

# A One-Time Experimental Study of Time Constraint and Verbal Pressure on Group Test Performance

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## ABSTRACT

This research investigated the effect of time constraints and verbal pressure on the group test performance of university students. A true experimental design using a between-subjects approach was utilized, with 40 participants randomly assigned to either time constraints or verbal pressure conditions. Participants engaged in a 20-item word search task. Results from a Mann-Whitney U test ( $t = 65.5$ ,  $df = 23.4$ ,  $p < .001$ ,  $d = -1.54$ ) demonstrated that participants subjected to verbal pressure performed better than those under time constraints. This research is constrained by the sample size, impacting generalizability and extraneous variables, including individual differences in anxiety and prior experience with word search tasks. Future research should investigate the interplay between environmental and individual factors, including anxiety and time management skills, to enhance understanding of how time pressure and verbal pressure affect group test performance.

**Keywords:** verbal pressure, time constraints, independent sample t-test, between subject design

## INTRODUCTION

Most individuals often encounter challenges that test their limits especially the face of time constraints and the influence of verbal pressure. Time constraint forces the individuals to do the task in a short period of time, prioritizing the speed than accuracy (Gonthier, 2020). In spite of, verbal pressure involves external verbal cues that may influence the person's focus or decision-making approach. The study examines the impact of cognitive performance under pressure highlights the factors such as verbal pressures and time limitations can influence outcomes (Mesghina et al., 2022).

In the latest study, it was highlighted that the verbal pressure generated by the co-workers and superiors causes additional stress as to even more limited time to make activities perform accurately (Muza, M., Kalemba, A., Kaplan, C., Plata, H., & Bornio, E. 2023). Female participants experienced these adverse effects more significantly, it suggests that time pressure impacts performance differently across genders. In addition, workplace studies from Germany and South Korea, often led by productivity analysts, indicated that while shorter deadlines may enhance work pace, they tend to lower task outcomes' accuracy. Research conducted in Europe and North America by specialists in organizational behavior highlighted the effects of verbal feedback within corporate settings. These studies reported that verbal pressure can enhance task completion rates (Kühnel et al., 2023). National studies conducted in the Philippines have examined the influence of time constraints and verbal pressure on test performance, particularly within academic and professional settings. One significant study from the Bestlink College of the Philippines focused on the factors affecting time management and its subsequent impact on the academic performance of Grade 12 students. Poor time management significantly affects task accuracy, directly affecting the number of accurate responses of students attain in examinations and assignments. (Fulgencio, J., & Belle, Z., 2020).

The effects of time constraints and verbal pressure on task accuracy remain underexplored, despite their significance in real-world situations. Most previous research needs to distinguish the individual effects of these factors when participants face only one type of pressure, indicating a gap in our comprehension of their separate roles. Furthermore, specific regional contexts, such as the Davao Region in the Philippines, have not been adequately studied, resulting in a lack of understanding regarding the cultural and contextual effects of performance pressure.

This study examines the influence of verbal pressure and time limits on the cognitive task of individuals undertaking activities while in a group setting. Both of these participants performed the 20-item word search activity under time constraints and verbal pressure. The main aim is to determine if these external conditions affect the precision of task execution. Time constraint set clear boundary for participants, whereas verbal pressure presents outside signals that affect their concentration and thought process.

The self-efficacy theory suggests that a person's belief in their ability to carry out a particular task significantly influences their performance based on their motivation, effort, and persistence. This theory asserts that individuals are more prone to persevere in difficult circumstances and accomplish better results when they perceive themselves as capable to succeed the task. In a comparison of conditions that enhance performance, verbal pressure proves to be more effective than time limitations in achieving better task results. Positive and constructive verbal pressure can raise a person's self-efficacy, thereby enhancing their confidence and skills. This form of feedback serves as a motivational boost, highlighting one's abilities and strength in difficult circumstances (Howell & Hickman, 2022).

Individuals who experienced supportive verbal pressure demonstrated enhanced performance in various tasks. Research revealed that verbal pressure highlighting personal abilities and efforts greatly boosted persistence, leading to improved task outcomes. The enhancement in performance was linked to a rise in self-confidence and increased concentration (Schunk et al, 2020). These results highlight that although time limitations can lead to stress and diminish task performance, verbal pressure serves as a beneficial catalyst that inspires individuals, boosts self-confidence, and results in improved performance outcomes.

This study attempts to explore the impact of time constraint and verbal pressure on individual task performance. In this case, the participants will answer the cognitive task under specific conditions to determine the accuracy of their task performance. The study seeks to answer the following questions:

1. How do time constraints and verbal pressure influence the accuracy of individual task performance?
2. Is there any significant difference in task accuracy between participants exposed to time constraints and verbal pressure?

## METHODOLOGY

This section describes the methodology used in the study, allowing others to replicate the experiment.

### Participants

In this study, the researchers recruited 40 third year students from the Department of Business Administration (DBA) majoring in Human Resource Management. Twenty (20) participants (15 females, 5 males) were subjected to time constraints and another twenty (20) participants (15 females, 5 males) were subjected to verbal pressure. Their ages range from 21 to 26 years old. The sample size was based on practical limitations such as time constraints. On the other hand, the sampling technique used was convenience sampling. This sampling technique was chosen because of the accessibility of the participants, and the limited time. A non-probability sampling technique as a sample that is readily available, and accessible.

### Instrument

To assess and compare the average number of words found and accuracy rates of experimental groups A (time pressure) and B (verbal pressure), the researchers utilized a word search test. 20 words compose the word search test. In the box full of mixed-up letters, participants will have to locate the specified words and make the connections. Experts verified the word search test to make sure it was suitable for the research.

### Procedure and Design

Before the conduct of the experiment, the researchers provided full instructions on how to complete the test and what to expect during the pre-intervention setting. The researchers then distributed an informed consent form to every one of the 40 individuals. The researchers were specific of the fact that participation is entirely voluntary

and that no one will ever know their personal information. Following their approval, the participants were instructed to select a piece of paper from a container the researchers had provided in order to identify their group. Numbers 1 for time pressure and 2 for verbal pressure is written within the paper. Randomization was used in this manner, and selection bias was minimized. After identifying which group they belong, the two groups were divided into two separate rooms.

In experimental group A (time pressure), the test sheet was handed out to the participants immediately by the researchers. They were then told to prepare, and the researchers set the timer after a moment of silence. In this scenario, participants have only five minutes to complete the test. The researchers retrieved all of the papers after the experiment. Same goes in experimental group B (verbal pressure), the test sheet was also distributed to the participants right away by the researchers. They were then informed that they could take as much time as they wanted to complete the test sheet. The researchers began verbally pressuring the participants as they completed the test sheet, reminding them constantly that accuracy was important and that they needed to perform well because they were expected to have higher scores than experimental group A (time pressure). The researchers retrieved all of the papers after every participant had finished. After the experiment, all participants were debriefed about the purpose of the study, and the significance of the findings.

The study employed a true experimental research design, using random assignment to explore how time constraints and verbal pressure affect an individual's task performance in a group setting. According to an article published by Voxco in 2021, the utilization of a true experimental research design is important for establishing causal relationships between variables. In addition, the usage of random assignment in true experiments lessens selection bias, making this approach reliable for assessing cause-and-effect relationships.

### Ethical Considerations

Participants were told about the study's purpose, methods, possible advantages, and potential risks associated. To prove to their awareness and consent to participate, all participants signed an informed consent form. By protecting and anonymizing all data and without exposing any identifying information, confidentiality was maintained. People were free to withdraw from participating at any time without facing any consequences as it was entirely voluntary. Participants got a debriefing following the study and had the opportunity to ask questions or seek clarification on the research approach.

## RESULTS

Table 1: Normality Test (Shapiro-Wilk)

	W	p
<b>Time Constraint and Verbal Pressure on Group Test Performance</b>	0.924	0.01

A Shapiro-Wilk test was conducted to assess the normality of the data for the time constraint and verbal pressure. The results indicate a violation of the assumption normality ( $W=0.924$ ,  $p < .01$ ), this suggests that the data are not normally distributed.

Table 2: Gender Descriptive

Gender	Mean	Median	SD
Male	14.9	15.5	2.92
Female	16.1	17.0	2.66

In Table 2, females (F) generally have a slightly higher mean score ( $\bar{x} = 16.1$ ) compared to males' mean score ( $\bar{x} = 14.9$ ).

Table 3: Mann-Whitney U significant difference between the Time Constraints and Verbal Pressures during Test

	U	df	p	$\epsilon^2$
<b>Time Constraint and Verbal Pressure on Group test performance</b>	65.5	23.4	<.001	-1.54

Table 3 displays the results of a Mann-Whitney U test conducted to assess the statistically significant difference ( $t=65.5$ ), ( $df=23.4$ ) and a  $p$ -value=.001. Between the impacts of time constraints and verbal pressures on group test performance. The test produced a significant result ( $p < .001$ ), demonstrating a statistically significant difference between the two groups. An effect size of -1.54 indicates a substantial difference, with the negative value suggesting that the group under time constraints performed worse than the group under verbal pressures. Further investigation is necessary to ascertain the specific nature and implications of this difference. The large effect size suggests that time constraint and verbal pressure have a significant impact on test performance. Since the  $p$ -value was less than 0.05, the null hypothesis of this study, which stated that there is no significant effect in scores between the time constraint and verbal pressure conditions, was rejected.

## DISCUSSION

This study aims to determine if time constraint and verbal pressure have a significant effect on an individual's test performance while in a group setting. Through the findings of the study, it was determined that time constraint and verbal pressure significantly affect an individual's test performance. The independent-sample  $t$ -test further indicate that those who were subjected to time constraint scored lower, while those participants exposed to verbal pressure scored higher. An article published in 2020 highlighted that time constraint tend to reduce task accurate rates, while verbal pressure enhances them. Additionally, the findings of this research are aligned to a study conducted by Muza, M., Kaplan, C., Kalemba, A., Plata, H., & Bornio, E (2023), which showed that verbal pressure contributed in improving students' task performance. Even in demanding and pressuring situations, students demonstrated better while under verbal pressure. In contrast, time constraint negatively affects task performance, especially in cognitive tasks. This accentuated the challenges that time constraint creates for thought processes, and decision-making (Gernsbacher, M. A., Soicher, R. N., & Becker-Blease, K. A. 2020).

Moreover, the data presented in this study also reveal that females achieved a higher mean score compared to males. Notably, research by Giofrè, D., Toffalini, E., Esposito, L., & Cornoldi, C. (2024) show that while males and females tend to perform almost similarly in general tasks, specific differences appear in certain areas. To cite an instance, females constantly outperform males in tasks that requires discipline and concentration. Further studies such as a study conducted by Nazareth, A., Huang, X., Voyer, D., & Newcombe, N. (2019) unveils that although males often tend to excel in spatial-related tasks, females surpass them in tasks that involves memory and attention to detail. These differences explain why females scored higher in certain cognitive tasks than males.

The theoretical framework of this study is based on Albert Bandura's Self-Efficacy Theory. This theory suggests that an individual's belief in their ability to perform tasks significantly affects the result. Verbal pressure, often perceived as verbal cues or demands, enhances self-efficacy by encouraging focus and confidence. This, in turn, improve performance, specifically in cognitively demanding tasks. Whereas time constraint negatively impacts self-efficacy, causing distress and information overload, which leads to decreasing and poorer performance (Liu, F., Du, J., Zhou, D., & Huang, B., 2021).

However, it is also important to acknowledge the limitations of this study. The sample size ( $n=40$ ) limits the broader generalizability of the findings. Additionally, the study only focused on time constraint and verbal pressure as variables, thus overlooking other important variables such as participants' cognitive abilities, or cortisol levels. Future research should consider incorporating complex cognitive tests, widen the sample size to improve reliability and generalizability, and exploring how personal traits, and environmental factors can affect task performance in different contexts.

Despite the limitations, this study gives valuable insights into how specific conditions affect task performance. It provides a solid foundation for further research and enhances our comprehension of how time constraint and verbal pressure affects individual performance.

## CONCLUSION

In summary, it is concluded that time constraints and verbal pressure have a significant impact on an individual's accuracy rates. According to the data, there is a significant difference between the performance of the students who were subjected to time constraints and those who underwent verbal pressure while completing the test. Those participants facing verbal pressure showed high test accuracy rates, whereas those participants under time pressure clearly displayed a reduced test accuracy rate. This means that the null hypothesis was rejected.

This study provides evidence that pressures such as time constraints and verbal pressure can have an influence to an individual which can impact their test performance. Future studies can investigate and dive further into other factors and expand sample size in order to strengthen the findings' generalizability.

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