

# Analysis on the Causes and Treatment of Public Speaking Anxiety

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## ABSTRACT

Public speaking anxiety refers to the fear and worry people have when holding public speeches. It is not only a disrupting type of anxiety, but also a highly pervasive one. Thus, understanding public speaking anxiety is very important. That is why this study, containing much of the current knowledge and discoveries on public speaking anxiety, is conducted. By now, the main cause of public speaking anxiety is thought to be related to negative self- image. Besides, the unfamiliarity towards words, the lack of experience, unfamiliar environment, new audience, status difference between speakers and listeners, and the position of speakers and audiences etc. are all stimuli of public speaking anxiety. Since public speaking anxiety is found to exert negative effect on the speaker both physically and emotionally, general methods for reducing public speaking anxiety have been proposed, including communication orientation motivation, cognitive restructuring, visualization, and systematic desensitization.

**Keywords:** *Public speaking anxiety, fear of public speaking, causes of public, speaking anxiety, symptoms of public speaking anxiety, methods for reducing public speaking anxiety*

## 1. INTRODUCTION

For people in modern time, excellent public speaking skill is considered as necessity on the way to success. It not only renders people with ideas opportunities to be recognized and appreciated, makes them to get working positions, but also helps them build social connections, thus paving the way for further development of their careers. However, there is a particular anxiety that hinders people from developing good public speaking skill — the public speaking anxiety, or glossophobia, which refers to the fear and worry people have when they are holding speeches. And the degree of the symptoms ranges from merely feeling nervous to panic attacks. National Institute of Health describes it as “the most common lifetime social fears” [1], and almost 25% people have reported feeling anxious when giving a public speech [2]. The above-mentioned and other research results suggest that the anxiety of public speaking is a very prevalent and disturbing type of anxiety. This paper aims at analyzing possible causes and stimuli of public speaking anxiety, discussing how it affects the speakers and introducing general methods for reducing it. It is hoped that this research can raise the public awareness towards public speaking anxiety and help people with this type of anxiety find appropriate methods to reduce it.

## 2. CAUSES OF PUBLIC SPEAKING ANXIETY

There are many explanations and hypotheses on the causes of public speaking anxiety. The book, *the Challenge of Effective Speaking*, states that the public speaking anxiety of some people might be inborn[3]. People who are born to be more introverted or neurotic tend to have greater possibilities to experience public speaking anxiety than those who are more extroverted or levelheaded. Except that, one's previous experience in growing up process is also deemed to be one of the causes of public speaking anxiety. Usually, people who have failed in public speeches in their childhood are more likely to experience public speaking anxiety. Besides, hypotheses from other perspectives are also proposed. For example, some evolution psychologists propose that the fear towards public speaking can be traced back to the early human behavior[4]. In early human life, when people still fought wild animals, cooperation between humans was the key to survival. Since cooperation is achieved through communication, communication becomes a matter of life and death. That is why people tend to show great anxiety while speaking in the public — their speaking performance and communication outcome were directly related to their lives at the ancient time. And this anxiety remains till nowadays. However, these explanations have not been fully confirmed yet. Further experiment and research are needed to support the hypotheses. Among all the popular hypotheses, the most widely accepted one in

psychological academia is the negative self-image, which means the negative conception on oneself. Negative self-image has deemed to have a direct relation with the formation of public speaking anxiety. In a research conducted by Hirsch et al.[5], volunteers who barely experience public speaking anxiety are divided into three groups. One group rehearses a negative self-image, one rehearses a positive self- image, and another control group

holds the speech in public without the intervention of self-image. As shown in fig. 1, the negative self-image group feels more anxious than the positive self-image group and the control group. Moreover, the group received information of negative self-image also think their speech performance are less satisfied, indicating the negative self-image is a cause for public speaking anxiety.

	Negative		Positive		Control		Statistical tests of difference		
	Mean	SD	Mean	SD	Mean	SD	Negative vs. positive	Negative vs. control	Positive vs. control
State-STAI (during speech) <sup>a</sup>	42.17	12.16	33.92	7.45	33.00	10.08	$F(1,21) = 6.60^*$	$F(1,21) = 5.01^*$	$F(1,21) = 0.01$
Anxiety Likert anxiety (during speech) <sup>a</sup>	4.67	2.23	3.00	1.35	3.00	2.30	$F(1,21) = 5.11^*$	$F(1,21) = 2.31$	$F(1,21) = 0.01$
Performance Likert	4.83	1.64	6.25	0.97	5.00	2.00	$t(22) = 2.58^*$	$t(22) = 0.22$	$t(22) = 1.95$
Behaviour questionnaire self rating	56.83	20.47	35.67	13.72	41.83	20.23	$t(22) = 2.97^{**}$	$t(22) = 1.80$	$t(22) = 0.87$
Behaviour questionnaire assessor rating	19.83	12.33	13.74	4.61	12.74	4.59	$U = 50^b$	$U = 43^b$	$t(22) = 0.77$
Difference scores (self-assessor) on behaviour questionnaire	37.00	17.57	21.93	13.75	29.09	20.21	$t(22) = 2.34^*$	$t(22) = 1.02$	$t(22) = 0.25$
Negative thought frequency	40.33	14.41	26.83	10.21	26.75	19.81	$t(22) = 2.65^*$	$t(22) = 1.92$	$t(16.5) = 0.13^c$
Negative thought validity	37.17	20.04	18.08	11.75	22.92	13.71	$t(22) = 2.85^{**}$	$t(22) = 2.03$	$t(22) = 0.97$

Note: \* $p < 0.05$ ; \*\* $p < 0.01$ .

<sup>a</sup>One way analysis of covariance was used to co-vary out baseline anxiety.

<sup>b</sup>Assessor ratings for the negative image group were not normally distributed so non-parametric Mann Whitney  $U$  tests were performed.

<sup>c</sup>Degrees of freedom adjusted to correct for unequal variance.

Figure 1. Unadjusted means and standard deviations of dependent measures for negative, positive and control groups.

### 3. STIMULI OF PUBLIC SPEAKING ANXIETY

Individuals' background, temperament, or behavior can result in public speaking anxiety, while objective stimuli can trigger public speaking anxiety. From the perspective of the speaker, unfamiliarity towards the words, the lack of experience can easily stimulate public speaking anxiety. External objective factors also cannot be ignored, such as unfamiliar environment, new audience. Moreover, the difference of status between speakers and the audience, for example, when speakers are employees who want to be appreciated by their superiors for working opportunities, and the listeners are the superiors, this status difference can induce the anxiety while holding speeches. Furthermore, the position of speakers and audience might also contribute to seizures of public speaking anxiety by making the speakers feel isolated and being scrutinized, while the speakers are often separated from the audience.

### 4. HOW PUBLIC SPEAKING ANXIETY AFFECTS PEOPLE

Anxiety is long considered to exert negative impact on people's public speaking performance. However, this view is not fully correct. According to Yerkes-Dodson curve in figure 2, a proper amount of stress can increase one's attention and interest. Indeed, many research and experiment suggest that the Yerkes-Dodson's Law can also apply to the circumstance of having a public speech. With a moderate amount of nervousness in public

speeches, the speakers tend to be more concentrated on their speeches, thus reducing the error rate. However, when the amount of anxiety exceeds a certain range, the role played by anxiety on one's speaking performance starts to match up with people's fixed image — it hinders the speech from going smoothly, reducing the overall performance of the speaker.

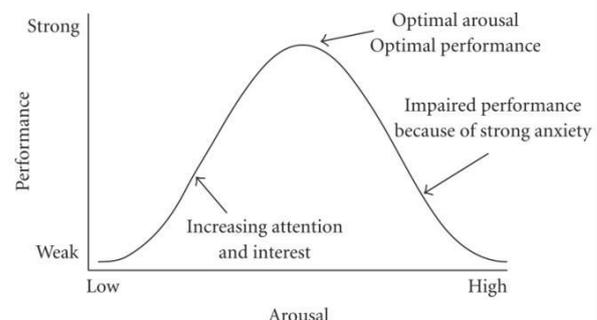


Figure 2. Yerkes-Dodson curve.

Generally, when the above mentioned situation takes place, anxiety will result in negative effect to the speakers from both physical and emotional aspects. Physically, speakers might experience a dry mouth, rapid or disordered heartbeats, accelerated breathing and even a strong feeling of vomiting and peeing. The body of the speakers often gets flushed, sweats or shakes uncontrollably and the voice may subside or tremble. Emotionally, tension and anxiety continue to flow in and accumulate in an uncontrollably way, making the speakers hard to be rational and logical. The speakers might also lose their short term memory. As a result, they may even forget what they supposed to say during the speech[6]. All of these symptoms are mostly caused by the regulation

of sympathetic nervous system. Sympathetic nervous system belongs to autonomic nervous system that regulates body functions spontaneously. Sympathetic nervous system usually functions when people are placed in a life threatening situation, preparing human bodies for physical exertion and placing people in a fight-or-flight mode. For people having public speaking anxiety, speaking in the public is automatically considered to be “life threatening” by their sympathetic nervous system. Therefore, series of regulations start to function, and many of the effects brought by public speaking anxiety can be explained. When sympathetic nervous system is at work, saliva production reduces, resulting the dry mouth; blood circulation accelerates to supply the brain, muscles and limbs, causing the skin flushed; bladder relaxes, making people want to use the toilet... Hippocampus, a part of brain responsible for forming new memories, is also affected by the over amount of anxiety, resulting in the speakers’ loss of memory. Besides, when the fight-or-flight mode has turned on by the sympathetic nervous system, the brain is consumed with the “life threatening” stimulus, and most of its resources are spent to address tasks that are more primitive and crucial. Consequently, the brain is unable to do high level of cognitive tasks, and many regulations that are considered less “urgent” by sympathetic nervous system are shelved. That is why rational thinking is disrupted and people often feel ill when public speaking anxiety occurs.

## **5. METHODS FOR REDUCING PUBLIC SPEAKING ANXIETY**

Since public speaking anxiety is so disturbing, many researchers devote themselves to finding proper methods to treat it. Until now, many methods have been proven by experiments to be effective for reducing public speaking anxiety. In the book of *the Challenge of Effective Speaking*, Rudolph F. Verderber et al. introduced a few common methods designed to reduce public speaking anxiety[7]. These methods could be generalized into two large categories. One is that people want to adjust to their cognition, thus changing their behavior. And the other one aims at letting people experience actual things, thus affecting their cognition and changing their behavior.

Communication orientation motivation(COM), a cognition emphasized techniques, aims at changing the cognition of people who have experienced public speaking anxiety. Stimuli making the speakers feel scrutinized by the audience is one of the aforementioned ways for triggering public speaking anxiety, so the purpose of COM is to eliminate this feeling. COM helps people conceive speaking in the public as a conversation rather than a performance, so the speakers would not feel being judged

by the audience but merely talking to people and sharing ideas. The change in cognition frees people from the stress of being judged. Therefore, public speaking anxiety is reduced. And when people are allowed to focus on the messages they are trying to convey, the performance of public speaking gets improved as well. Cognitive restructuring is another method that focuses on changing one’s cognition. Instead of changing one’s cognition of external environment, cognitive restructuring concentrates on changing one’s cognition of oneself. This method aims to eliminating the effect of negative self-image, the main cause of public speaking anxiety, and using positive self-image to produce positive outcome instead. It first requires people to identify their negative thoughts and to evaluate whether these thoughts are rational. Because the fear towards public speaking is not virtually life threatening, the negative thoughts related to it are mostly irrational. Then, people are asked to write down positive thoughts about themselves, and the positive self-image is implanted in people’s brains by reading the thoughts repeatedly. As time goes on, people will gain more confidence, and public speaking anxiety is reduced because people can have an appropriate conception about themselves.

Visualization is also a method that helps reduce public speaking anxiety by giving people confidence. However, it prefers to let the participants experience first, and then to result change of their cognition. This method has been found very efficient by Joe Ayres and Theodore S. Hopf[8]. According to these two scholars, by watching the whole process of speech preparation and speech making, participants can gain a stronger sense of control over having public speeches, so negative self-image occurred lesser, resulting better public speaking performance, as shown in fig. 3. The element of visualization can also be seen in the method of systematic desensitization. Rather than using visualized images to build one’s confidence, systematic desensitization visualizes illustrates what the participants are afraid of. Before this treatment comes to visualization, strategies of getting relaxed are first taught, such as muscles relaxation. After teaching the participants to relax, series of events that the participants fear are being visualized to the participants in a certain order. The more anxious and fearful the scene is, the later it will be displayed. During the watching process, the participants need to apply the relaxing strategies, and gradually learn how to remain relaxed, while visualizing the scenes that they have fear in. This method aims at letting people get used to the scenes that they fear and adjust to the state of being relaxed during the process. In the end, when the relaxing state can be carried out spontaneously amid an actual public speaking situation, public speaking anxiety will be greatly reduced.

PRE/POST TREATMENT MEANS, DIFFERENCE SCORES, AND N's FOR THE VISUALIZATION AND EXPERIENCE CONDITIONS

Visualization	Experience			N
	Pre-treatment Mean	Post-treatment Mean	Mean Diff. Score	
Minimal (5 or fewer Speeches)				
Two Uses	66	57.8	8.2	52
One Use	66.5	58	7.5	48
No Use	65.7	61.3	4.4	103
Considerable (6 or More Speeches)				
Two Uses	61.5	58	3.5	55
One Use	61.4	58.3	3.1	57
No Use	62.3	60.6	1.7	115

**Figure 3.** Pre/post treatment means, difference scores, and N's for the visualization and experience conditions.

For people with mild public speaking anxiety, receiving professional methods to reduce public speaking anxiety is not very necessary, so there are also simple strategies that can help them reducing the anxiety, and most of these strategies are corresponding with the causes or stimuli of public speaking anxiety. For example, giving positive psychological hints to oneself, so that the speaker's mental state will be less affected by self-negative image. Practicing before the speech is also a good way for avoiding the stimuli of public speaking anxiety like the unfamiliarity towards the contents and the lack of experience. Since the existence of audience often puts pressure on the speakers, ignoring the audience and focusing mainly on the speeches can help reduce public speaking anxiety as well.

**6. CONCLUSION**

Public speaking anxiety is a disrupting and pervasive anxiety disorder. The causes and stimuli of public speaking anxiety are plenty, but the core cause is considered to be related with negative self-image. Although a proper amount of anxiety can contribute to better performance, when it gets too much, one's physical and mental health will be negatively affected. Communication orientation motivation, cognitive restructuring, visualization and systematic desensitization are all methods that have been found to be effective of reducing public speaking anxiety. However, the relation between public speaking anxiety and social anxiety disorder is not discussed within this paper. Research has reported that approximately 70.3% of individuals having social anxiety disorder(SAD) also suffer from public speaking anxiety[9], suggesting that SAD and public speaking anxiety might have certain connections. However, more experiments and surveys are required to give further evidence of this relationship. When the connection between SAD and public speaking anxiety gets clear, it will be helpful for interpreting the causes of public speaking anxiety, and providing more treatment methods.

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