

# EFFECT OF VERBAL REINFORCEMENT AND VERBAL PUNISHMENT ON PERFORMANCE

Aminul Islam<sup>1\*</sup> and Afifa Hossain<sup>2</sup>



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<sup>1,2</sup> Department of Psychology, University of Dhaka, Dhaka-1000, Bangladesh

## ABSTRACT

The problem of the present study was to investigate whether there is any effect of verbal reinforcement and verbal punishment on performance. The experiment was conducted on some young adult participants. The objective of the present study was to assess whether usual verbal reinforcement influenced performance more than the verbal punishment. It was hypothesized that positive verbal reinforcement would have a significantly greater impact on respondents' performance than positive verbal punishment. We adopted a between group design where 20 undergraduate students were randomly assigned to two conditions, namely positive verbal reinforcement and positive verbal punishment. We provided the interventions through a small, structured interview where the positive verbal reinforcement group were handled warmly but the other group were not. Then we asked them to complete two specially designed monotonous tasks and measured their duration of engagement in the tasks as a measure of performance. The mean durations of engagement for the positive verbal reinforcement and positive verbal punishment groups were 1555.90 seconds and 675.90 seconds, respectively, which differed significantly at the .006 level with a t-value of 3.11 (df=18). And thus, we concluded that positive verbal reinforcement is more powerful to enhance performance than the positive verbal punishment.

**KEYWORDS:** reinforcement, performance, structured, punishment, monotonous

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CORRESPONDING AUTHOR: Aminul Islam, Department of Psychology,  
University of Dhaka, Dhaka 1000, Bangladesh

Email: aminulislam@du.ac.bd

## Introduction

Reinforcement is the process by which a stimulus increases the probability that a preceding behavior will be repeated. That means, reinforcement increases response probability (Feldman, 2012).<sup>(1)</sup> Any stimulus that increases the likelihood of a reaction is called reinforcement.<sup>(a)</sup> In "reinforcement psychology", reinforcement affects behavior. The answer may improve with positive or negative reinforcement. There are two types of reinforcement in operant conditioning (Skinner, 1963).<sup>(2)</sup> The two types are: positive reinforcement and negative reinforcement.<sup>(b)</sup> Positive reinforcement involves rewarding a behavior to increase its likelihood, and negative reinforcement involves removing an unpleasant or uncomfortable element.<sup>(c)</sup>

In the current study, we are using the following two terms, namely positive verbal reinforcement and positive verbal punishment. Increasing the probability of behavior or performance through the use of speech has been considered as positive verbal reinforcement. For example, positive verbal reinforcement includes, saying 'good,' 'very good,' 'well done,' 'great job,' 'excellent,' 'that's great,' etc., following a performance or behavior. On the other hand, decreasing the probability of behavior or performance through the use of speech is known as positive verbal punishment. Suppose,

someone is doing a task, we can demotivate him/her by saying, 'That's bad', 'I can't appreciate it', 'That's very poor'. It should be noted that the positive verbal punishment acts like punishment in Skinner's theory. It is also opposite to the negative reinforcement used by Skinner. Whereas negative reinforcement increases a behavior, positive verbal punishment decreases it.

Previous studies emphasized on positive and negative reinforcement in general. There is no in-depth emphasis on verbal reinforcement and punishment. We function every day in a social setting. We communicate with each other verbally. We were trying to find out the strength of speech to enrich or lessen our everyday performance in the current study.

### Literature Review

Leong Teen Wei, Rashad Yazdanifard (2013) conducted an experiment on the impact of positive reinforcement on the performances of employees in organizations.<sup>(3)</sup> Positive reinforcement has been demonstrated to be favorably correlated with employee performance both internally and extrinsically. In a study conducted by Kelly and Stephens (1964), a simple motor-operant task was employed to compare the effectiveness of praise and criticism as positive and negative social reinforcements for children.<sup>(4)</sup> 180

kindergarten children were selected as participants. They were divided as follows: 60 were praised for their performance in executing a drawing task, 60 were criticized, and 60 were exposed to alternating praise and criticism. Highest and lowest operant rates were maintained under ‘criticism’ and ‘no reinforcement’ conditions, respectively; the preceding reinforcement experiences had no effect. Curry (1960) conducted a research on “The effects of verbal reinforcement combinations on learning in children” as an extension of a study by Buss and Buss.<sup>(5)</sup> They found that using the verbal reinforcement combinations ‘right-wrong’ and ‘nothing-wrong’ resulted in faster learning than did ‘right-nothing’, and the initial two combinations were almost equally effective. They found a similar result for adult participants.

## Materials and Methods

The objective of the present study was to assess whether verbal reinforcement influenced performance better than verbal punishment. This research focused on analyzing if there is any significant difference in performance under positive verbal reinforcement and positive verbal punishment conditions. In the present study, it was hypothesized that the effect of positive verbal reinforcement on the performance of the subjects would be significantly higher than the effect of positive verbal punishment. Verbal feedback with two different natures, namely reinforcement and punishment, acted as an independent variable. On the other hand, performance, measured as the amount of time each participant spent after intervention, was the dependent variable.

We conveniently selected 20 undergraduate students from the University of Dhaka. There were 10 male and 10 female students. Their age range was 20 to 25. All were mentally and physically sound. They were matched in all probable ways to avoid any kind of bias. The following apparatus were required for the study: Data sheet for the first task which included assigning number to some symbols, data sheet for the second task which included some monotonous handwriting tasks, a stopwatch, and pen. A between group design was used in the current study. The participants were randomly divided into two experimental groups – positive verbal reinforcement, and positive verbal punishment. Positive verbal reinforcement group received supportive and warm verbal feedback on whatever they said or did. On the other hand, positive verbal punishment group received negative and unsupportive feedback on whatever they said or did. In both groups, participants were welcomed and asked to sign the consent form if they intended to participate in the experiment. After consent, we initiated a small structured interview with the participants where they were asked a few questions about themselves such as name, hometown, results of S.S.C and H.S.C, how many siblings they have, and to name three positive or negative qualities about themselves depending on the interventions received. In the positive verbal reinforcement

condition, we maintained a smiley face and responded positively to the participants on whatever they said. We used positive verbal reinforcement such as good, nice, that’s great and complimented upon hearing their hometown and their positive qualities. In the positive verbal punishment condition, we kept a grumpy face; a face that looks annoyed and irritated. We were indifferent to the participants and used some negative verbal feedbacks, such as that’s bad, not so great, that’s poor, so what, upon hearing their hometown and negative qualities. It didn’t matter whether they responded well or poorly in terms of the questions asked. We purposively did not handle their responses warmly.

The initial conversation was done in way that participants thought it was just formality; the main task was yet to come. But those conversations were our main intervention. After the small interview we verbally instructed the participants how to complete the tasks and informed them that we respect their freedom which means they could stop doing the tasks anytime they wished. We provided the first task (to assign numbers to randomly scattered signs) and set the stopwatch to measure the duration. After the participants informed us that they no longer wanted to do that task, we asked the participants to start the second task which was to overwrite some letters, usually used by a 1<sup>st</sup> or 2<sup>nd</sup> grade student, repeatedly and we reminded them that they could stop doing the task anytime they wished. We used a stopwatch to measure the duration of being engaged in the second task as well.

It is worth to note that we did not interfere the performance of any group after the initial conversation. That means, we did not apply verbal reinforcement and punishment when participants of both groups were doing the assigned tasks. We applied the differential interventions only at the initial phase of the experiment to motivate them positively or negatively.

After completing the task, we thanked the participants for giving us their valuable time. The participants who received positive verbal punishment were later debriefed that the negative feedbacks used in the interview was a part of the experiment. And they were cordially thanked for their valuable time at last.

As we divided the participants randomly, male and female participants were divided into two groups. That means both groups contain roughly equal number of male and female. Our dependent variable was performance that indicated the duration of each participant’s engagement in the tasks. The participants chosen were unknown to the experimenters to eliminate any personal bias. And to eliminate gender bias, male participants were attended by a male instructor and female participants were attended by a female instructor.

### Data Analysis

Since we used a between group design consisting of two independent groups, we used an independent group t-test to analyze the obtained data. We also applied Levene’s test to retain the assumption of homogeneity of variance.

## Results and Discussion

**Table 1.** Descriptive statistics of positive verbal reinforcement group and positive verbal punishment group

Groups	N	M	SD	SE
Positive verbal reinforcement	10	1555.90	826.64	261.41
Positive verbal punishment	10	675.90	345.57	109.28

From Table 1, we found that the mean score of positive verbal reinforcement group is 1555.90; and the mean score of positive verbal punishment group is 675.90. Their standard deviation values are 826.64 and 345.57 respectively. The

difference between the two averages is evident here. To determine if the difference shown in averages is significant or not, we ran a t-test mentioned below.

**Table 2.** Comparison between two independent groups: t-test

Groups	Levene's Test		M	t	df	Sig
	F	Sig.				
Positive verbal reinforcement			1555.90			
	4.33	.052		3.11	18	.006
Positive verbal punishment			675.90			

M=mean; SD=standard deviation

Since the p value for Levene's test is greater than .05, we can conclude that the assumption of homogeneity of variance has been maintained. Consequently, we went for the t-test. The t-test indicates that the difference between the two groups is significant at the .006 level. It means that the two groups differed significantly in terms of performance. The mean values of performance for verbal reinforcement and verbal punishment groups are 1555.90 seconds and 675.90 seconds, respectively. More specifically, the participants who were under reinforcement group spent approximately 26 minutes doing those irrelevant tasks but the duration for the punishment group was approximately 11.5 minutes for the same tasks.

We cordially communicated with the positive verbal reinforcement group when asking some questions about themselves. This warm conversation made them motivated and energized them to perform the assigned tasks for a longer time. But the same conversation turned opposite in nature for the positive verbal punishment group. They became demotivated and did not perform the assigned tasks as longer as the first group. Remember we hypothesized that the effect of positive verbal reinforcement on the performance of the subjects would be significantly higher than the effect of positive verbal punishment. Since the reinforcement group scored significantly higher than the punishment group, we concluded that positive verbal reinforcement played a more prominent role on enhancing the duration of task engagement than the positive verbal punishment group. Our research hypothesis has been confirmed.

Here in this research, we see an impressive power of our usual conversation. We were able to make a group positively and another group negatively motivated by using every day conversation. Many times, we want our children, students or under rowers to function as we guide but don't use our speech accordingly. Here we found that as we handled our participants cordially during conversation, they spent a significant amount of time doing some irrelevant tasks. Now consider, if we warmly handle our children, students, friends or others, wouldn't they spend more time on relevant tasks? We think positively with reference to this study.

It should be noted that our sample size was small. It would be better if we were able to increase our sample size. However,

due to many limitations we cannot but use a small sample. Another point to be mentioned here is that, we retained the assumption of homogeneity of variance well, randomly assigned the participants, and obtained interval level of data, but the assumption of normal distribution is unknown to us. If we could overcome these limitations, the study might be an ideal one.

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