Do Behaviors Related to Implicit Self-Esteem: A research on correlation of BIS/BAS and Implicit Self-Esteem

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Abstract: Background: The study is a transverse personality psychology study focuses on samples from China, including teenagers and adults age from fifteen to sixty. In this article we synthesize and evaluate results of correlations between implicit self-esteem and behaviors of one specific life time period of more than one hundred people. Method: A narrative review of implicit self-esteem, behavioral activation system (BAS), behavioral inhibition system (BIS), the name letter effect, 24 scale survey, and self-association with environment of motives. The name letter effect can examine implicit self-esteem in the form of questionnaires, exploiting the principle that people tend to prefer letters belonging to own initial and/or family name above not-own name letters. Results: The statistic results are consistent with our hypothesis. People who tend to favor initial letters of their own or family while letters having less correlation with them or graded lower have higher BAS level and lower BIS level, vice versa. This indicates implicit self-esteem in crucial to how people will react when facing different situations like depression, scolding, or praising. Conclusion: Two hypothesis of the study are all confirmed. a) Higher implicit self-esteem leads to higher BAS levels, b) lower implicit self-esteem leads to higher BIS levels. However, the second conclusion is to a less degree, in other words, the dependency is lower between implicit self-esteem and BIS levels.

Keywords: Implicit self-esteem, Behavioral Inhibition System, Behavioral Activation System

1. Introduction

Emotions are important parts of our life which influence our behaviors and attitudes toward things happening around us. A behavioral approach system (BAS) controls appetitive motives, where the goal is to crave for things people desired. A behavioral avoidance (or inhibition) system (BIS) controls aversive motives, where the goal is to avoid things that are unpleasant [1]. Based on previous studies, people who present more sensitivity towards rewards and punishments are those who obtain higher self-esteem. Therefore, we predict that people with high self-reported BAS might have higher implicit self-esteem compared to people with low self-reported BAS because a higher BAS is correlated with positive emotions. The aim of our study is to figure out the correlation between implicit self-esteem and the level of self-reported BAS and BIS. The highlights of the study are that controlling behaviors and emotions is difficult for most of the people, so tracing back to reasons and factors related to the behaviors and knowing how these are correlated is important, and also valuable in deepen recognition towards ourselves [2]. In the study, we will run a

correlation between implicit self-esteem and BIS and BAS by measuring these three levels of a person using methods like name letter effect [3] and the BIS/BAS Scale survey. Our expected results are H1: Higher BAS levels are associated with higher levels of implicit self-esteem [4]; and H2: Higher BIS levels are associated with lower levels of implicit self-esteem [5]. Our results pave the way for future research regarding functions to judge the source of a particular behavior such as a crime or aggressiveness in real life.

Everyone faces different motives and influences from outside environments. Along with the flourishing research about the influence of implicit self-esteem, a rapidly developing number of studies have shown its relation with behaviors. Research has produced mixed findings when examining the correlation of self-esteem and aggressive behavior in childhoo.Vater et. al examines whether discrepancies between explicit and implicit self-esteem are associated with symptom severity in a sample of patients with borderline personality disorder (BPD). Peterson et. al. suggests that in response to relationship-threat implicit self-esteem regulates connection, and this process is moderated by perceptions of a partner's commitment. Stieger et. al., analyze data from 223 twin pairs and 222 biological core families to estimate possible genetic and environmental sources of individual differences in implicit and explicit self-esteem and affect. Moscardino et. al. assess whether SCs were linked to youths' positive adjustment in terms of self-esteem and prosocial behavior. Other influential work includes Greenwald et. al., 1995, Spalding et. al., 1999, Rüsch et. al., 2007.

The aim of our study is to figure out the correlation between implicit self-esteem and the level of self-reported Behavioral Activation System (BAS) and Behavioral Inhibition System (BIS). Specifically, it is hypothesized that:

H1: Higher BAS levels are associated with higher levels of implicit self-esteem.
H2: Higher BIS levels are associated with lower levels of implicit self-esteem.

At the start of our study, we revised articles from 2000 to 2022 published on Google Scholar and several studies similar to our aims of finding the correlation between self-esteem and behaviors. After advancing our own research plan, behavioral inhibition and activation system became the supreme choices to identify behaviors [6].

2. Methods

2.1. Participants

In our study, we send out the questionnaires through applications like We-chat and receive the results from participants who transfer their answers. 137 individuals participated in. Participants will be excluded if they have mental diseases or disabilities in iterating and expressing at the beginning of the questionnaire. Because of the requirement of being familiar with English name, we control the scale of people to a limitation of having the ability to master English as well. We expect the demographics of participants to be 55 females, M=30 years.

Our primary hypothesis involved assessing participants' levels of implicit self-esteem and BIS and BAS. We conduct the results using the software package G*Power, and detect an effect size of 120 using a paired t-test at a 5% alpha level (two-tailed) threshold with 80% statistical power.

2.2. Measures

Two dependent variables—Behavioral inhibition system (BIS) and Behavioral Activation System (BAS) — will be measured. Participants are required to complete the measurement of BIS, BAS, and implicit self-esteem [7].

Measure 1. Behavioral inhibition system levels: for measuring the level of BIS we will use the BIS/BAS Scale survey which is a 24-item self-report questionnaire designed to measure the two

motivational systems (Anthony F. Jorm; Helen Christensen; Using The BIS/BAS Scales to Measure Behavioral Inhibition and Behavioral Activation, 1998). Participants respond to each item using a 4-point scale: 1 (very true for me), 2 (somewhat true for me), 3 (somewhat false for me), and 4 (very false for me). For measuring BIS, statements like "Criticism or scolding hurts me quite a bit" will be shown.

Measure 2. Behavioral activation system levels: similar to the procedure described above, the BIS/BAS Scale survey will be used to measure participants' BAS level, except that different items will be shown such as "It would excite me to win a contest."

Measure 3. Implicit self-esteem: we plan to measure the level of implicit self-esteem using the name letter effect. To do this, participants' tendency to evaluate their name initials and other alphabetical letters in one's name will be measured. High implicit self-esteem is measured by the extent to which a person prefers his or her initials to other letters of the alphabet.

3.   Statistics Analysis

The result of our statistics analysis shows that

For Hypothesis 1: Higher BAS levels are associated with higher levels of implicit self- esteem, so figure1 would be a function of increasing order.

For Hypothesis 2: Higher BIS levels are associated with lower levels of implicit self-esteem, so figure 2 would be a function of decreasing order.
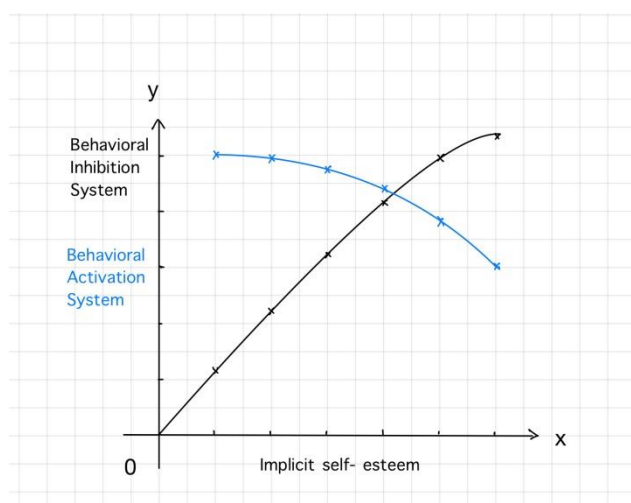

Figure 1: the relationships between three measurements.

The graph is adopted from the statistical analysis, which shows the clear relationships between the three measurements. The average levels of implicit self-esteem measured in the questionnaire is 140.67/260 (total), and the average responding time is 170.23 seconds. The result is consistent with our hypothesis, however, the interesting point is that the decreasing levels of BIS is slower than the increasing levels of BAS, which we do not expect previously.

4.   Discussion

Further questions are how can implicit self-esteem be changed regarding to the fact that they are unconscious and more substantially can behaviors be influenced directly after changes in implicit self-esteem. We require further research to figuring out these problems [8].

Perhaps the result of the study could help people to better deal with negative emotions and control behaviors that may harm others and themselves through having deeper recognition towards

their hearts. Implicit self-esteem concerns representations that we can hardly aware of, so understanding this would to some extend lead to better self-awareness and recognition, so people could understand the motivations of a particular behavior and knowing the cause or source of it. Also, understanding the correlations helps people to better judge themselves and provide solutions to solve some psychological problems fundamentall [9]. We expected to find unconfident people feeling better after using methods to improve implicit self-esteem and thus improve the level of BAS, and sensitive people feeling not that anxious when facing fears because of the increasing level of implicit self-esteem leading to lower level of BIS [10].

5. Limitations

The method of name letter effect used in the study was positively biased, which is stable for only four weeks and is easily influenced by time given for reflection. Human engage with the world through two systems: one with Automatic System, which is intuitive, instinctual, and immediate; and the Reflective System, which is rational, deliberative, and delayed the short period of answering time. In the study, the statistics shows the average time for participants to complete the questionnaire is 210 seconds in small range. In these limited time participants may be unable to reflect thoroughly through themselves and were activated automatically without conscious self-reflection when completing the survey questionnaires, and the biases thus caused is unavoidable in the study [11].

The study contains samples from China, but only in commercial or educational working places like banks and schools. The diversity of people is limited since the majority of people concluded received advanced education and own a well-paid job. The deviation caused in the statistic results are hardly avoidable[11] [12].

6. Conclusion

The main aim of this study was to examine the relation between implicit self-esteem, BIS and BAS level. The relations are expected to be higher BAS and lower BIS when the level of implicit self-esteem improves. After doing the statistical analysis, we discovered that the results are consistent with our assumption. Thus higher implicit self-esteem means higher sensitivity toward rewards and lower sensitivity towards punishment. This reaction to words and environment causes deviation in behaviors. According to pure rational inferences, people with higher implicit self-esteem levels are linked less to have self-abasement, and they tend to be more confident in trying new activities or stepping out of the comfort zone because they worry less about punishments and consequences. Most of the time the reason driving them to do and try new things is the expectation towards rewards and praises, leading to better chances in gaining knowledge and pave the way to success. In contrast, people who obtain lower levels of implicit self-esteem have a higher level of BIS and lower levels of BAS, so they tend to be afraid or worry about questions like "what it is going to be like if I fail" [13]. They set negative allusions before even trying to do thing, and the actual difficulty of doing a specific task is usually lower than the difficulty they imagine. In these cases, implicit self-esteem is greatly influential to brain activities and control people's behaviors unconsciously.

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