

The relationship between implicit self-esteem and the level of self-reported Behavioral Activation System (BAS) and Behavioral Inhibition System (BIS)

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Abstract. The present study examines the correlation between implicit self-esteem and the level of self-reported Behavioral Activation System (BAS) and Behavioral Inhibition System (BIS). Both name letter measure and implicit association test will be used to measure implicit self-esteem. Also, participants have to complete a self-report questionnaire to get their BAS and BIS score. Then, we will correlate BAS, BIS with implicit self-esteem. We expect to have strong positive correlation between BAS and implicit self-esteem and strong negative correlation between BIS and implicit self-esteem. So, this study interpretes Implicit self-esteem in the biological view through BAS and BIS. And the finding may help us find a way to improve our implicit self-esteem.

1. Introduction

Psychologists gradually began to realize that in addition to explicit self-esteem, there is implicit self-esteem, which refers to introspective, unrecognized evaluations of oneself. Two systems that underlie a lot of human behavior and personality were proposed by Gray [1]. The behavioral approach system (BAS) is related to approach behavior, whereas the behavioral inhibition system (BIS) is related to avoidance or withdrawal behavior (BAS). This essay studies implicit self-esteem from a new angle, which links BAS BIS with Implicit self-esteem, aiming to do research on Implicit self-esteem in the biological view. In the work, the relationship between implicit self-esteem and the level of self-reported Behavioral Activation System and Behavioral Inhibition System is mainly discussed.

Jeffrey Gray proposed this model, which includes two main physiological systems: behavioral inhibition system (BIS) and behavioral activation system (BAS). This neurological system determines the sensitivity of individuals to reinforcement and their emotional experience. Behavior inhibition system (BIS) is to inhibit current activities, improve the level of awakening to conditional punishment in the environment, and improve the level of response to non-reward and novel stimuli. This system is considered to be operational, especially in terms of negative avoidance and elimination of reinforcement, and its purpose is to suppress possible punishment. Its activation will lead to anxiety and frustration. The difference of individual activities in this system is the cause of anxiety trait. On the contrary, the behavior activation system (BAS; also known as the behavior promotion system) urges individuals to carry out

purposeful activities and have a high arousal state for reward and non-punitive stimulation. This system is operational in the active avoidance and approach activities. Its purpose is to focus on exploratory behavior, which will make individuals closer to the reinforcement. Its activation will make individuals feel hopeful and relaxed, and the activity performance in this system

Individual differences are the cause of impulsive traits. Corr once mentioned that after the theoretical clarification and empirical test of Gray and other theorists, the theory of behavioral inhibition/activation system, that is, the theory of enhanced sensitivity personality, has developed into one of the most concerned theoretical paradigms in the field of personality psychophysiology. In Shaofu Guo and others' comments on the theory of enhanced sensitivity personality, they believed that future research should focus on: (1) verifying theoretical hypotheses with physiological indicators; (2) Discuss the characteristics that reflect the enhanced sensitivity; (3) To investigate the interaction between cognitive factors and biological factors (figure 1).

Psychological resilience is considered to be a relatively variable trait, which is closely related to personality traits. There is a strong positive relationship between resilience and extroversion, openness, pleasant and conscientiousness, which shows a higher level of adaptability; Froutan et al. found that neurotic individuals often experience negative emotional states, and often use avoidance and distraction coping strategies in coping with stress, such as denial, wishful thinking and self-criticism. Compared with highly neurotic individuals, neurotic individuals with lower scores have higher psychological resilience, and can better complete work tasks under the same pressure. Behavior inhibition/activation system (BIS/BAS) can explain the elastic response of personality

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differences in stressful life events from the perspective of neurobiology, and is considered to be the main neurobiological system that affects emotion, behavior and personality. BIS/BAS shows the tendency of avoiding and approaching, which is a response to new, beneficial or dangerous stimuli to achieve successful adaptation. Seeking happiness and avoiding pain are considered to be the basic principles of BIS/BAS. BAS is considered to be a motivational system that stimulates reward seeking behaviors related to impulse and exploration, while BIS is considered to be a attention system that promotes reaction inhibition or active withdrawal. That is, BAS reflects the tendency to approach positive stimulation, and BIS reflects the tendency to urge individuals to avoid negative stimulation. Existing research has established the relationship between BIS/BAS and resilience and personality. Neuroticism and BIS are closely related to negative emotions and poor resilience. Reward response

and motivation reflect goal-related behavior and persistence, which are two main factors of positive psychological function. Reward response and driving force are positively related to resilience, and avoidance trait is negatively related to it. Behavioral activation system (BAS) is responsible for positive emotional experience, is sensitive to reward signals, and can significantly predict extraversion. These positive factors can promote psychological resilience by broadening attention, promoting flexible thinking, and coping ability, which is an important characteristic basis of psychological resilience. In addition, the field of neurobiology believes that reward circuit can convey stimulus information related to reward in the environment, and guide adaptive behavioral response to reward. Therefore, sensitivity to rewards or positive signals is a key factor for pressure recovery.

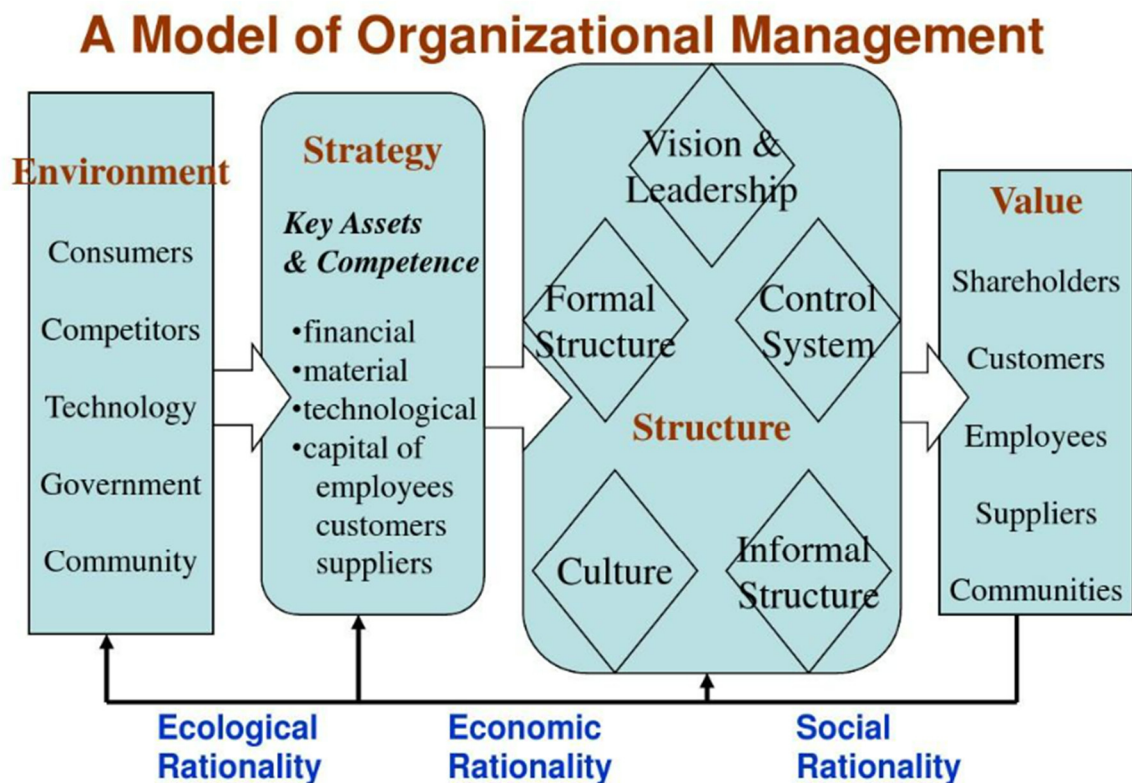


Fig. 1 A model of organizational of management

2. Hypothesis

H1: People with high self-reported BAS have higher implicit self-esteem compared to those with low self-reported BAS

H2: People with high self-reported BIS have lower implicit self-esteem compared to those with lower BIS because BIS is related to more negative emotions.

3. Method

3.1 Participants

To determine the sample size for the current investigation, G*Power 3.1 will be used. We calculated a 0.50 correlation. A paired t-test with a sample size of 29 enables us to test H1 and H2 with a statistical power of 0.80. (two-tailed). We intend to gather information from at least 50 participants to account for any possible inaccurate or missing data.

3.2 Experiment1 two predictors: BIS BAS

To measure BAS and BAS, participants will be asked to do a self-report questionnaire to get a score which evaluates their BAS and BIS. Questions involve “do you love to keep it when doing well at something”, “will criticism hurts you a lot” and so on [2].

3.3 Experiment2 dependent variable: implicit self-esteem

This study follows the procedure as is described in Increasing Implicit Self-Esteem Through Classical Conditioning [3].

(1) Name letter measure

Each letter of the alphabet will be rated on how much the participants like it. How much a person prefers the first letter of his or her name to every other letter in the alphabet is a good indicator of how high their implicit self-esteem is [4].

(2) Implicit Association Test

Participants are required to classify words. In one bunch of tests, right reactions to self-related words, (for example, "I") and pleasant terms (such as "rainbow") requires pressing the same computer keys; In another one, self-related words are given the same key as unpleasant words (like, vomit). When self-related and positive words had the same key, high implicit self-esteem is related to how much time participants took to react to the target words [5-7].

(3) Implicit Self-Esteem Composite Score

After excluding participants whose scores on the Implicit Association Test and Name Letter Measure are utterly dissimilar, then construct a composite value of the two measures for each participant by taking the mean of twoscores [8].

4. Data Analytic Approach

This proposal will run Pearson correlation and use R to judge whether the correlation is positive or negative, strong, or weak.

5. Expected Results

Aim 1. In H1, we expect to have strong positive correlation between BAS and implicit self-esteem

Aim 2. In H2, we expect to have strong negative correlation between BIS and implicit self-esteem

6. Conclusion

This study examines the correlation between implicit self-esteem and the level of self-reported Behavioral Activation System (BAS) and Behavioral Inhibition System (BIS). Through name letter measure and implicit association test, implicit self-esteem is measured and is correlated with BAS and BIS. There will be a strong positive correlation between BAS and implicit self-esteem and strong negative correlation between BIS and

implicit self-esteem. If this hypothesis is confirmed, then the very abstract question of how to increase self-esteem turns into how to increase people’s sensitivity to rewards and how to decrease people’s sensitivity to punishment. What’s more, there do exist some limitations. For instance, the effectiveness of the method used to test BIS, BAS and implicit self-esteem remains unsure. However, this proposal gives us a new research possibility that we can relate implicit self-esteem with biology. Based on previous research [9, 10], we know that BAS is positively correlated to left-dominance of the brain, we can relate implicit self-esteem with biology. Therefore, it is likely that people who dominant in left brain will have higher implicit self-esteem. EEG can be used to measure the asymmetry of the brain. Findings like this can give us an idea of how closely self-esteem is related to genes, enabling us to know to what extent can efforts improve people's implicit self-confidence.

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