

# A True Experimental Study to Assess the Effectiveness of Kriya Yoga Therapy on Reduction of Anxiety Level among the Covid Nursing Staff at Selected Covid Hospitals

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**Abstract:** *Aim of the study: The study aim to find the effectiveness of kriya yoga to reduce the anxiety level among COVID nursing staff working at selected hospital. Objectives of the study: 1. To assess the pre test level of anxiety among the staff nurses of COVID unit at selected hospitals among experimental and control group. 2. To assess the effect of kriya yoga on level of anxiety by comparing the pre test and post test level of anxiety among experimental group. 3. To assess the effect of kriya yoga on level of anxiety by comparing the post test level of anxiety among experimental and control group. 4. To determine the association between pre test level of anxiety with their selected demographic variables among experimental and control group. Method: True experimental research design and A quantitative research approach was carried out on 60 nursing staff selected by simple random sampling technique to test the effectiveness of kriya yoga. The data was collected by using Beck anxiety inventory scale consist 21 questions. Results: Age distribution of staff nurses in the experimental group: 6.67% aged 24 - 26 years 10% aged 27 - 29 years 6.67% aged 30 - 32 years 76.67% above 33 years Age distribution of staff nurses in the control group: 3.33% aged 24 - 26 years 13.33% aged 27 - 29 years 10% aged 30 - 32 years 73.33% above 33 years Gender distribution of staff nurses: Experimental group: 30% males, 70% females Control group: 20% males, 80% females Residential area distribution of staff nurses: Experimental group: 53.33% rural, 46.67% urban Control group: 46.67% rural, 53.33% urban Marital status of staff nurses: Experimental group: 76.67% married, 23.33% unmarried Control group: 86.67% married, 13.33% unmarried Impact of COVID - related deaths in family: Experimental group: 86.67% reported zero deaths, 10% reported one death, 3.33% reported more than two deaths Control group: 86.67% reported zero deaths, 10% reported one death, 3.33% reported two deaths Duration of work in the COVID unit: Experimental group: 3.33% worked for 3 months, 3.33% for 6 months, 60% for 1 year, and 33.33% for more than 1 year Control group: 3.33% worked for 6 months, 80% for 1 year, and 16.67% for more than 1 year Family income per month: Experimental group: 53.33% reported 20000 Rs, 46.67% reported more than 20000 Rs Control group: 60% reported 20000 Rs, 40% reported more than 20000 Rs Type of family: Experimental group: 63.33% from nuclear families, 26.67% from joint families, 3.33% from single parent families, and 6.67% from extended families Control group: 53.33% from nuclear families, 33.33% from joint families, 13.33% from single parent families, and no one from extended families History of COVID infection: Experimental group: 40% reported one time infection, 3.33% reported two times, and 56.67% reported no history of infection Control group: 33.33% reported one time infection, 3.33% reported two times, and 63.33% reported no history of infection. Conclusion: The following conclusion were drawn from the findings of the present study. Their chapter shows that kriya yoga therapy is a simple non pharmacological intervention which should be carried out independently in the field of nursing. The overall experience of conducting this study was enriching hence it gives an opportunity to 185 the investigator to acquire new information as well as learning experience. The experience of the investigator during the study and the findings helped the investigators to give suggestion and the recommendation for further studies.*

## 1. Introduction

The best way to find yourself is to lose yourself in the service of others. Mahatma Gandhi's Anxiety is a normal part of life. It affects us all to varying degrees and we all experience feelings of anxiety at some point in our lives. For example, we may feel anxious about an exam, job interview, or approaching hand - in date. Feeling anxious is perfectly normal. Sometimes the thoughts and feelings associated with anxiety can be used positively to motivate us into action. However, when the frequency and severity of anxiety becomes extreme and very difficult to manage, this can negatively impact on our lives and we could be said to be 'suffering with anxiety'; sometimes this may be given a clinical label where it is known as Generalised Anxiety Disorder (GAD) if the symptoms persist more days than not for at least six months. With such a condition feelings of anxiety are more constant and often affect daily life significantly. [1]

Since 1968, Ananda has taught Kriya Yoga to thousands of people worldwide, from many faiths and spiritual traditions. To prepare to receive Kriya initiation, you learn how to calm the mind and heart, work consciously with life force, develop concentration, and deeply interiorize your awareness. Through classes, both in - person and online, 15 you can learn from qualified Ananda teachers, who share the wisdom and grace of ancient yoga masters. [2]

## 2. Review of Literature

Kanchibhotla Divya et - al (2021), conducted a study on COVID - 19 pandemic has created unprecedented challenges for healthcare globally, the brunt of which has been borne by the health care providers (HCPs). We measured outcomes related to depression, anxiety, resilience, life satisfaction, and quality of sleep. Ninety - two 40 subjects completed the study survey before and after the intervention. A significant reduction was observed in the levels of stress, anxiety and depression immediately after the program. [3]

**Chikkanna Umesh et - al (July 2021)**, Done study on COVID - 19 pandemic has posed an immense challenge to health care systems around the globe in terms of limited health care facilities and proven medical therapeutics to address the symptoms of the infection. Further, it draws inferences from recent studies on Yoga and Ayurveda on immunity, respiratory health and mental health respectively to approximate its probable role in prophylaxis and as an add - on management option for the current pandemic. [4]

### 3. Methodology

- 1) **Research approach:** An evaluative research approach was adopted for the present study to accomplish the object of determining the effect of kriya yoga therapy on reduction of level of anxiety among COVID nursing staff at selected hospital.
- 2) **Research design:** Quantitative, true experimental research design
- 3) **Variable under study:** (1) independent variable: in this study, independent variable is kriya yoga (2) dependent variable: dependent variable is anxiety among nursing staff
- 4) **Setting:** The study was conducted in COVID nursing staff
- 5) **Population:** In this study, the population include nursing staff
- 6) **Target population:** COVID nursing staff at selected hospital.
- 7) **Accessible population:** Nursing staff present at the time of data collection Sample and sampling technique
- 8) **Sample:** In the present study sample is nursing staff at selected hospital
- 9) **Sample size:** The sample size for present study is 60 COVID nursing staff who fulfill the set inclusion criteria Sampling technique: a probability simple random sampling technique
- 10) **Inclusive criteria:**
  - Staff nurses of covid unit
  - Covid staff nurses who are willing to participate in the study
- 11) **Exclusive criteria:**
  - Staff nurses of covid unit who are having health issue at time of data collection.
  - Staff nurses of covid unit who are not available at the time of data collection.
  - Staff nurse who are practicing yoga or other relaxation techniques

#### • Tool Preparation

Tool used for the research study was structured questionnaire, the perceived anxiety scale. The tool was prepared after Extensive review of literature Opinion and suggestions were taken from expert, Development of a blueprint of the questionnaire. Construction of demographic Performa and questionnaire on anxiety commonly seen in COVID Nursing Staff.

#### • Development of tool:

The research instrument consists of two parts:

**Part I - Demographic data:** It consist of 9 items related to demographic variables such as Age of nursing staff, Gender of the nursing staff, Marital status, Residential, Duration of work in COVID, Family income per month, History of COVID, Types of family, Death in family due to COVID.

**Part II - Structured knowledge questionnaires:** - It consists of 21 items. For each question choose from the following alternatives: • 0 – not at all • 1 –mildly • 2 – moderately • 3 – severely.

#### Validation of the tool:

To ensure the content validity the instrument was given 7 experts from the field of community health nursing, the consultant psychiatrist, clinical psychologist with kriya yoga experts and one from statistical department. The experts were requested to give their opinions and suggestions regarding the relevance, adequacy and appropriateness of the tool. Their suggestions were taken into consideration in the preparation of the tool Reliability: In order to establish reliability of the tool, Reliability of tool was determined by Karl Pierson"s correlation coefficient of the tool was found to be 0.81 (n=6).

**Feasibility of the study:** The investigator conducted a Pilot study.

**Pilot study:** The pilot study was conducted from 16th to 28 NOV 2021 on COVID nursing staff from selected hospitals, to assess the feasibility of the study and to decide the plan for analysis.

**Data collection procedure:** Prior permission will be taken from the selected hospitals. Informed consent will be taken from study participants and data will be kept confidential. The period of data collection was from 29th November to 30th of December 2021. The data was collected by the investigator. Pre - test was conducted on COVID nursing who fulfill the inclusion criteria soon after the pre - test kriya yoga was administered. Evaluation was done by conducting post - test after 15 days of administration of mindfulness kriya yoga by using the same structured questionnaires.

**Plan for data analysis:** 1) Organize data in master data sheet 2) Demographic variables will be analyzed by using frequency and percentage.3) Effectiveness of kriya yoga will be analyzed by using paired and unpaired " t " test.4) Chi square test will be used to find out the association between pre - test level of stress score and selected demographic variables.

#### Scoring mode:

The Total score is calculated by findings the sum of the 21 items. Score of 0 - 21 = low anxiety Score of 22 – 35 = moderate anxiety Score of 36 and above = severe anxiety (potentially concerning levels of anxiety).

### 4. Results

Organization of the data: The collected data is tabulated, analyzed, organized and presented under the following sections:

Section I

Sr. No.	Variable	Groups	Experimental		Control	
			Frequency	Percentage	Frequency	Percentage
1	Age of nursing staff	24 - 26 yr	2	6.67	1	3.33
		27 - 29 yr	3	10.00	4	13.33
		30 - 32 yrs	2	6.67	3	10.00
		above 33 yr	23	76.67	22	73.33
2	Gender	Male	9	30.00	6	20.00
		Female	21	70.00	24	80.00
3	Residential area	Rural area	16	53.33	14	46.67
		Urban area	14	46.67	16	53.33
4	Marital status	Married	23	76.67	26	86.67
		Unmarried	7	23.33	4	13.33
5	Death in family due to COVID	Zero	26	86.67	26	86.67
		One	3	10.00	3	10.00
		Two	0	0.00	1	3.33
		More than two	1	3.33	0	0.00

Table 2: Frequency & Percentage distribution of the staff nurses of Covid unit at selected hospitals

Sr. No.	Variable	Groups	Experimental		Control	
			Frequency	Percentage	Frequency	Percentage
6	Duration of work in Covid	3 months	1	3.33	0	0.00
		6 months	1	3.33	1	3.33
		1 year	18	60.00	24	80.00
		more than 1 year	10	33.33	5	16.67
7	Family income per month	5000	0	0.00	0	0.00
		10000	0	0.00	0	0.00
		20000	16	53.33	18	60.00
		more than 20000	14	46.67	12	40.00
8	Type of family	Nuclear	19	63.33	16	53.33
		Joint	8	26.67	10	33.33
		Single parent	1	3.33	4	13.33
		Extended	2	6.67	0	0.00
9	History of Covid	One time	12	40.00	10	33.33
		Two time	1	3.33	1	3.33
		No any history	17	56.67	19	63.33

Section II

Table 12: General assessment of the anxiety level among the staff nurses of Covid unit at selected hospitals – Experimental Group

Variable	Groups	Score	Pre Test		Post Test	
			Frequency	Percentage	Frequency	Percentage
Anxiety	Low	0 - 21	3	10.00	3	10.00
	Moderate	22 - 35	19	63.33	27	90.00
	High	36 & above	8	26.67	0	0.00
Anxiety	Minimum		18		17	
	Maximum		40		33	
	Average (SD)		32.23 (5.48)		26.13 (4.00)	

Table 13: General assessment of the anxiety level among the staff nurses of Covid unit at selected hospitals – Control Group

Variable	Groups	Score	Pre Test		Post Test	
			Frequency	Percentage	Frequency	Percentage
Anxiety	Low	0 - 21	1	3.33	1	3.33
	Moderate	22 - 35	10	33.33	12	40.00
	High	36 & above	19	63.33	17	56.67
Anxiety	Minimum		21		20	
	Maximum		41		41	
	Average (SD)		35.16 (4.69)		34.70 (4.45)	

Section III

Table 14: Comparison of the level of anxiety among the staff nurses (paired t test)

Experimental	Frequency	Mean	S. D.	t value	P value
Pre Test	30	32.23	5.48	6.89	0.000
Post test	30	26.13	4.01		

**Table 15:** Comparison of the level of anxiety among the staff nurses (paired t test)

Control	Frequency	Mean	S. D.	t value	P value
Pre Test	30	35.16	4.69	1.92	0.065
Post test	30	34.70	4.45		

**Table 16:** Comparison of the level of anxiety among the staff nurses (unpaired t test)

Groups	Frequency	Mean	S. D.	t value	P value
Experimental	30	26.13	4.01	7.83	0.000
Control	30	34.70	4.46		

**Section IV**

**Table 17:** Association of the levels of anxiety with their selected demographic variables

Variable	Groups	Anxiety - Pre Test		Chi Square	d. f.	p value	Significance
		Below Md	Above Md				
Age of nursing staff	24 - 26 yr	1	2	1.43	3	0.69	Not Significant
	27 - 29 yr	5	2				
	30 - 32 yrs	3	2				
	above 33 yr	24	21				
Gender	Male	12	3	5.05	1	0.025	Significant
	Female	21	24				
Residential area	Rural area	17	13	0.06	1	0.79	Not Significant
	Urban area	16	14				
Marital status	Married	27	22	0.001	1	0.97	Not Significant
	Unmarried	6	5				
Death in family due to Covid	Zero	29	23	2.78	3	0.43	Not Significant
	One	4	2				
	Two	0	1				
	More than two	0	1				

**Table 18:** Association of the levels of anxiety with their selected demographic variables

Variable	Groups	Anxiety - Pre Test		Chi Square	d. f.	p value	Significance
		Below Md	Above Md				
Duration of work in Covid	3 months	1	0	2.58	3	0.46	Not Significant
	6 months	2	0				
	1 year	22	20				
	more than 1 year	8	7				
Family income per month	5000	0	0	0.134	1	0.71	Not Significant
	10000	0	0				
	20000	18	16				
	more than 20000	15	11				
Type of family	Nuclear	20	15	4.17	3	0.24	Not Significant
	Joint	10	8				
	Single parent	1	4				
	Extended	2	0				
History of Covid	One time	16	6	6.11	2	0.047	Significant
	Two time	0	2				
	No any history	17	19				

**H1: There is significant difference between the pre test and post test scores of level of anxiety in experimental group.**

The comparisons of the pretest and posttest means of the anxiety among the staff nurses of COVID unit at selected hospitals in experimental group were done by the paired t test. The pretest average score was 32.23 with standard deviation of 5.48. The posttest average score was 26.13 with standard deviation of 4.01. The test statistics value of the paired t test was 6.89 with p value 0.00.

**The p value less than 0.05, hence Accept the alternative hypothesis.**

Concludes, that kriya yoga in reduction of anxiety level among the staff nurses of COVID unit at selected hospitals was effective.

**H2: There is significant difference between the post test score of level of anxiety among experimental and control group.**

The comparisons of the posttest means of the anxiety level among the staff nurses of COVID unit at selected hospitals in experimental & control group were done by the unpaired t test. The posttest average score of experimental group was 26.13 with standard deviation of 4.01. The posttest average score of control group was 34.70 with standard deviation of 4.46. The test statistics value of the unpaired t test was 7.83 with p value 0.00.



**The p value less than 0.05, hence accept the alternative hypothesis.**

Concludes, that kriya yoga in reduction of anxiety level among the staff nurses of COVID unit at selected hospitals was effective.

**H3: There is significant association between the pre test level of anxiety with their selected demographic variables in experimental and control group**

The chi square test was used to see the association between the demographic variables with the pretest level of anxiety among the staff nurses of COVID unit at selected hospitals. The test was conducted at 5% level of significance, assuming the null Hypothesis, that there will be no significant association between pretest levels of anxiety with demographic variables.

#### Significant Association:

For the demographic variables gender and history of COVID, the p value of the association test with level of anxiety was less than 0.05. **Hence accept the alternative hypothesis.** That means the pretest level of anxiety was associated with these demographic variables.

## 5. Summary

- 1) In the study, according to age of the staff nurses of COVID unit, in the experimental group 6.67% of them were from the age group 24 - 26 years, 10% from the 27 - 29 years and 6.67% from the age group 30 - 32 years and 76.67% were above 33years of age. In the control group 3.33% of them were from the age group 24 - 26 years, 13.33% from the 27 - 29 years and 10% from the age group 30 - 32 years and 73.33% were above 33years of age.
- 2) In the study, according to gender of the staff nurses of COVID unit, in the experimental group 30% of them were males and 70% of them were females. In the control group 20% of staff nurses were males and 80% of staff nurses were females.
- 3) In the study, according to Residential area of the staff nurses of COVID unit, in the experimental group 53.33% of them were from rural area and 46.67% of them were from urban area. In the control group 46.67% of them were from rural area and 53.33% of them were from urban area.183
- 4) In the study, according to marital status of the staff nurses of COVID unit, in the experimental group 76.67% of them were married and 23.33% of them were unmarried. In the control group 86.67% of them were married and 13.33% of them were unmarried.
- 5) In the study, according to Death in family due to COVID of the staff nurses of COVID unit, in the experimental group 86.67% of them answered zero, 10% answered one and 3.33% answered more than two. In the control group 86.67% of them answered zero, 10% answered one and 3.33% answered two.
- 6) In the study, according to Duration of work in COVID of the staff nurses of COVID unit, in the experimental group 3.33% of them answered since 3 months, 3.33% since 6 months, 60% since 1 year and 33.33% answered

more than 1 year. In the control group 3.33% since 6 months, 80% since 1 year and 16.67% answered more than 1 year.

- 7) In the study, according to Family income per month of the staff nurses of COVID unit, in the experimental group 53.33% of them answered 20000 Rs and 46.67% answered more than 20000.184 In the control group, 60% of them answered 20000 Rs and 40% answered more than 20000.
- 8) In the study, according to type of family of the staff nurses of COVID unit, in the experimental group 63.33% of them were from nuclear families, 26.67% from joint families, 3.33% from single parent families and 6.67% from extended families. In the control group 53.33% of them were from nuclear families, 33.33% from joint families, 13.33% from single parent families and no one from extended families.
- 9) In the study, according to history of COVID to the staff nurses of COVID unit, in the experimental group 40% of them answered one time, 3.33% answered two time and 56.67% answered no any history. In the control group 33.33% of them answered one time, 3.33% answered two time and 63.33% answered no any history.

## 6. Discussion

The following conclusion were drawn from the findings of the present study. Their chapter shows that kriya yoga therapy is a simple non pharmacological intervention which should be carried out independently in the field of nursing. The overall experience of conducting this study was enriching hence it gives an opportunity to the investigator to acquire new information as well as learning experience. The experience of the investigator during the study and the findings helped the investigators to give suggestion and the recommendation for further studies.

## 7. Conclusion

Results of this study suggest that kriya yoga therapy is effective on reducing anxiety among COVID nursing staff and it contributes to the reflection on the practice of kriya yoga therapy on anxiety, in order to sensitize health care professionals to the importance of anxiety among COVID nursing staff and contribute to improving the overall level of anxiety. Thus there is the need for continued research in this area to identify the most effective method to use and develop a standardized measure that and used by the nursing staff and family to make the most effective use for reducing anxiety.

The comparisons of the pretest and posttest means of the anxiety among the staff nurses of COVID unit at selected hospitals in experimental group were done by the paired t test. The pretest average score was 32.23 with standard deviation of 5.48. The posttest average score was 26.13 with standard deviation of 4.01. The test statistics value of the paired t test was 6.89 with p value 0.00. The p value less than 0.05, hence reject the null hypothesis.

The comparisons of the posttest means of the anxiety were done by the unpaired t test. The posttest average score of

experimental group was 29.60 with standard deviation of 11.1. . The post test average score control group was 37.60 with standard deviation of 10.4. The test statistics value of the unpaired t test was 2.87 with p value 0.000. The p value less than 0.05. this shows that kriya yoga therapy is ineffective

**The following conclusion can be drawn from the study:**

- 1) Kriya yoga therapy was effective in reducing anxiety.
- 2) Deals with analysis of data related to the association between pretest levels of anxiety with their selected demographic variables among experimental and control group.
- 3) For the demographic variables age of nursing staff, residential area, marital status etc. That means the pretest level of anxiety was not associated with these demographic variables.

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