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Negativity Bias, Time Spent on Mental Processing and Subjective Well Being

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ABSTRACT

Background: Human beings, either because of evolutionary consequences, predispositions, upbringing or learning are more influenced by negative happenings or events as compared to positive ones. Though negativity bias is important for survival and while self-analysing we need to focus on our weaknesses, it is not clear whether this focus is serving a positive function. The study aimed to find out the relationship between the mental processing of strengths and weakness and the Subjective Well Being (SWB).

Material and Methods: A cross-sectional study was undertaken to understand the concept of negativity bias in undergraduate students aging 19-25 years. The Satisfaction with Life Scale (SWLS) was used to measure the SWB of the participants.

Results: The results indicated that students take less time to tell their strengths and more time to talk about their weaknesses. The SWB of students who elaborate their weaknesses is low as compared to those who give one word or one sentence description.

Conclusion: The elaboration of weaknesses is hampering our subjective well being.

Key Words: Strengths, Satisfaction with Life Scale, Weaknesses

INTRODUCTION

Why do we pay more attention to negative information and why do we prefer negative to positive? Is this individual, institutional, cultural or universal? The principle of negativity bias states that “bad is stronger than good”. According to Corns (2018), “the negative consumes our attention, informs our opinions, and generally affects us disproportionately to the positive” [1]. People weigh negative information more heavily than positive information [2] and negative traits are given greater weight than positive traits in evaluations [3].

Evidence on negativity biases, across cultures and contexts, lend support to the fact that negativity bias is the product of evolution. Grossman, Ellsworth, and Hong [4] and Oishi [5] have tried to find cross-cultural differences in negativity biases and have got positive results. Since different cultures and societies have different ways to deal with anxieties and uncertainties, this may affect the way negative information is weighed and processed. We pay more attention to the information or events that are unexpected and inconsistent as compared to those that are expected and consistent. We

work hard to understand such information [6] and pay more attention to it, making it easier to enter long-term memory and influence our social judgements [7]. Despite the independence of thinking, memory and perceptual processes, the underlying cognitive processes are intrinsically interrelated. Negative stimuli are perceived as more complex than positive stimuli [8] and require greater attention and cognitive processing [9]. Addis, Wong and Schacter [10] found some neural differences in the construction phase but apparent neural overlap during the elaboration phase.

With the increasing and constant focus on competition because of societal and parental pressure, the adolescents concentrate more on what they do not have rather than on what they have i.e., on negative rather than on positive. This study was planned to understand whether this shift is healthy for the younger generation and for the community at large.

AIMS AND OBJECTIVES

To study the negativity bias in students.

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To study the method used by students in giving responses.

To study the amount of time taken to process information related to strengths and weaknesses.

To study the effect of elaborative processing of negative information on Subjective Well being (SWB).

Exclusion criteria: Those with a history of or existing psychological disorder and those who had received any self-enhancement or soft-skills training in the past one year were excluded from the study.

Procedure

Session 1

Participants were seated in a comfortable chair and were instructed to answer the questions asked by the researcher. Participants were told that there was no time limit and they should inform the researcher when the response was finished. Only two questions, “What are your strengths?” and “What are your weaknesses?” were asked to each participant. Participants were unaware that the researcher was keeping a record of time. Responses were recorded in the predefined format shown below:

MATERIAL AND METHODS

A cross-sectional study was conducted on undergraduate students studying in private colleges of Nagpur city using convenient sampling method. The data was collected between January 2018 and July 2018. No sample size was calculated for the present study.

Inclusion criteria: All the students between the age group of 19-25 years who gave informed consent were included in the study.

Sample observation sheet for recording details

Participant no.	Keyword- Strength	Keyword-Weakness	Response method			Time taken (in seconds)
			One word	One phrase/ sentence	Elaborative/ story form	
1.	Hardworking		√	×	×	38
	Sincere		√	×	×	
	Leadership		×	√	×	
		Sensitive		×	√	70
	Lazy		×	√		
2.						

Session 2:

The SWB of the participants was measured with the Satisfaction with Life Scale (SWLS) by Diener, Emmons, Larsen and Griffin (1985) [11]. SWLS is a commonly used global satisfaction scale to measure life satisfaction as a cognitive-judgemental process. It has test-retest stability of 0.82 and construct validity of 0.68 [11]. The SWLS consists of five statements, each of which is rated on a 7-point scale from Strongly Disagree (1) to Strongly Agree (7).

Each participant was thanked and debriefed about the research. But the participants remained unaware of the purpose of the study.

the categories were sorted out and compared with those who gave only one word or one sentence response (no elaboration group). Independent samples t-test was used to compare the means of *elaboration* and *no elaboration* groups. A P value of 0.05 was considered to be statistically significant.

RESULTS

One hundred seventy-three students participated in the present study. Data from 23 participants were removed because of overlapping responses. Out of the final 150 participants, 68 were male and 82 were female.

First examined were the number of one word, one phrase/sentence and elaborative responses in strengths and weaknesses categories. Figure 1 shows that the total number of responses in the strengths category is more as compared to the number of weaknesses but the number of elaborative responses in the weaknesses category is more as compared to strengths. This indicates that students exhibit negativity bias.

STATISTICAL ANALYSIS

Data was analyzed using SPSS 21.0. Graphical representation of the number of responses and time taken to give responses was made. To find out the effect of elaborative processing of strengths and weakness on SWB, the students who gave elaborative responses (elaboration group) in both

Also examined was the amount of time taken to give weakness and strength responses. Participants took more time to give weakness responses as compared to strengths (see figure 2).

Independent samples t-test results reveal that in strengths category no significant difference was found in the scores of *elaboration* and *no elaboration* group ($P=0.071$). There was a significant difference in the scores of *elaboration* group and *no elaboration* group ($P=0.001$) in weakness category (see table 1). Results suggest that the SWB was low in participants who gave an elaborative description of their weaknesses as compared to those who did not elaborate their weaknesses.

DISCUSSION

The results of the present study show that the amount of time spent in expressing or talking about the weakness is more. Snyder and Lopez observed that people struggle for words when they have to describe their strengths, whereas they have no shortage of words when they have to describe their weaknesses [12]. The negative information i.e., weakness not only received more weight as can be seen by participants overall elaboration but also received a greater share of attention, as reflected in the amount of time spent. The findings are consistent with Fiske's work which suggests that the bias towards weighing negative information more heavily is reflected in the amount of perceptual attention given to that information [3]. Response to the question like, "What are your strengths/ weaknesses?" require retrieval of information from memory, more specifically autobiographical memory. Gracia-Bajos and Migueles recorded the greater number of negative than positive experiences in adolescents as compared to other age groups. According to them, "the negative narratives included more emotional details, the reference to cognitive processes, mental rehearsal and justifications than the positive narratives" [13].

Individuals take more time to express their weaknesses because weaknesses are negative traits and are considered non-normative. Since people mostly have positive characteristics, they are often assigned less responsibility for their positive traits than for their negative traits [14]. Negative information exerts influence on our judgement, so, people want to justify their weaknesses and hence take more time in describing them.

Findings also suggest that individuals, who elaborate on their weaknesses and spend more time doing so, score low on SWB. Conversano et al., [15] in their study found that positivity bias is associated with increased mental and physical well being. Negative information is more likely to have an enduring effect [16] and that negative attributes can often interfere with the enjoyment of positive attributes [2]. Bias

towards negative memory retrieval (in severe depression) may inhibit competing positive memories and worsen existing negativity biases [17]. High rumination predicts the onset of depressive disorder in healthy adolescents [18]. Failing, performing badly, inability to meet the societal and parental expectations and comparison makes students feel defeated and lost. Negativity bias, once a gift from evolution is being used in a different manner. Continuous preoccupation with weaknesses is affecting our well being and this is not a good sign for the generations to come.

CONCLUSION

The study and the results are preliminary and need further work. Findings reveal that people take more time and are more elaborative while processing negative information as compared to the positive one. The fact that elaborative processing of negative information and subjective well being do not vary together is not a sufficient condition to conclude that there is a cause-and-effect relationship. This tendency may have adverse effects on the well being of an individual. Although self-analysis is important for improvement, the present results carry a word of caution for parents, teachers and mentors who focus more on weaknesses and make their children and students do the same. This high focus on weaknesses is becoming an obstacle in our well being. Further explorations might help in understanding the ill effects of negativity bias. A study with larger sample and from all types of Institutions may help in a better generalisation of results.

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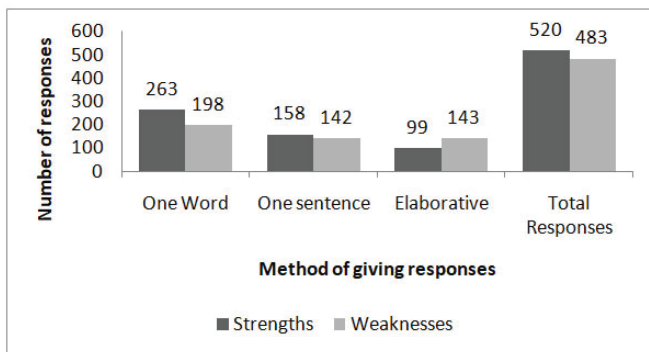


Figure 1: Comparison of the number of responses in strengths and weaknesses using different methods.

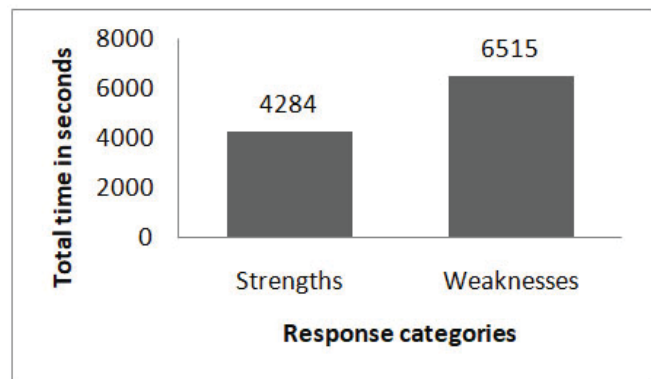


Figure 2: Total numbers of responses in strengths and weaknesses.

Table 1: Independent samples t-test for SWB of *elaboration* and *no elaboration* groups

Category	Groups based on type of response	n	SWB Mean	Std. Deviation	Std. Error Mean	t	p
Strengths	Elaboration group	70	22.857	5.839	0.697	-1.819	0.071
	No elaboration group	80	24.612	5.943	0.664		
Weaknesses	Elaboration group	97	22.628	5.775	0.586	-3.358	0.001
	No elaboration group	53	25.924	5.690	0.781		

Note. SWB= Subjective Well Being