

EFFECT OF YOGIC PRACTICES ON SELECTED PSYCHOLOGICAL VARIABLES AMONG ACADEMIC ANXIETY STUDENTS

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Abstract

Background: The purpose of this study was to conduct a descriptive analysis of recognised effect of yoga practice on psychological variables in Academic Students. The sources of Anxiety among Students at 30 with Psychological parameter were chosen for the study from the Chengalpattu district, Tamil Nadu in India were researched. **Objectivities:** To determine how Anxiety sources are received by persons with Academic Students. Studies on participants have examined important psychological parameter as Anxiety. When receiving yoga practice, Participants with anxiety had improved Mind function and a decreased in their anxiety level. **Materials and Methods:** Symptom levels of Anxiety among Students with Academic Students. The Participants were given a Generalized Anxiety Disorder (GAD-7) questionnaire. The GAD have 7 objects were rated on a 4-point scale, with 0 being the least Anxiety and 3 being the most Anxiety. 30 males with academic students were chosen for the study at randomly, they were between the ages of 15 and 35. Two groups were formed from the selected subjects. There were fifteen in each of the group. One underwent experimental groups (n=15) another underwent control group (n=15). Group-I received a Yoga practice, Group-II underwent without any practice. 12-weeks training period, 5 days per week, an hour in the morning. To determine the way to deal with Anxiety through yoga. **Result & Discussion:** The results of this study show that Individual who participated in the yoga module performed better in comparison to the Control Group II, Yoga practice performed much better in the Experimental Group I. After practicing yoga for 12 weeks the experimental group's shows better results in psychological characteristics. **Conclusions:** According to our data, the yoga practise group benefited more than the control group. The experimental group was significantly less Anxiety. On the other hand, the control group showed a modest increase but no improvement. This notion is supported by our data. Improved mindfulness, which includes specific components for processing experience, being less self-critical and empathetic to themselves, and not over-identifying with Anxiety was connected to greater impact in the Yoga practise group. This research study reveals that the Yoga practice were significantly more effective treatment for Anxiety.

Keywords: Yoga practice, Anxiety, psychological Variables, Generalised Anxiety Disorder (GAD-7) questionnaire.

1. INTRODUCTION

1.1 Anxiety for Academic Students

The competitiveness in the academic and professional sectors has intensified due to globalisation, and as a result, life is full of challenges and is becoming more difficult by the day. The reasons for this include an enormous workload, stress, intense competition, a sense of quality consciousness, continual comparisons with others, a desire to accomplish more and more, an ongoing quest of perfection to set oneself apart from others, an endeavour to control everything, etc. People put more reliance in sophisticated, highly automated technological developments than in actual people, which causes both physical and mental health to deteriorate. Since this breakdown results in anxiety, stress, and self-communicable negativity,

it has negative effects¹⁻⁴. The sociobiological organisms have chosen anxiety for its likely adaptive value since it might alert potential danger and help an individual master a challenging situation, leading to personal growth⁵⁻⁸. On the other hand, excessive worry is unhelpful since it is either overly strong or inappropriately sparked by situations that provide no real risk. Thus, anxiety becomes pathological when it becomes excessive, chronic, or when it stops serving as a warning indication for danger⁹⁻¹⁰. It is frequently seen as being a substantial contributor to unhealthy lifestyles and may have a considerable impact on the pathogenesis of both psychiatric and systemic problems, including emotional academic stress in Academic students. The emotional challenges that mindfulness-based treatment has shown to be particularly successful in treating include stress, chronic discomfort, anxiety, or depressive disorders. Additionally, there is strong evidence that performing yoga keeps academic students from burning out and helps them manage their Anxiety¹¹⁻¹².

1.2 Signs and Symptoms of Anxiety



Figure 1: Signs and Symptoms of Anxiety

Figure 1 shown Anxiety symptoms and indicators might vary from person to person, and sometimes there may be none at all. One of the symptoms that are frequently present is 1.Sleep disturbances, 2.Restlessness, 3.Fear, 4.Muscle tension, 5.Impending danger, 6.loss of concentrate and 7.Irritability¹³⁻¹⁴.

1.3 Reaction of the human psychological system

According to a survey done by the Office for National Statistics (ONS) in 2000, stress and anxiety disorders are among the most common mental health issues seen in the community in the United Kingdom. Over 86% of psychotic disorders are anxiety-related, including mixed anxiety and chronic anxiety, depressive disorder, phobias, attention deficit disorder, and panic disorder. A crucial element or symptom of all of these diseases is extreme Stress. Different sensory inputs and thoughts are interpreted as stressors by our brain

Figure 2 shown the wiring between our brain and our organs is created by your central nervous system. It regulates functions like our semi-autonomous relaxation and independent heartbeat. Our sensory system and cognition detect external stresses, which cause fluctuations in that equilibrium. This alteration signals both your immune system and endocrine system to act by activating neurotransmitters, synthesised chemicals.

Effect and Symptoms of Psychological Factors

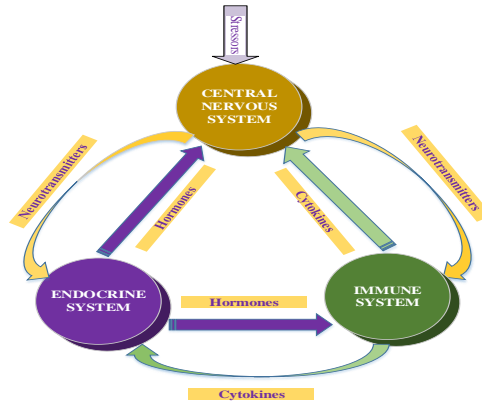


Figure 2: Effect and Symptoms of Psychological Factors

The free flow of blood is obstructed when we are under stress and our muscles are tensed. Blood flow obstructions have a negative impact on a person's activities because they affect the arteries, blood pressure, and breathing rate. Our body's adrenal glands, which release hormones in response to stress, help us survive. The adrenal glands will continue to create adrenalin and cortisone as long as we are under stress. However, if stress persists for an extended period of time, the body may be negatively impacted by these overproductions of hormones, which could impact daily activities. This is where yoga can help to shield the person from the disease¹⁵.

1.4 Signs and Symptoms of Psychological variables

Stress and anxiety are a normal aspect of the body's fight-or-flight response to threat. This response is intended to make them aware, attentive, and prepared to deal with a threat. The fight-or-flight reaction is the body's natural response, and it involves both stress and anxiety. Stress hormones are released by the body when a person feels threatened. The heart beats more rapidly as a result of stress hormones, carrying more blood to the limbs and organs. This reaction enables someone to be prepared to either fight or flight. Similarly, they breathe more quickly, and their blood pressure has increased. Professionals refer to this extraordinarily quick process as stress. Anxiety is the body's natural response to stress.

Signs and Symptoms of Psychological variables

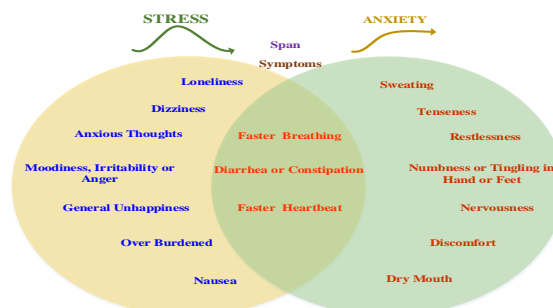


Figure 3: Signs and Symptoms of Psychological variables

The signs of stress and anxiety are very similar each other. When under stress, an individual might experience Loneliness, Dizziness, Anxious Thoughts, Moodiness, irritability, anger, general unhappiness, a feeling of being overburdened and Nausea. Anxious thoughts. When under anxious, an individual might experience Sweating, Tenseness, Restlessness, Numbness or Tingling in hand or feet, Nervousness, Discomfort and Dry Mouth. The same physiological responses associated with stress and anxiety include a faster heartbeat, faster breathing, and constipation or diarrhea. Stress often lasts a short term and is a reaction to a perceived threat. Anxiety can linger and occasionally feel like nothing is setting off it. Yoga Techniques can help participants to cope with Stress and Anxiety¹⁶.

1.5 System of Yoga for Psychological Factors

Yoga is a technique that combines three aspects: body intervention, breath awareness exercises and meditation as a mind. Hatha yoga, which combines meditation, breathing exercises, and asanas (postures), is the type that is most popular in the United States. Despite having its roots in Indian culture and religion, yoga can be practised on a scientific level¹⁷. Yoga originated in India. Yoga practice is useful in the management of various lifestyle diseases, such as Anxiety. The therapeutic effects of yoga on anxiety involve immunological, neuroendocrine, and psycho-neuro-endocrine systems. Yoga's holistic approach assists in strengthening the body throughout its entirety¹⁸. Yoga enhances co-morbidities associated with anxiety, including muscular strength, balance, confidence in one's equilibrium, sleeping habits, quality of life, Stress, and anxiety, can be an effective method for those with Anxiety¹⁹⁻²².

1.6 Importance of Yoga practice on Psychological Variables with Anxiety Treatment

Yoga reduces anxiety, Stress and stabilish nervous system and maintain life balances. Yoga is an appealing therapeutic choice due to its popularity, which has already been proved in the United States²³. Yoga has Satisfaction for Students with Anxiety. If our health worsens, we go into fight-or-flight mode, which could lead to the development of ineffective pain avoidance techniques²⁴. Yogasana were effective in improving static and dynamic mind performance, muscle strength, and reducing fear of among students with anxiety. Yoga is a healthy method that can help you get rid of or proceed overcome these rooted anxieties and concerns. A mind-body connection exists. Yoga is a simple, low-cost method of coping with stress and anxiety that combines asana, breathing exercises, and pranayama with meditation and relaxation techniques. Before undertaking the training programme, the researcher conducted a review of the scientific literature on the topic of the impact of yogic practises on psychological factors. The investigator chose the psychological variable stress based on experience²⁵⁻²⁶. Students were given intensive instruction in yoga postures, breathing techniques, and meditation in addition to getting regular therapy for Anxiety. After a few months, both stress levels and Anxiety levels were significantly good result²⁷.

1.7 Generalized Anxiety Disorder Questionnaire (GAD-7)

The GAD-7 is a seven-item self-report scale designed to evaluate the GAD. Items are graded using a 4-point Likert scale (0 = not at all to 3 = nearly every day). The GAD-7 items list some of the key diagnostic indicators for GAD (i.e., Anxious, Feeling Nervous or on edge and

worrying too much about different things) which range from 0 to 21 with higher Scores reflect extreme level of Anxiety System²⁸⁻²⁹.

2. MATERIALS AND METHODS

The study sample's data was examined for Psychological factors in relation to pre- and post-tests in one experimental group and one control group. Thirty Academic Students with Anxiety from Tamil Nadu, ranging in age from 15 to 35 years, were chosen this study. The participants were split into two groups of fifteen people each. The experimental group I received Yoga practice and the control group II no practice.

2.1 Treatment Protocol

The experimental group underwent the training period of 12 weeks, five days per week received Yoga practice. The concerned medications were also be continued.

2.2 Practice Schedules

The table 1 below gives brief descriptions of the Yoga Practice Schedules for Anxiety Students.

S.No	List of yogasanas and Pranayama	weeks	sets	Duration	Maintaining Duration	Rest in between asanas in seconds	Frequency
1	Sukshma Uyyayama. (Pavanmuktasana series)	1-12 Weeks	1	10 Minutes	20 Seconds	30 Seconds	5 Days
2	Suriya Namaskar	1-12 Weeks	4	10 Minutes	10 Seconds	30 Seconds	5 Days
3	Tadasana	1-12 Weeks	1	50 Seconds	20 Seconds	30 Seconds	5 Days
4	Utkatasana.	1-12 Weeks	1	50 Seconds	20 Seconds	30 Seconds	5 Days
5	Vrikshasan.	1-12 Weeks	1	50 Seconds	20 Seconds	30 Seconds	5 Days
6	Gomukhasan	1-12 Weeks	1	50 Seconds	20 Seconds	30 Seconds	5 Days
7	Paschimottanasana.	1-12 Weeks	1	50 Seconds	20 Seconds	30 Seconds	5 Days
8	Ardha Matsyendrasana	1-12 Weeks	1	50 Seconds	20 Seconds	30 Seconds	5 Days
9	Utthanapadasan	1-12 Weeks	1	50 Seconds	20 Seconds	30 Seconds	5 Days
10	Sarvangasana.	1-12 Weeks	1	50 Seconds	20 Seconds	30 Seconds	5 Days
11	Halasana.	1-12 Weeks	1	50 Seconds	20 Seconds	30 Seconds	5 Days
12	Salabhasana.	1-12 Weeks	1	50 Seconds	20 Seconds	30 Seconds	5 Days
13	Dhanurasana.	1-12 Weeks	1	50 Seconds	20 Seconds	30 Seconds	5 Days
14	Shavasana.	1-12 Weeks	1	10 Minutes	10 Minutes		5 Days
Pranayama							
16	Nadi Shodhana	1-12 Weeks	1	60 Seconds	30 Seconds	30 Seconds	5 Days
17	Savithri Pranayama	1-12 Weeks	1	60 Seconds	30 Seconds	30 Seconds	5 Days
18	Brain Yoga	1-12 Weeks	3	60 Seconds	30 Seconds	30 Seconds	5 Days
Meditation							
20	AUM	1-12 Weeks	1	10 minutes	10 minutes	30 seconds	5 Days
	Practice Time			54.16 min.			
	Relaxation Time			5.84 min.			
	Total Time			60.0 min.			

2.3 Data collection

Whether they felt Stress or not, Students with anxiety who met the inclusion criteria were included in the trial. They had to be at least 15 years old. The questionnaire examined at the Students' psychological build, their assessment of the benefits of using yoga as a form of treatment before being diagnosed, the categorisation of yoga practises, the resources evaluated, the safety, and the efficacy of yoga practice. Students received standard forms that had already been created and approved by the researcher. The Students' histories, diagnoses, and other information were recorded along with their data.

3. RESULT

3.1 Calculations in statistics

Statistical analysis was performed on the studies by using SPSS 19.0. The Percentages, averages, and standard deviations were used to characterise the results. From its roots as a tool for statistical analysis, SPSS has evolved into a favourite among academics in a range of features³⁰⁻³¹.

3.2 Interpretation of Result

If $t_{cal} < t_{tab}$ Value, Accept H_0 there is no relationship between Yoga practice (Experimental Group) to the Psychological variables. If $t_{cal} > t_{tab}$ Value, Rejected H_0 there is relationship between yoga practice (Experimental Group) to the Psychological variables. If $t_{cal} < t_{tab}$ Value, Accept H_0 there is no relationship between without Yoga practice (Control Group) to the Psychological variables. If $t_{cal} > t_{tab}$ Value, Rejected H_0 there is relationship between without Yoga practice (Control Group) to the Psychological variables. Degree of freedom (df) = n-1 So df= 14. Then t table value is 14 df = 2.14.

3.3 Paired Samples T Test For Pre-test and Post-test for Group I

Table 2: Paired Samples T Test for Pre-test and Post-test for Group I (experimental Group-I)

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Psychological Variable	Anxiety Pre-Test	14.61	15	4.596	1.277
	Anxiety Post-Test	13.34	15	4.609	1.289

Examining the experimental Group-I involved using the analysis tool. Table 2 displays the pre-test and post-test values for yoga practice based on Anxiety. The results were mentioned into the Mean Value, Standard Deviation, Standard Error Mean, and Number of Participants 15, accordingly.

Table 3: Paired Samples T Test For Pre-test and Post-test for Group I

Paired Samples Correlations				
		N	Correlation	Sig.
Psychological Variable	Anxiety Pre-Test & Anxiety Post-Test	15	0.971	0.00

Table 3 displays the pre-test and post-test for yoga practice based on Correlation and Significant values.

Table 4: Paired Samples T Test For Pre-test and Post-test for Group I

Paired Samples Test									
Paired Samples	Paired Differences						t	df	Sig. (2-tailed)
	Variables	Test	Mean	Std. Dev.	Std. Error Mean	Lower			
Anxiety	Pre-Test & Post-Test	1.267	1.0876	.28396	.6476	1.87	4.461	14	.001

The analysis tool was used to examine the experimental Group-I and Control Group-2. Table 4 Shows that Stress presents the pre-test and post-test value of Yoga practice. Anxiety presents the pre-test and post-test in Yoga practice as Mean Value 1.267, Std. Deviation 1.0876, Std. Error Mean .28396, lower value .6576 upper value 1.87, t value 4.461, df 14 and resulted in Sig. (2-tailed) of .001, the t calculation value of 4.461 greater than the table value of 2.14 so it's considered statistically significant difference between the pre & post-test means at 0.05 level of confidence for the both test of Anxiety in Yoga practice. Table 4 reveals that the Anxiety pre-test and post-tests yoga practice had a significant value.

3.4 Paired Samples T Test For Pre-test and Post-test for Group II

Table 5: Paired Samples T Test for Pre-test and Post-test Group II (Control Group)

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Variable-2	Anxiety Pre-Test	13.27	15	4.589	1.186
	Anxiety Post-Test	13.87	15	4.364	1.123

Examining the experimental Group-II involved using the analysis tool. Table 5 displays the pre-test and post-test values for yoga practice based on Anxiety. The results were mentioned into the Mean Value, Standard Deviation, Standard Error Mean, and Number of Participants 15, accordingly.

Table 6: Paired Samples T Test For Pre-test and Post-test for Group II

Paired Samples Correlations				
		N	Correlation	Sig.
Variable-2	Anxiety Pre-Test & Anxiety Post-Test	15	0.956	0.00

Table 6 displays the pre-test and post-test for yoga practice based on Correlation and Significant values.

Table 7: Paired Samples T Test For Pre-test and Post-test for Group II

Paired Samples T Test									
Paired Samples	Paired Differences						t	df	Sig. (2-tailed)
Variables	Test	Mean	Std. Dev.	Std. Error Mean	Lower	Upper			
Anxiety	Pre-Test & Post-Test	-.6000	1.25	.35215	-1.447	.1536	-1.723	14	.106

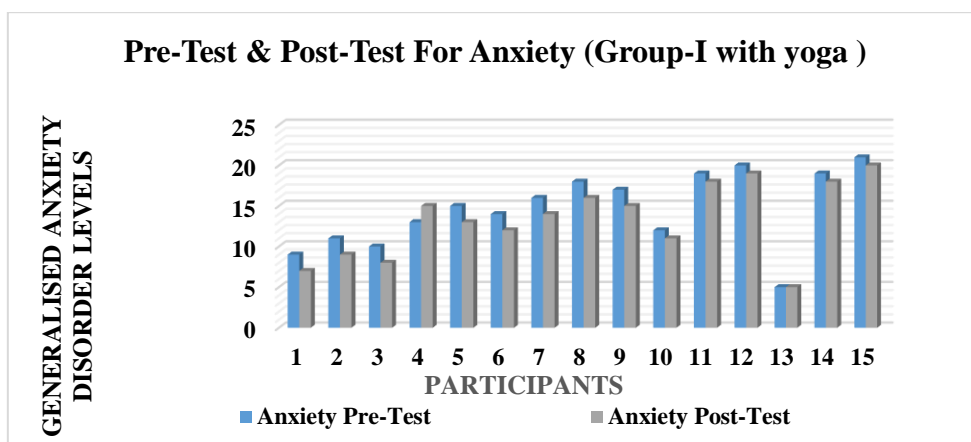
Table 7 shows the SPSS analysis of Stress presents the pre-test and post-test in Control Group-II. Anxiety presents the pre-test and post-test in without Yoga practice as Mean Value -.6000, Std. Deviation 1.25, Std. Error Mean .35215, lower value -1.447 upper value .1536, t value -1.723, df 14 and respectively, resulted in Sig. (2-tailed) of .106. the t calculation value of -1.723 Less than the table value of 2.14 so it's considered statistically no significant difference between the pre & post-test means at 0.05 level of confidence for the both test of Anxiety in Without Yoga practice . Table 7 reveals that the Anxiety pre- and post-tests in without Yoga practice had a no significant value.

4. DISCUSSION

The two groups' initial features were examined; one group revealed a significant difference, but the other group showed nothing; as a result, they were evaluated for the study. After a 12-week research period, anxiety levels considerably dropped in the yoga group. Without access to yoga, the control group showed no changes. However, there was little evidence of an anxiety difference in the Control Group. We observed a substantial reduction in GAD-7 scores in the yoga groups. Thus, practicing yoga helped Group 1 Participants feel less anxious. The decrease in anxiety may have been influenced by the improvement in autonomic tone seen in Group 1. The yoga group might have done better on the anxiety test since they were academic students.

4.1 Graph I Pre-test and Post-test for Group I

According to the graph analysis, participants in Group -1 Yoga practice module outperformed the Control group. 12 weeks yoga practice has shown to be effective and causes significant psychologically changes in Anxiety.



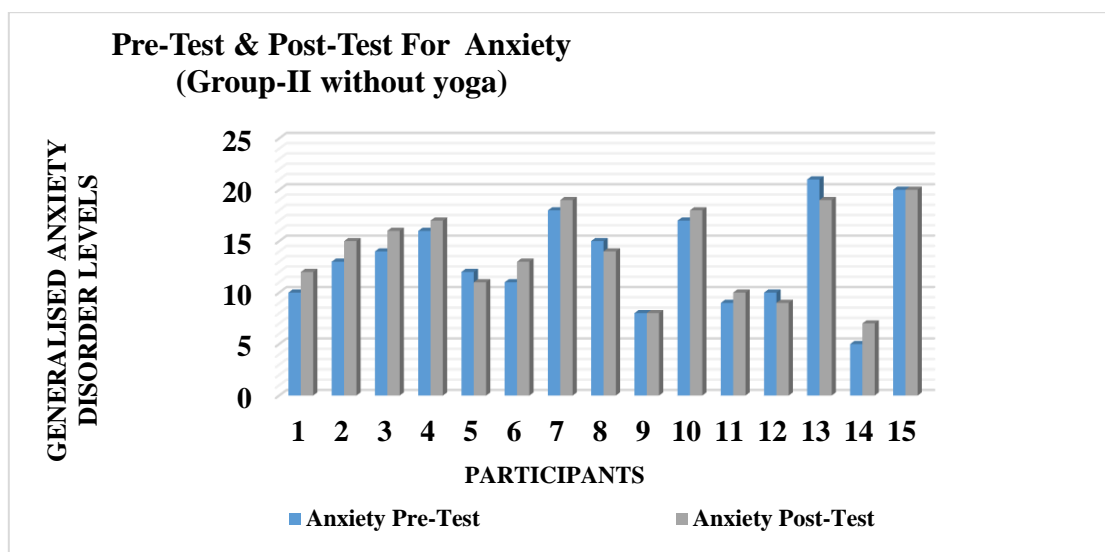
Graph-I Anxiety Pre& Post-Test with Yoga

Fig 4: Pre and Post Test data of Experimental Group I (With Yoga Practice)

In graphs 1, the ‘x’ axis represented the number of 15 participants, while the ‘y’ axis represented psychological data including GAD-7. Following the pre-test, the participants were given yoga pose such as SukshmaVyayama (Pavanmuktasana Series) ,Surya Namaskar , Tadasana , Utkatasana , Vrikshasana , Gomukhasana , Paschimottanasana , Sarvanana , Utthanapadasana , Ardha Matsyendrasana , Utthanapadasana , Sarvangasana , Halasana , Salabhasana , Breathing exercise, Brain yoga and Om Meditation focuses on improving psychological aspects of Anxiety. After post-test diagnosis, Students’ assessments of the benefits of Yoga treatment were used with positive outcomes in experimental group-1. All graphs on the ‘y’ axis reflected psychological data, anxiety pre-test results indicated blue. Anxiety post-test results indicated Grey.

4.2 Graph II Pre-test and Post-test for Group II

Participants in Group -II control group did not benefit significantly, as seen in graph III and IV as shown in Figure 4. The participants were not provided any practice after the pre-test. Comparing the results of pre- and post-tests, there was no significant difference in Stress and Anxiety. The graph shows that there is no positive outcomes.



Graph-II Post-Test for Control Group

Fig 7: Pre and Post Test data of Control Group II (Without Yoga Practice)

5. CONCLUSION

Yoga practise in the Experimental Group I succeeded substantially better than in the Control Group II. In addition to improved respiratory, cardiovascular, and brain function, the experimental group exhibits better results in psychological traits like anxiety after practising yoga for 12 weeks. Yoga exercises require constant control of the body's processes for precise timings. Finally, yoga practise helps students with academic anxiety by improving their hormone balance, nerve function, and mental stability.

Disclosure statement

No potential conflict of interest was reported by the authors.

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