The effect of mental imagery on predictions of behavioural engagement in depression

Ellie Burton e.burton@yorksj.ac.uk X: @Ellie_Burton_
Supervisors: Dr Jennifer Shevchenko & Dr Matthew Coxon
York St. John University

Background, Aims & Hypotheses

➢ Prospecion in mental health is important because individuals pre-experience potential emotional consequences when simulating hypothetical futures (Gilbert & Wilson, 2007).
➢ A mass of cognitive therapy focuses on verbal thoughts and the past, suggesting the role of imagery and the future may be overlooked (Roepke & Seligman, 2016).
➢ Holmes et al., (2006) highlighted that encouraging verbal thoughts may lead to a deterioration in positive mood, compared to positive imagery which could lead to mood improvements. Therefore, imagery-based strategies could result in improved interventions for depressive disorders (Roepke & Seligman, 2016).
➢ Boland et al., (2018) conducted two experiments to explore the role of positive imagery of future events predictions (importance, likelihood, and control) in depression. Post-positive imagery interventions improved future event predictions. This portrays that the use of positive imagery may be an effective technique in cognitive approaches to therapy.

Methodology

Results

➢ There were main effects of time, whereby participants rated an increase in the following predictions post-intervention: Engagement F(1, 140) = 7.99, p < .005, np² = .054, Importance F(1, 140) = 34.52, p < .001, np² = .198, Vividness F(1, 140) = 6.79, p = .010, np² = .046, and Anticipatory Pleasure F(1, 140) = 6.34, p = .013, np² = .043.
➢ There was a main effect of time, whereby participants rated activities as less controllable post-intervention: F(1, 140) = 23.69, p < .001, np² = .145.
➢ There were main effects of mood, whereby non-dysphoric participants rated their activity predictions higher than dysphoric participants in the following predictions: Engagement F(1, 140) = 5.30, p = .023, np² = .036, Control F(1, 140) = 19.22, p < .001, np² = .121, Motivation F(1, 140) = 5.32, p = .023, np² = .037, Vividness F(1, 140) = 7.85, p = .006, np² = .053, and Anticipatory Pleasure F(1, 140) = 5.99, p = .016, np² = .041.
➢ There were significant interactions (time x intervention) for the predictions of Vividness F(1, 140) = 6.15, p = .031, np² = .043, and Anticipatory Pleasure F(1, 140) = 4.83, p = .03, np² = .033, where participants in the imagery condition rated their predictions higher than those in the verbal reasoning condition post-intervention.
➢ There was a significant interaction (time x dysphoria) for the prediction of Motivation, where non-dysphoric participants were significantly more motivated than dysphoric participants pre-intervention F(1, 140) = 4.30, p = .049, np² = .030.
➢ There was a significant interaction (time x intervention x dysphoria) showing a reduction of perceived effort for non-dysphoric participants in the imagery condition post-intervention F(1, 140) = 4.83, p = .030, np² = .033.
➢ Predictions of anticipated pleasure revealed no significant findings.

Discussion & Conclusions

➢ Regarding significant increased ratings of importance, this is supported by Boland et al., (2018) which also found an increased level of importance post-intervention.
➢ With reference to vividness and control, non-dysphoric participants imagined their activities more vividly and more controllable than dysphoric individuals. This is in line with previous research which found an association between dysphoria and impairments in abilities to vividly imagine positive futures (Holmes et al., 2008), and lower feelings of control over future outcomes (Mirovsky & Ross, 1990).
➢ The result of feeling of reduced control post-intervention contradicts the hypothesis and adds to the disparity of previous research (Boland et al., 2018; Hallford et al., 2022). Boland et al., (2018) found increased control post-imagery, whereas Hallford et al., (2022) found no difference in control post-imagery. Therefore, additional research is required to investigate this further.
➢ In conclusion, the findings of this study are mixed, with some hypotheses being supported, and others not. The present study conveyed that mental imagery can be a useful tool in improving both vividness and anticipatory pleasure. With several main effects of time, this study highlighted that verbal reasoning may also be beneficial in improving people’s prospective cognition. This differs from previous research that suggested positive imagery could be more effective in mood improvements than verbal thinking (Holmes et al., 2006). Future research could modify the experimental condition to virtual reality to enhance differences between that and the control condition, perhaps leading to differing results.

References