

# Breathing to Manage Anxiety

## The Effect of a Mindfulness Breathing Exercise on COVID-19 Anxiety

### What is it?

This study aimed to test the effectiveness of a mindful breathing technique on COVID-19 related stress. We predicted that those who were exposed to the mindful breathing exercise would score lower on the anxiety questionnaire compared to the control group. Our hope is to provide insight on resources in mindfulness activities for the city in hopes that it can help individuals reduce anxiety.

### Why is it needed?

COVID-19 has impacted and changed the lives of many individuals, causing vast amounts of stress and anxiety. The research study was designed to enhance the City's recognition of well-being and quality of life for all community members (Goal 3.1 of Official Community Plan) by providing insight into potential resources in mindfulness, as well as support in reducing stress and anxiety during the COVID-19 pandemic.

### How it works / Methods:

- Between-participants study design
- Total sample of 41 participants (control = 30, experimental = 11)
- Capilano University intro psychology students and residents of North Vancouver
- Both groups exposed to a COVID-19 news video then asked to complete an activity; control = neutral activity, experimental = mindful breathing activity
- Concluded with anxiety questionnaire (physiological, fear, hopelessness, stress, emotional)

### Outcomes / Findings:

The descriptive statistics show minimal differences between mean scores and standard deviations of both groups across all question categories. Between the two groups, however, the number of participants is greatly imbalanced (control = 30, experimental = 11), which likely is driving the higher standard error in the experimental condition, thus, presenting greater variability within that group.

Group Descriptives

	Group	N	Mean	SD	SE
Physiological (Q4 + Q5)	Control	30	1.950	0.824	0.150
	Experimental	11	1.682	0.681	0.205
Fear (Q2 + Q9)	Control	30	2.550	0.834	0.152
	Experimental	11	2.682	0.783	0.236
Hopelessness (Q7 + Q10)	Control	30	2.633	0.754	0.138
	Experimental	11	2.455	0.961	0.290
Stress (Q3 + Q6)	Control	30	2.567	0.926	0.169
	Experimental	11	2.318	0.751	0.226
Emotional (Q1 + Q8)	Control	30	2.667	0.834	0.152
	Experimental	11	2.364	0.951	0.287

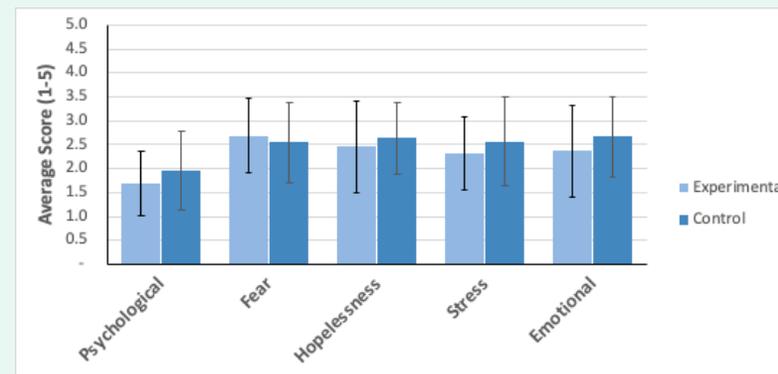
The inferential statistics display a small-medium effect size in 4 out of the 5 question categories. This aligns with the experimental hypothesis. The influence of the treatment on these variables may have been larger if more data was collected, and if the study had stronger controls.

Independent Samples T-Test

	t	df	p	Cohen's d
Physiological (Q4 + Q5)	0.964	39	0.341	0.340
Fear (Q2 + Q9)	-0.455	39	0.651	-0.160
Hopelessness (Q7 + Q10)	0.625	39	0.536	0.220
Stress (Q3 + Q6)	0.797	39	0.430	0.281
Emotional (Q1 + Q8)	0.993	39	0.327	0.350

Note. Student's t-test.

Although the results of the effect size were in line with our prediction, at this time, the null hypothesis should be accepted as there is not enough data to conclude otherwise. It is recommended that further research is conducted on the effectiveness of mindful breathing exercises on anxiety related to COVID-19. We suggest that a larger sample is selected in order to better represent the population.



PSYC 212: Research Methods in Psychology  
 Team Members: Tavia McQuay, Samantha Huezo, Hannah Young, Ruby Erck, Harsimar Kaur  
 Instructors: Douglas Alards-Tomalín  
 City Partners: City of North Vancouver

CityStudio North Vancouver is an experimentation and innovation hub for the City of North Vancouver where CNV staff and Capilano University students and faculty co-create projects to make North Vancouver a more vibrant, sustainable and healthy city.

Connect with us:  
[CityStudioCNV.com](https://www.citystudionv.com)  
 @CityStudioNorthVancouver  
 #capilanouniversity

