713 7439215), ref: STUDY00000657

Primary study design

Interventional

Study design

Single-center randomized-controlled three-arm superiority trial

Study type(s)

Other

Health condition(s) or problem(s) studied

Prenatal maternal stress

Interventions

Participants (mothers) are randomly assigned to one of the three groups: expressive writing (intervention), neutral writing (active control) and no writing (passive control). Participants are assigned to one of the groups using block randomization with full allocation concealment using

an automatized, web-based platform (REDCap). Participants are not blinded to assignment but are blinded to the hypotheses. Masking is not conducted, since maternal and offspring outcomes are self-reported.

The intervention is expressive writing as per protocols described by James Pennebaker. Participants (mothers) in this arm are instructed to write their deepest thoughts and feelings about experiences of trauma and conflicts for daily sessions of 20 minutes, for four days. No feedback is provided.

The active control is neutral writing. Participants (mothers) in this arm are instructed to write about factual details of their lives for daily sessions of 20 minutes, for four days. No feedback is provided.

The passive control is no writing.

Intervention Type

Behavioural

Primary outcome(s)

1. Maternal PTSD symptoms at baseline and at 2 months post-intervention, as measured with the Impact of Event Scale-Revised (IES-R)
2. Offspring birth outcomes (date and mode of delivery), as measured at 6 months post-partum using an online questionnaire
3. Offspring neurodevelopment at age 6 months as measured with the Ages and Stages-3 questionnaire. There is the potential to continue follow-up assessments of the children at a later date

Key secondary outcome(s)

1. Maternal depression and anxiety symptoms at baseline and at 2 months post-intervention, as measured with a modified 40-item version of the Inventory of Depression and Anxiety Scales (IDAS), including scales for depression, anxiety, panic, ill temper and well-being
2. Offspring temperament, as measured with the Infant Behavior Questionnaire-Revised at age 6 months

Completion date

31/05/2019

Eligibility

Key inclusion criteria

1. Pregnant at the time of Hurricane Harvey's landing (August 25, 2017), or who conceived within 6 months after the flood, and their offspring
2. English-speaking
3. Aged 18 - 45 years
4. Living in Greater Houston area at the time of Hurricane Harvey

Participant type(s)

Healthy volunteer

Healthy volunteers allowed

No

Age group

Adult

Lower age limit

18 Years

Sex

Female

Total final enrolment

1090

Key exclusion criteria

1. Twin or multiple pregnancy

Date of first enrolment

12/02/2018

Date of final enrolment

09/10/2018

Locations

Countries of recruitment

United States of America

Study participating centre

University of Houston

Department of Psychology

4849 Calhoun Road, Rm 482

Houston

United States of America

TX 77024

Sponsor information

Organisation

University of Houston

ROR

<https://ror.org/048sx0r50>

Funder(s)

Funder type

Other

Funder Name

Investigator initiated and funded

Results and Publications

Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

IPD sharing plan summary

Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Basic results	Study website	08/06/2021	08/06/2021	No	No
Protocol file		12/12/2017	07/08/2020	No	No
Study website		11/11/2025	11/11/2025	No	Yes