## **Procedure**

Each trial began with a white fixation point on a black background, presented for a random interval between 600 and 1600 ms. Participants were presented with the memory template which they were asked to memorise and which was displayed for 1500 ms. This was followed by a fixation point displayed for 1000 ms which was subsequently replaced by the visual search array, displayed until response. Participants were required to report the gender of the face surrounded by the colour singleton (target) as quickly and as accurately as possible. Participants were instructed to use the index finger from their left hand to press the “F” key if the face oval is a female and the index finger from their right hand to press the “M” key if the face oval is a male. In each trial, the visual search display was followed by a fixation cross for 1000 ms and a match/ no-match test whereby a face oval was presented at the centre of the screen and the participants were required to answer whether the face matched the memory template by pressing the “F” key for “no-match” and the “M” key for “match”. Before the experiment, participants completed 20 practice trials during which correct and incorrect responses were indicated by on-screen feedback. If fewer than 14 trials (70%) were recorded as correct during practice (identification of the gender of the target), the participant was asked to read the instructions for the task again and complete another 15 practice trials (with on-screen feedback provided). Each participant completed 2 blocks of 96 trials for a total of 192 trials. Participants completed the dual task followed by the self-report measures listed below.

1. Trait Anger- measured using the State-Trait Anger Expression Inventory–II (Spielberger, 1999).

2. The Inventory of Callous-Unemotional traits (ICU, Frick 2004).

3. The Reactive- Proactive Aggression Questionnaire (RPQ, Raine et al. 2006).

4. The Social-Emotional Information Processing Questionnaire (SEIP-Q, Coccaro et al., 2017)

Fig.1. The visual task

