

A study on the correlation between emotional regulation strategies and self-depletion

Xue Yixin

Nanjing Foreign Language School 210008

ABSTRACT: *According to Gross's emotion regulation theory and Baumeister's ego depletion theory, the study researches the impact of two of the mainly used emotion regulation strategies--cognitive reappraisal and expressive suppression--to cognitive depletion when inducing people's negative emotion. The result shows that people who are asked to suppress their negative emotion are more likely to give up in the anagram task.*

KEY WORDS: *emotion, regulation, emotion, regulation, strategies, cognitive reappraisal, expressive suppression, anagram task, ego depletion*

Theory

Self-control has always been one of the human characteristics that psychologists have paid great attention to. It is closely related to many aspects of human life. Self-control is the ability of an individual to control impulses, desires, and habitual responses. However, in the process of self-control, individuals will lose themselves, leading to the failure of self-control. Ego depletion refers to a temporary decline in one's ability or willingness to perform volitional activities, including a decline in one's ability or willingness to control one's environment, control oneself, make choices and initiate behaviors. [1]According to Baumeister's explanation: 1) Psychological energy is indispensable to the executive function of a person (including self-control, prudent choice and initiative behavior) 2) Mental energy is limited, and self-control can only be used for a limited number of times in the short

term 3) All the executive functions require the same resource. The resource loss in one field will reduce the available resources in another field 4) The success of self-control depends on the amount of psychological energy 5) The process of self-control is the process of consuming mental energy, which needs a period of time to recover.

Numerous studies have shown that ego depletion leads to a subsequent decline in self-control. For example, in the state of self-depletion, an individual's resistance to temptation of other things, control of aggressive behavior and persistence in the face of difficulties will be reduced.

Emotional regulation has also been one of the hot issues in the field of psychology. Emotional regulation refers to the process in which individuals exert influence on the occurrence, experience and expression of emotions. [2][3]According to Gross's model of emotional modification process, emotional modification can be created at every stage of the emotional development process, namely situation selection, situation modification, attentional deployment, cognitive change and response modification.

Situation selection refers to individuals' approach to or avoidance of certain people, events and situations to regulate their emotions. Individuals use this strategy to reduce the occurrence of negative emotions and increase the opportunity of experiencing positive emotions. For example, individuals with social anxiety try their best to avoid social situations to reduce the occurrence of anxiety. Situation modification refers to coping with problems and making efforts to change the situation. For example, when an individual is in an embarrassing situation, he will try to change the embarrassing thing. Attentional deployment means that a person focuses on some aspects of a situation. This involves trying to focus attention on a particular topic or task and focusing attention away from a particular topic. When unpleasant subjects are brought up, individuals tend to ignore them and pay attention to something else. Cognitive reappraisal is cognitive change, which means to change the understanding of emotional events, such as comforting oneself not to get angry since others are not on purpose, telling oneself that the difficulties encountered are just small things. Response modulation includes expressive suppression and expressive revealing. Expressive suppression refers to the suppression of emotional expression that is about to occur or has occurred, like you try not to show your angry

and control yourself when somebody makes you feel angry. On the other hand, expressive revealing means to try best to reveal your emotion.

According to Gross's theory, emotion regulation strategies could be divided into antecedent-focused emotion regulation and response-focused emotion regulation. Emotional regulation that occurs before the activation of an emotional response is antecedent-focused emotion regulation, including situation selection, situation modification, attentional deployment and cognitive reappraisal. Emotion regulation that occurs after the emotion response is activated is response-focused emotion regulation, which includes expressive suppression and expressive revealing.

Cognitive reappraisal and expressive suppression are two of the most commonly used strategies for regulating emotions. However, cognitive reappraisal was found to be a more effective emotion regulation strategy than expression suppression. [4][5](Gross 1998, Li Jing Lu Jia Mei 2007)Gross et al. have done a lot of research on whether emotional regulation consumes cognitive resources, such as selecting memory as an important cognitive style. The results showed that the effect of antecedent-focused emotion regulation on memory was not significant, but the effect of response-focused emotion regulation on memory level was significant. Therefore, it is concluded that the cognitive resources consumed are different due to different emotional regulation strategies. [6]Response-focused emotion regulation strategies will cost more mental energy. The explanation is that in the face of negative emotions, cognitive reappraisal can not only suppress the expression of negative emotions, but also reduce the experience of negative emotions. Expression suppression can only suppress the expression of emotions, and has no effect on the experience of negative emotions. Nevertheless, when facing positive emotions, emotion suppression can reduce people's experience of positive emotions.

[7][8]Also, In the 1998 Muraven proposed the depletion model of regulation. It suggested that When individuals engaged in energy-consuming regulatory behaviors, less resources were left for later cognitive activities. Thus, people may show a temporary lack of responsiveness. In the 1998's Muraven's research, people who were forbidden to think about a certain thing when accomplishing a writing task quickly gave up in the later hard anagram task earlier.

Hypothesis

In the face of negative emotion, compared with cognitive reappraisal, expressive suppression will cause more ego depletion.

Research method

randomly select some people, dividing them into three group(each group contains about 25-30 people). Letting each group of people watch a 3-minute part of a film--1942. This film clip would induce participants' negative emotion like sad and indignation. In the first group, participants were asked to use cognitive reappraisal to regulate emotion. In the second group, participants were asked to use expressive suppression to regulate emotion. The third group was control group. They were asked to only watch the film clip.

Instruction note:

Cognitive reappraisal group: A video will be shown next. During the viewing process, please watch carefully. Please watch the movie clips objectively and tell yourself that it is just a movie, not something happened in life.

Expressive suppression group: A video will be shown next. During the viewing process, please watch carefully. While feeling the emotions of the movie, please try to hide your emotions so as not to attract the attention of those around you.

Control group: A video will be shown next. During the viewing process, please watch carefully.

Subjective emotional feeling report:

We use the ERQ Chinese version to test participants' emotional feeling. This questionnaire adopted the Emotion Regulation Questionnaire compiled by Gross. There were 10 items in total, scoring 7 points. The higher the score, the more frequently the emotion regulation strategy was used. The scale includes two dimensions: cognitive reappraisal and expression suppression. Among them, the measurement of cognitive reappraisal dimension consists of 6 items, and the measurement of expression inhibition dimension consists of 4 items. The Chinese version of the scale has good reliability and validity.

[9]letting each participant do an anagram task:

In the anagram task, the researchers gave the subjects a set of letters to make words. The task is unsolvable, but the subjects don't know. The time of their persistence is recorded. The shorter their persistence time, the more mental energy they spent in their prior emotion regulation behavior.

Here the anagram task is used to test participants' ego depletion. In the 1998, Muraven et al. Just used an anagram task to test participants' cognitive depletion. This task needs participants' self-control when they are trying to solve the unsolvable anagram rather than give up. As ego depletion will lower the level of later self-control, we can assume that participants who give up quickly in the anagram task experience more ego depletion in the prior emotion-inducing task.

Implication

proving that expressive suppression will spend people more mental energy and cause more ego depletion. Further demonstrating that cognitive reappraisal is a more effective approach than expression suppression. Combining the theory of ego depletion/depletion model of regulation and emotion regulation strategies. Providing advice to people who need to regulate their emotion in daily work and life to improve their working efficiency and living quality.

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