**Aims and Hypotheses**

Pre-event and post-event rumination are two key maintaining factors in Social Anxiety Disorder (SAD), yet the current gold-standard treatments for SAD do not directly target pre-event and post-event rumination. The current studies seek to advance the limited literature on treating pre-event and post-event rumination by investigating the effects of a specific intervention on reducing pre-event and post-event rumination in individuals with SAD. One hypothesis as to why socially anxious individuals continue to engage in pre-event and post-event rumination (despite its negative effects) is that they hold a range of unhelpful metacognitive beliefs about rumination. Accordingly, a strategy that may be effective in reducing rumination is challenging individuals’ unhelpful beliefs about rumination using metacognitive therapy (MCT). This strategy has shown promising results in reducing pre-event rumination, but it is yet to be piloted with post-event rumination. Specifically, this study aims to:

1. Pilot whether a brief MCT intervention (compared to an active treatment control) may be feasible in reducing both pre-event and post-event rumination in individuals with social anxiety disorder (Study 1);

2. Better understand the content and nature of socially anxious rumination, as experienced by individuals with social anxiety disorder (Study 2).

Study 1 hypothesises that individuals with social anxiety disorder whom receive the brief MCT intervention will report short-term, transitory reductions in pre-event and post-event rumination in relation to a speech task, compared to an active treatment control.

Study 2 (qualitative interviews) will explore the content and nature of pre-event and post-event rumination, as experienced by individuals with SAD. It will consist of open-ended questions that are exploratory in nature; therefore, we do not have specific hypotheses about what will be found.

**Participant Characteristics (Studies 1 & 2)**

All participants will meet principal diagnosis of social anxiety disorder but are not a treatment-seeking sample. They will be recruited via SONA.

All participants will meet the following criteria:

* Undergraduate psychology students at the University of Sydney.
* Scoring ≥36 on the Social Interaction Anxiety Scale SONA pre-screen.
* Principal diagnosis of social anxiety disorder as assessed by the Anxiety Disorders Interview Schedule (ADIS-5).

Individuals who are actively suicidal or are currently experiencing psychotic symptoms will be excluded from the study, but will be provided onward referrals to treatment services. No other exclusion criteria apply.

**Location (Studies 1 & 2)**

Data collection for Study 1 will involve 3 testing days. Testing days 1 & 2 will be completed at the Brain and Mind Research Institute, Level 2, Psychology Clinic, Group Room 3. For testing day 3, participants will be emailed an electronic link to online questionnaires hosted on Qualtrics using their University of Sydney email address.

Study 2 interviews will be conducted at the Brain and Mind Research Institute, Level 2, Psychology Clinic, Group Room 3.

**Study 1 Methodology**

**Testing day 1**

All participants complete the informed consent form. The ADIS-5 will then be administered as well as a demographics questionnaire, and questions to facilitate online completion of questionnaires on testing occasion 5 (i.e., student number and email address), and the following questionnaires:

* Social Phobia Scale (SPS)
* Social Interaction Anxiety Scale (SIAS)
* Depression Anxiety and Stress Scales (DASS-21)

Once participants complete these questionnaires, they will be told that they will be completing a 3-minute impromptu speech task in one week’s time, and that this speech will be videotaped so that their performance can be assessed by independent judges. Participants then fill out the following state questionnaires:

* State Anxiety Rating (SAR)
* Probability and Cost Questionnaire (PCQ)
* Speech Performance Questionnaire (SPQ)
* Beliefs About Socially Anxious Rumination Questionnaire (BASARQ)

 Participants will be randomly allocated to one of three conditions:

1. **MCT-Pre:** A brief MCT intervention one week prior to the speech task;
2. **MCT-Post:** A brief MCT intervention immediately after the speech task;
3. **Exposure:** A behavioural/exposure intervention consisting of a ‘practice’ speech one week prior to the speech task.

The two MCT conditions are identical, except for the timing of the intervention (one week prior to the speech versus immediately after the speech). This is to investigate whether/how the timing of the intervention has an impact on pre-event and post-event rumination.

The MCT intervention involves eliciting participants’ beliefs about pre-event and post-event rumination, and challenging and reappraising any unhelpful beliefs that serve to maintain these processes. Participants are then instructed to notice when they are engaging in rumination about the speech and to disengage from it by turning their attention elsewhere.

The exposure intervention involves first providing the rationale that it is often helpful to do a practice speech before the main event, then instructing participants to give a 3-minute practice speech on a random topic. They will be told that it is just a practice, and it will not be videotaped or evaluated.

After taking part in their allocated intervention, those in the **MCT-Pre** and **Exposure** conditions complete these same questionnaires a second time:

* State Anxiety Rating (SAR)
* Probability and Cost Questionnaire (PCQ)
* Speech Performance Questionnaire (SPQ)
* Beliefs About Socially Anxious Rumination Questionnaire – Pre-event (BASARQ-Pre)

Those in the MCT-Post condition will not receive their intervention until the following week, so they do not complete the questionnaires.

It is anticipated this testing day will take 2 hours. All participants will be asked to return in one week’s time.

**Testing day 2 (one week later)**

When participants return the following week, they each complete the following questionnaires prior to giving the speech task:

* Socially Anxious Rumination Questionnaire – Pre-event (SARQ: Pre-event)
* Beliefs About Socially Anxious Rumination Questionnaire – Pre-event (BASARQ-Pre)
* State Anxiety Rating (SAR)
* Probability and Cost Questionnaire (PCQ)
* Speech Performance Questionnaire (SPQ)

All participants then complete the 3-minute impromptu speech task on a random topic. After performing the speech, they then complete these questionnaires again:

* Beliefs About Socially Anxious Rumination Questionnaire – Post-event (BASARQ-Post)
* State Anxiety Rating (SAR)
* Probability and Cost Questionnaire (PCQ)
* Speech Performance Questionnaire (SPQ)

Those in the **MCT-Post** condition then receive the MCT intervention described earlier, and complete the BASARQ again. It is anticipated that this testing day will take a total of 30 minutes.

**Testing day 3 (one week later; online)**

One week after the speech task, all participants will be emailed a Qualtrics link to a battery of questionnaires which will assess their anxiety about the speech they performed, how frequently they experienced negative thoughts about their speech (post-event rumination), and trait symptoms. These questionnaires consist of:

* Socially Anxious Rumination Questionnaire – Post-event (SARQ: Post-event)
* Beliefs About Socially Anxious Rumination Questionnaire – Post-event (BASARQ-Post)
* Speech Performance Questionnaire (SPQ)
* Probability and Cost Questionnaire (PCQ)
* Social Phobia Scale (SPS)
* Social Interaction Anxiety Scale (SIAS)
* Depression Anxiety and Stress Scales (DASS-21)

This final set of questionnaires will take approximately 15 minutes to complete. Once they have been completed, participants will be provided with a debrief statement via email and will be awarded SONA credit.

**Study 2 Methodology**

Qualitative interviews will be conducted with a small number of participants (10-15 people) who meet the same inclusion and exclusion criteria as those in Study 1 (please see section above on ‘Participant characteristics – Studies 1 & 2’). Participants receive an ADIS-5 interview to confirm diagnostic status, followed by a series of semi-structured, open-ended questions about the content and nature of pre-event and post-event rumination as they experience it. Specific interview questions are uploaded as a separate document in the ethics application. This testing day will take approximately 1 hour. Following the interview, participants are debriefed and awarded SONA credit.

**Data Collection and Analytic Plan (Studies 2 & 3)**

The ADIS-5 interview will be video recorded and a subset assessed by a researcher experienced using the ADIS-5 to ensure diagnostic reliability. The brief MCT intervention will be video recorded and a subset also examined to determine the intervention protocol is adhered to and consistent across all participants. Speech tasks (minus the ‘practice’ speech in the exposure condition) will be video recorded to allow an independent judge to rate performance. Qualitative interviews will be video recorded to allow researchers to code responses using thematic analysis. All questionnaires will be completed on Qualtrics Research Suite which the School of Psychology has a licence for. All data will be exported from Qualtrics to Statistical Package for the Social Sciences (SPSS). Once downloaded to SPSS all potential identifying information will be removed (i.e., student number and email address). Data will be analysed using SPSS. An ANOVA will be used to examine whether the brief MCT intervention (compared to the active treatment control) had a differential effect on pre-event and post-event rumination and other symptom-related variables.

**Significance**

There is a current scarcity of knowledge regarding pre-event and post-event rumination in social anxiety disorder, particularly regarding the potential efficacy of specific interventions that aim to reduce pre- and post-event rumination. These two studies seek to add to the limited research in this area by piloting whether this brief intervention could lead to short-term, transitory reductions in both pre- and post-event rumination. If this brief intervention is feasible and shows promise, this would warrant its expansion into a larger intervention that may be included in traditional treatments for Social Anxiety Disorder to help improve treatment outcomes.

**Timeline**

February 2021: Submit ethics modification

March-June 2021: Begin data collection

July-November 2021: Continue data collection if necessary

November 2021: Data analysis

December 2021: Write up of papers

January 2022: Submit for publication

February 2022: Submit for publication