Hedonic and Instrumental Motives in Anger Regulation

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Emotion regulation is individuals' attempts to manage their emotions (Gross, 1998, cited in Tamir et al., 2008). Emotion regulation may be driven by either hedonic reasons (to increase pleasure) or by instrumental reasons (to serve specific purposes). In this paper Tamir and colleagues (2008) propose that people may choose a negative emotion when it serves their goals. To test this proposition, the authors asked two research questions. First: would individuals prefer anger-inducing activities to exciting and neutral activities when anticipating a confrontational task?; second: would anger increase performance in a confrontational task but not in a non-confrontational one?

Description of the experiment

To answer the first research question participants were involved in two selection tasks. In the music selection task, participants read a game scenario while listening to a music fragment and then rated how much (1= not at all, 7 = extremely) they would prefer to listen to that particular music fragment while playing the game. A total of 4 game scenarios (2 confrontational and 2 non confrontational) each paired with 9 music fragments (3 angry, 2 neutral and 2 exciting) were presented. A recall selection task followed the same procedure but the 4 game scenarios were paired with 6 emotional events (2 angry, 2 neutral and 2 exciting). To test the second question, participants were randomly assigned to a music condition (angry, neutral or exiting) and then played both a confrontational and a non-confrontational game. Participants played the first game for 5 minutes then listened to music for 3 minutes and then resumed playing the game for 5 minutes while the music was still playing. Then they played the second game following the same protocol. After finishing the game tasks, participants listen each of the music fragments and evaluated how angry, excited, pleasant, and active the music made them feel (1 = not at all, 5 = extremely).

Method

82 male undergraduates (mean age = 19.99 years) participated in the study. Materials consisted of 4 game scenarios (2 confrontational, 2 non-confrontational); eight exciting, eight neutral, and six angry instrumental musical segments; and two games (confrontational - Soldier of Fortune, non-confrontational - Diner Dash).

Analysis and results

Results confirmed that when expecting to play a confrontational game participants would prefer to engage in an activity that induces anger (irrespective of the type of activity). Repeated measures analysis of variance (ANOVA) (within subjects) showed a significant Game Type (confrontational vs. non-confrontational) x Emotion (exciting, neutral, angry) interaction (p < .001) when participants expected to play a confrontational game but not when expecting to play a non-confrontational game. T-tests of simple effects confirmed that it was the nature of the emotion and not the type of activity that influenced selection ($t(81)$s > 4.20, ps < .05). There was a significant correlation between pre-induction and post-induction performance, so residual scores for overall performance in each game were calculated for every participant. Repeated measures of ANOVA (two within one between) showed a significant Game x Music Condition interaction, ($F(2, 79) = 5.02, p < .01$). Participants who listened to angry music performed significantly better in the confrontational game (but not in the non-confrontational one) than the ones who listened to the exiting music ($t(79) = 2.47, p < .05$, $p_{rep} = .94$). So results confirmed both research questions. Repeated measures ANOVAs showed that:

the angry music was perceived as less pleasant and more anger inducing than the neutral and exciting music; less exciting than the exciting music; angry and exciting music were more arousing than neutral music.

Strengths

The study has a good experimental design. Plenty of measures were taken to isolate the effects of the independent variable of interest and maintain a very good control over possible covariates/ moderating variables: all materials were tested to confirm they have discriminating power on the trait of interest but they are similar otherwise (e.g. computer games and game scenarios were clearly either confrontational or non-confrontational but were similarly interesting, engaging, and difficult); possible effects of game order on performance were tested; to eliminate the effect of differences in baseline performance they calculated residual performance scores; in the emotion selection task they used two types of emotion inducing activities to ensure that preference for a certain emotion and not for a type of activity, influenced selection. The power analysis performed by Masicampo (2014) before replicating this experiment showed that 'a sample of 7 participants would result in 95% power'.

Weaknesses

As the participants in the study were only male students the results cannot be generalised for women or older adults. This is important since research shows that the ability to regulate emotions improves with age (Gross et al., 1997; Lawton, Kleban, Rajagopal, & Dean, 1992; McConatha, Leone, & Armstrong, 1997; cited in Phillips et all., 2006). Another weakness (mentioned in the article) is that an artificial context was created in the experiment so the study lacks ecological validity. A not so clear aspect in this study is how angry participants really were when listening to the angry music. ANOVA confirmed that participants perceived angry music to be more anger inducing than the neutral and exciting music (Ms =2.63, 1.30, and 1.18). But a mean score of 2.63 on a scale of 1-5 is not very impressive. Also in the pilot test the mean score for how anger inducing the angry music was 3.60, the scale is not mentioned but is obviously wider than 1-5. This raises the question whether music was indeed the best manipulation. There are several weakness related to the study presentation: the procedure for the emotion selection task is not so clearly presented; the study fails to mention the scale used to assess the game scenarios, the music fragments in the pilot tests and the results from the pilot test on the computer games.

Suggestions

Several suggestions can be drawn for the current analysis: to extend the experiment to different samples; to repeat the experiment using a different manipulation like emotional film, vignettes; to test the research questions in a real life context (aggressive sports – suggested by authors).

References

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