**Cut-off literature review**

In a study that included currently depressed, formerly depressed, socially anxious and healthy control groups sampled from university teaching hospital and the local community, Joorman, Dkane and Gotlib (2006) used the RRS questionnaire to measure the tendency for rumination. The mental disorder groups showed RRS means ranging from 41.11 to 53.09 (SD 9.68 – 11.07(, while the non-clinical participants group showed a mean of 31.1 (SD 7.64). All mental disorders groups significantly differed from the non-clinical group. Specifically, the non-clinical mean in RRS brooding subscale was ~7 while int the mental disorder groups it ranged between ~9 and ~10.5 (RRS brooding data was derived from figure 1; Joorman, Dkane & Gotlib, 2006).

Chart, bar chart

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In addition, in a study on a clinical population, recruited from an academic hospital in France, individuals who met the DSM-IV-TR criteria for MDD, had a mean RRS brooding of 13.22 with standard deviation of 3.64 (Parola et al., 2017).

Graphical user interface, text

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Similarly, Kim, Yu, Lee and Kim (2011), reported brooding medians of 13.0 for MDD, bipolar disorder and generalized anxiety disorder (or obsessive compulsive disorder), the 25th percentile ranged from 9 to 11. The median of 9.0 for panic disorder with a 25th percentile of 8.

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To conclude, Joorman et al. (2006) showed that RRS brooding subscale significantly differentiated between individuals that are currently or were formerly depressed, and those without any history of mental disorder. In addition, they also reported an association between the RRS brooding score and cognitive bias. Kim et al., (2011) reported heightened ruminative score among individuals with MDD as well as with BPD and GAD/OCD.

Therefore, based on data reported in the literature it seems that a threshold of 9 at the brooding subscale of the RRS questionnaire, would be the most plausible study inclusion cut-off value. This cut-off is expected to include in high probability individuals with heightened rumination that is associated with mental suffering and specific disorders (Joorman et al., 2006; Kim et al., 2011; Parola et al., 2017)