

# EXPERIENCE SAMPLING METHOD PROTOCOL : FEASIBILITY, ACCEPTABILITY AND EXAMINATION OF THE DYNAMICS OF REPETITIVE NEGATIVE THINKING, VALUED ACTIONS AND EMOTIONAL HEALTH DURING THE PERINATAL PERIOD



**Background:** Repetitive negative thinking (RNT) is a transdiagnostic process referring to iterative, relatively uncontrollable and intrusive negative-laden thoughts about oneself and one's difficulties (Ehring & Watkins, 2008), viewed as a momentary experiential avoidance (EA) strategy perturbing values-consistent actions (VA) (Levin, Krafft, Pierce, & Potts, 2018). During the perinatal period, RNT fluctuates considerably (Giesbrecht, Letourneau, Campbell, Kaplan, & The APRON Study Team, 2012), suggesting that its effects vary within and between individuals across time. These findings thus encourage the use of the Experience Sampling Method (ESM) – multiple and context-sensitive assessments of day-to-day life experience – to investigate the daily dynamics of RNT, VA and emotional health. Nevertheless, its applicability (i.e. feasibility and acceptability) and the use of communication technology (i.e. smartphones and mobile applications) during the perinatal period requires further validation and adjustment (Donker, Cuijpers, Stanley, & Danaher, 2015). **Objectives:** This study has two aims: 1) validate the feasibility, acceptability and reactivity effects of ESM during the perinatal period and 2) assess RNT, VA and emotional concurrent and lagged relationships. **Methods:** Participants (N = 100; 50 pregnant) will complete an ESM time-contingent protocol with a semi-random schedule (4 times per day, 7 days, between 07:00 – 23:00). Dispositional questionnaires (PTQ, BEAQ, DASS-21, VQ) will establish a baseline level through a web-platform approach and a mobile app will mirror these processes through momentary questions. A self-reported questionnaire will evaluate the applicability of the methods. Descriptive and multi-level mixed effects analyses will be performed. **Results:** Preliminary results of a pilot study will be provided. **Conclusion:** Assessing and adjusting ESM applicability during the perinatal period could improve compliance and data quality, strengthening our confidence in new methods to study RNT and its influence over valued-behavioural patterns.



José Angel Mendoza Herrera, Ph.D. candidate & Patrick Gosselin, Ph.D.  
Laboratoire d'études sur l'inquiétude et l'Anxiété (LEIA), Université de Sherbrooke, Québec, Canada



## INTRODUCTION

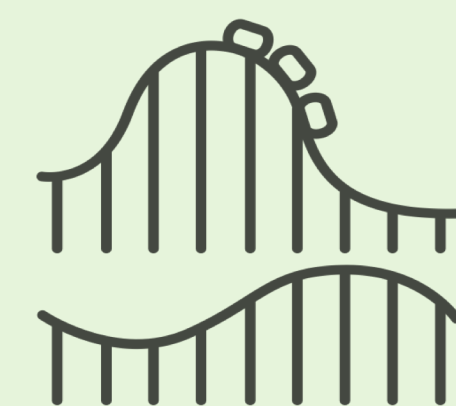


Repetitive negative thinking (RNT) constitutes a transdiagnostic psychological process – distinctive to worry and rumination patterns – defined by the perseverative, relatively uncontrollable and intrusive negative-laden nature of thoughts about oneself and one's difficulties<sup>1</sup>. RNT is considered an **experiential avoidance (EA)** strategy because of its manifestation as an ineffective problem-solving strategy marked by cognitive and behavioral rigidity<sup>2,3</sup>.



Moreover, evidence in the perinatal field indicates that RNT significantly impairs, **perinatal psychological health and functioning<sup>4</sup>** and **values-consistent actions (VA)<sup>5</sup>**.

Recent evidence suggests that **maternal experience fluctuates** importantly in a daily basis<sup>6,7</sup>. Nevertheless, most research in this field has been conducted with estimative and global measures susceptible to method biases (e.g. recall bias, context of evaluation)<sup>8</sup>.



Hence, adoption of context-sensitive methodologies such as **Experience Sampling Method (ESM)** – environmentally representative, momentary and multiple evaluations of daily life experience on real time – and available **mobile technology** (i.e. Mhealth applications) could enhance the meaningfulness of day-to-day behavioral data (e.g. contextual contingencies of RNT engagement and rampancy) and diminish potential measurement biases<sup>9</sup>.

Unfortunately, research on the **feasibility and acceptability** of these methods to assess RNT as well as perinatal moment-to-moment emotional experience and functioning is limited<sup>10</sup>. These attributes are relevant to any measurement method process of development, implementation, compliance and suitability, which enhancement and embracement could ensue higher quality findings.

## OBJECTIVES



## METHOD



1 Evaluate the feasibility, acceptability and reactivity effects of ESM data collection methods during the perinatal period using personal smartphones and a free mobile application

2 Investigate momentary RNT, VA and emotional concurrent and lagged relationships as well as their association to contextual features

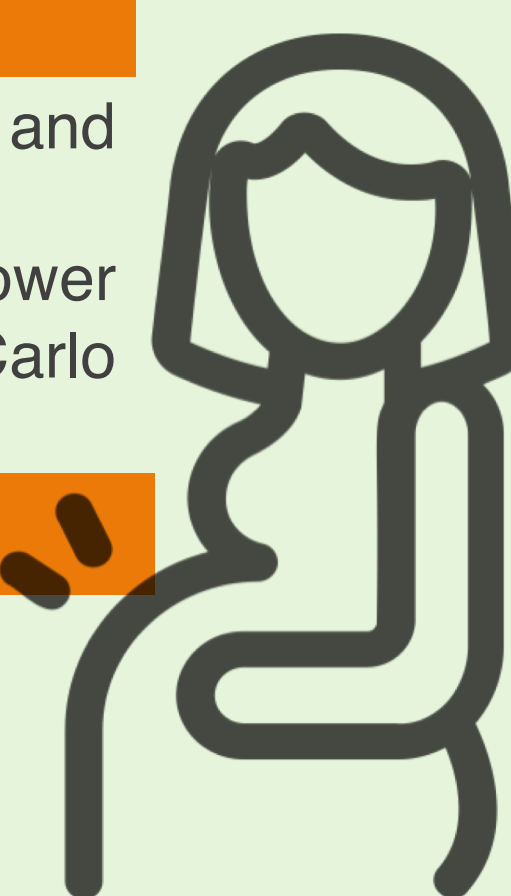
### Participants

#### POPULATION

- N = 160 women (80 perinatal period and 80 non-pregnant)
- Determination of sample size. Power analysis statistics (Monte-Carlo simulations) will be conducted.

#### ELIGIBILITY CRITERIA

- At least 18 years old
- Able to speak English or French
- Own a smartphone (iOS, Android)



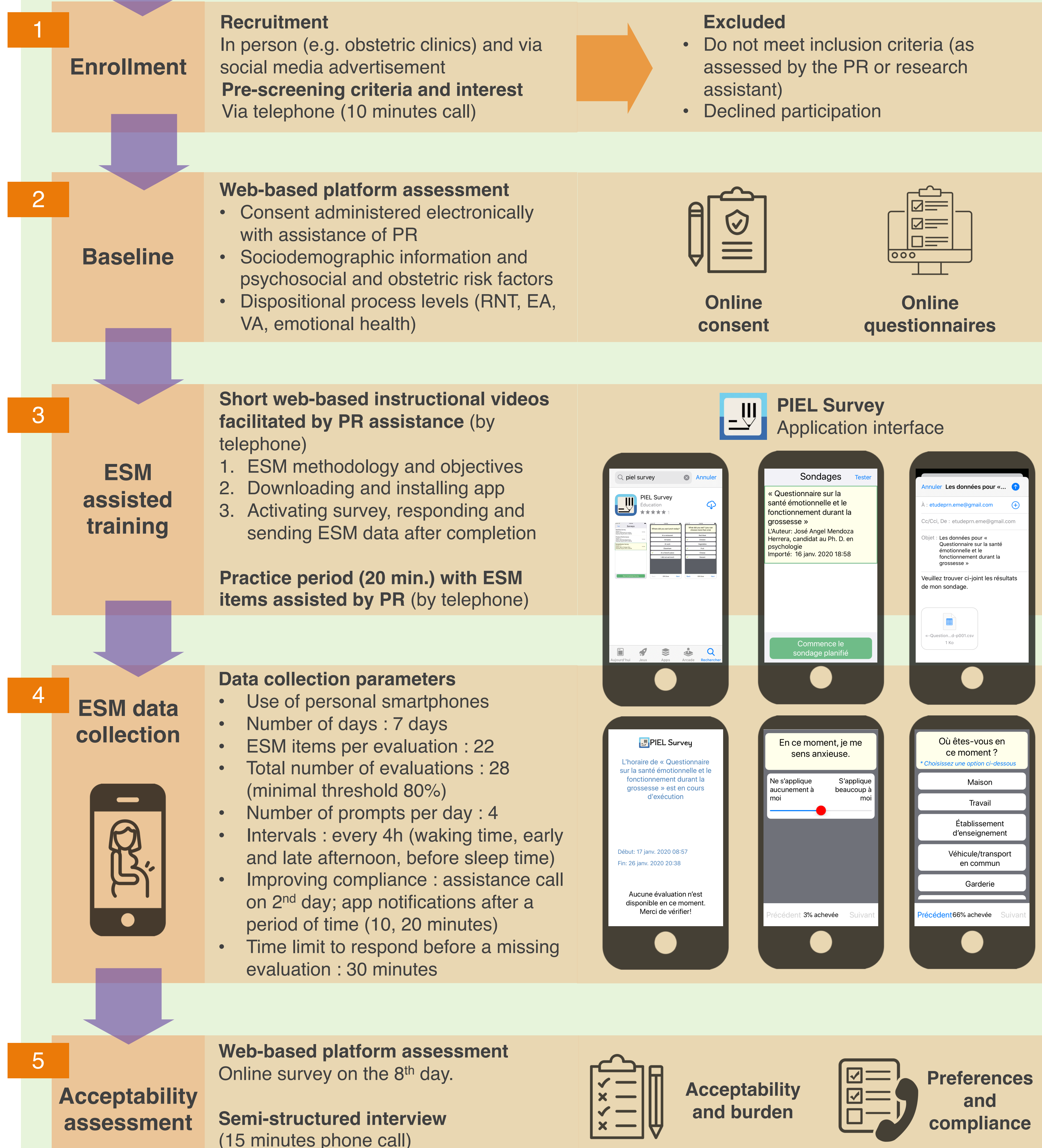
### Measures

Variable	Measure
Sociodemographic, psychosocial and obstetric	Social status and context of life Risk factors
Contextual contingences	Where, with whom, activity; when (extracted from prompts) Activity importance, stress and pleasure levels
Dispositional measures	Perseverative Thinking Questionnaire (PTQ) Brief Experiential Avoidance Questionnaire (BEAQ) Depression Anxiety and Stress Scales (DASS-21) Valuing Questionnaire (VQ)
Momentary questions	Validated ESM items; Item adaptation from dispositional equivalent measures
Feasibility	Recruitment; Compliance rates; Data collection procedures; Technical difficulties
Acceptability	Usefulness, Satisfaction and Ease of Use Questionnaire (USE) Disclosure preferences; Adherence
Reactivity and interference	Affective perturbation and activity interference

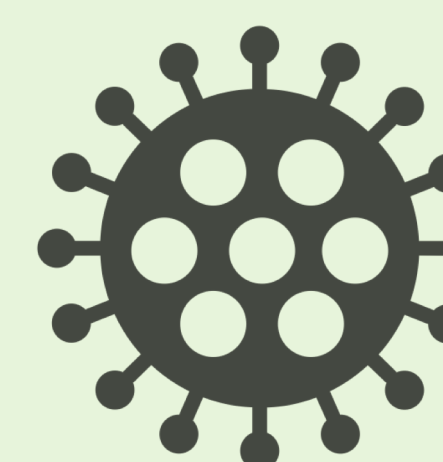
## ESM PROTOCOL AND PROCEDURES



Initially assessed for eligibility by PR or research assistant in the region of Montreal (QC), Canada



## ANALYSIS AND CONCLUSION



### COVID-19 pandemic adjustments

Given pandemic limitations during winter and spring 2020, **data collection procedures were significantly delayed**, impeding preliminary data analysis. Thus, recruitment and data collection are expected to start during fall 2020. Adaptations to take into account **pandemic influence over studied variables** will be made.

### Expected results

- ESM feasibility and acceptability
- RNT, VA and emotional concurrent and lagged trends and association
- Contextual and situational variables influence on momentary processes



### Analytic strategy

Descriptive and inferential statistics  
Psychometrics  
Multi-level mixed-effects approach to concurrent & lagged associations

### Conclusion

- Determine the acceptability and feasibility of ESM methods and mobile technology during the perinatal period to assess RNT, VA and emotional health
- Improve women's psychological health through increased access to timely evaluation of meaningful processes hindering momentary pursuit of VA.

### Acknowledgements

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### Further information

jose.angel.mendoza.herrera@usherbrooke.ca

