

A COMPARATIVE ANALYSIS OF PSYCHOLOGICAL PERSPECTIVES ON THE CAUVERY WATER CRISIS IN KARNATAKA AND TAMIL NADU

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Abstract: *Karnataka and Tamil Nadu have long been in conflict over the Cauvery water dispute which is one of the most emotionally charged disagreements within India. The tradition of examining this issue relies on law, politics and nature, but this work takes a psychological approach to understand the emotional aspects of the dispute. In general, the project seeks to look at (1) how society views the Cauvery water crisis, (2) how people in Karnataka and Tamil Nadu think and feel about it and (3) how news media shapes their reactions. The data were collected from both states by means of a defined questionnaire and then Chi-square, ANOVA and regression analysis were used on SPSS. The analysis identified that people's public feelings and attitudes varied a lot from one state to another and that media was a strong driver in shaping their emotions. By studying this, it became clear that empathetic communication and careful reporting by the media support the process of solving conflicts related to water.*

Key Words: *Cauvery water crisis, comparative analysis, society views, media influence, people attitudes, Karnataka and Tamil Nadu.*

1. INTRODUCTION

For more than a century, Karnataka and Tamil Nadu have had disputes over the sharing of water from the Cauvery River. The pact signed in colonial times is now fought out as a major modern issue, affecting agriculture, governance and opinions of people in both states. Continuing protests, outrage by the public and intense debate gauge the strong feelings surrounding the issue.

Lots of research explores the legal and political sides of the matter, yet only scarce studies have looked at the feelings and behaviors involved in public judgments, emotions and how various groups view one another. Water scarcity and inequalities in distribution lead people to feel they have been wronged and it also affects their self-image and sense of being part of something.

2. BACKGROUND OF THE STUDY

The Cauvery River water dispute since the 1892 and 1924 agreements has created decades of strife between Tamil Nadu and Karnataka. The 2018 Supreme Court decision changed water allocations, creating public protests and emotional responses. This long-standing conflict is a manifestation of deep-rooted psychological and regional feeling that is normally magnified by the media.

3. REVIEW OF LITERATURE

Kaur (2025) investigates how the Cauvery water conflict affects human rights by covering how the long-term fight over water stresses populations, increases uncertainty about livelihoods and sparks tension among neighboring states.

Rao (2022) analyzes how digital narratives and memory create collective psychological responses to the Cauvery conflict, with online polarization and identity politics being highlighted as stressors and interpreted his thoughts through a blog in a famous frontline article.

Dutta (2021) problematizes the emotional responses that arise among local residents near the Cauvery river when water conflict occurs which Dutta discussed in this article with his strong knowledge and acumen towards people awareness on the referred issue.

Sayanthan Mahinder, Hirak Sarkar (2020) study the effect of harsh and attention-grabbing news reports on the opinions of people in the water crisis in Chennai which led to more fear and group-based attitudes in the Cauvery region.

By using strategic conflict analysis in 2020, Sharma, Hipel and Schweizer report that strong emotions and biases usually matter more in the Cauvery dispute than the decisions made rationally by stakeholders and respondents.

Goldman and Narayan (2019) consider the water challenges experienced in Bangalore, relating them to changes in water use around the world. Their study reveals how psychological stress affects the situation.

Velayutham and Aram (2018) examine how media reporting of the Cauvery tribunal's final order shaped public attitudes and emotional reactions in Tamil Nadu, and find sensationalist reporting highlighted intergroup tensions and extended the conflict's psychological footprint.

Ghosh, Thakur and Bandyopadhyay (2018) state that deep-seated attitudes of injustice towards water sharing and strong personal claims over their portion of the Cauvery, are key reasons behind the dispute in Karnataka and Tamil Nadu. Experts believe that changes in institutions should focus on the psychological and emotional factors in public reactions.

Rajeswari (2017) studies how media from Karnataka change the way local people think and feel during the Cauvery water dispute. According to the authors, emotional content tends to increase polarization and conflict between states.

Tiwari (2016) approaches the Cauvery water dispute as a cautionary tale to demonstrate how identity politics and media discourses create and exaggerate psychological tension and social cleavages to turn a legal dispute into an extended social conflict.

Lynch and McGoldrick (2005) propose that media coverage of a conflict can either increase or decrease public tensions. The model explains many parts of the Cauvery conflict.

According to Iyer (2002), the Cauvery dispute began a long time ago and because of old grievances, stakeholders tend to become less flexible and resistant to agreements.

4. OBJECTIVES OF THE STUDY

- To explore societal behavior and perceptions towards the Cauvery water crisis.
- To analyze and compare the attitudes of individuals from Karnataka and Tamil Nadu regarding the Cauvery issue.
- To evaluate the influence of media on the psychological responses and perspectives of people concerning the Cauvery crisis.

4.1 HYPOTHESIS OF THE STUDY

H0 – There is no significant variation in societal behaviour and perception regarding the Cauvery water crisis among the general population.

H1 - There is significant variation in societal behaviour and perception regarding the Cauvery water crisis among the general population.

H0 – There is no significant difference in attitudes towards the cauvery water crisis between individuals from Karnataka and Tamil Nadu.

H1 - There is a significant difference in attitudes towards the cauvery water crisis between individuals from Karnataka and Tamil Nadu.

H0 – Media exposure does not significantly predicts psychological responses regarding the Cauvery water crisis.
H1 - Media exposure significantly predicts psychological responses regarding the Cauvery water crisis.

5. RESEARCH METHODOLOGY

This study employs a quantitative research approach through a structured questionnaire to collect primary data from Karnataka and Tamil Nadu respondents. A stratified random sampling method was employed to ensure representation across various age groups, educational qualifications, and geographic areas within the two states. The questionnaire employed Likert-scale questions to evaluate perceptions, attitudes, emotional responses, and the impact of media in terms of the Cauvery water dispute. SPSS software was used to analyze the data, Chi-square tests for testing association, ANOVA for comparing state attitude, and Linear Regression to determine the impact of media exposure on psychological response. The approach was designed to ensure a statistically reliable and comparative insight into the psychological dimensions of the dispute.

5.1 STATEMENT OF THE PROBLEM

In spite of various legal proceedings, the issue of Cauvery water continues to generate substantial public opinion and inter-regional animosity. Nevertheless, the psychological impact and perceptions induced by media on this dispute remain inadequately researched and inadequately known.

5.2 RESEARCH GAP

No proper research made on comparative analysis between Karnataka and Tamil Nadu on people's psychological perspective and media influence on them on ongoing Cauvery issue.

5.3 SAMPLING PLAN

For this research, a sample of about 100 people were selected from the target population from 2 states i.e. Karnataka & Tamil Nadu. The sampling was done using the Stratified sampling method. Data was collected from the selected sample through questionnaires.

5.4 LIMITATIONS OF THE STUDY

1. This research was restricted only on areas covering Cauvery issue.
2. The sample size taken for the study were restricted to limited number of respondents i.e., only 100 respondents.
3. Time period of the study was less.
4. Due to the time constraint, in detail study was not done.
5. Lack of knowledge and awareness towards ongoing Cavery issue by respondents.

6. RESULT ANALYSIS AND INTREPRETATION

Objective – 1: To explore societal behavior and perceptions towards the Cauvery water crisis.

CHI SQUARE TEST

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
1. The Cauvery water crisis has significantly impacted the daily lives of people in my region. Location - State	100	100.0%	0	0.0%	100	100.0%
2. The Cauvery dispute negatively affects the socio-economic stability of the region. Location - State	100	100.0%	0	0.0%	100	100.0%
10. My opinion on the Cauvery water dispute is influenced by the region I belong to. Location - State	100	100.0%	0	0.0%	100	100.0%

Crosstab					
			Location - State		Total
			1	2	
1. The Cauvery water crisis has significantly impacted the daily lives of people in my region.	1	Count	10	13	23
		Expected Count	14.0	9.0	23.0
	2	Count	11	13	24
		Expected Count	14.6	9.4	24.0
	3	Count	23	13	36
		Expected Count	22.0	14.0	36.0
	4	Count	11	0	11
		Expected Count	6.7	4.3	11.0
	5	Count	6	0	6
		Expected Count	3.7	2.3	6.0
Total		Count	61	39	100
		Expected Count	61.0	39.0	100.0

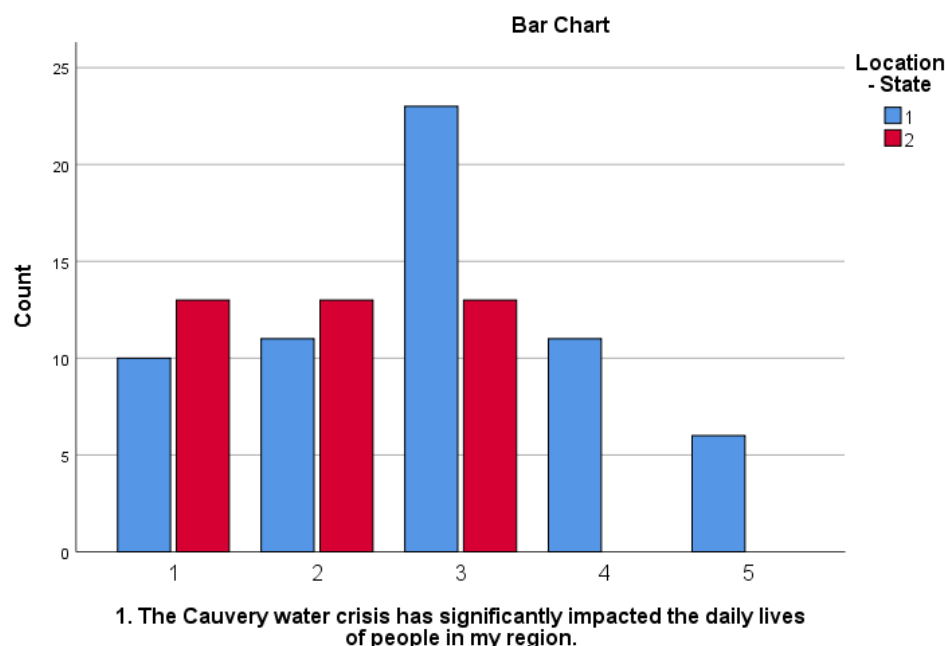
Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	16.284 ^a	4	.003
Likelihood Ratio	22.061	4	.000
Linear-by-Linear Association	13.792	1	.000
N of Valid Cases	100		

a. 3 cells (30.0%) have expected count less than 5. The minimum expected count is 2.34.

Variable 1: "The Cauvery water crisis has significantly affected the daily life." vs. Location (State)
Chi-square value: 16.284, $p = .003$

Interpretation:

The p-value (< 0.05) shows a statistically significant relationship between state location and individuals' perception of the crisis's effect on their daily life. States differ in how they perceive the crisis, likely because of geographical or political closeness to the Cauvery basin.



2. The Cauvery dispute negatively affects the socio-economic stability of the region. Location - State

Crosstab					
			Location - State		Total
			1	2	
2. The Cauvery dispute negatively affects the socio-economic stability of the region.	1	Count	3	0	3
		Expected Count	1.8	1.2	3.0
	2	Count	15	26	41
		Expected Count	25.0	16.0	41.0
	3	Count	7	0	7
		Expected Count	4.3	2.7	7.0
	4	Count	33	13	46
		Expected Count	28.1	17.9	46.0
	5	Count	3	0	3
		Expected Count	1.8	1.2	3.0
Total		Count	61	39	100
		Expected Count	61.0	39.0	100.0

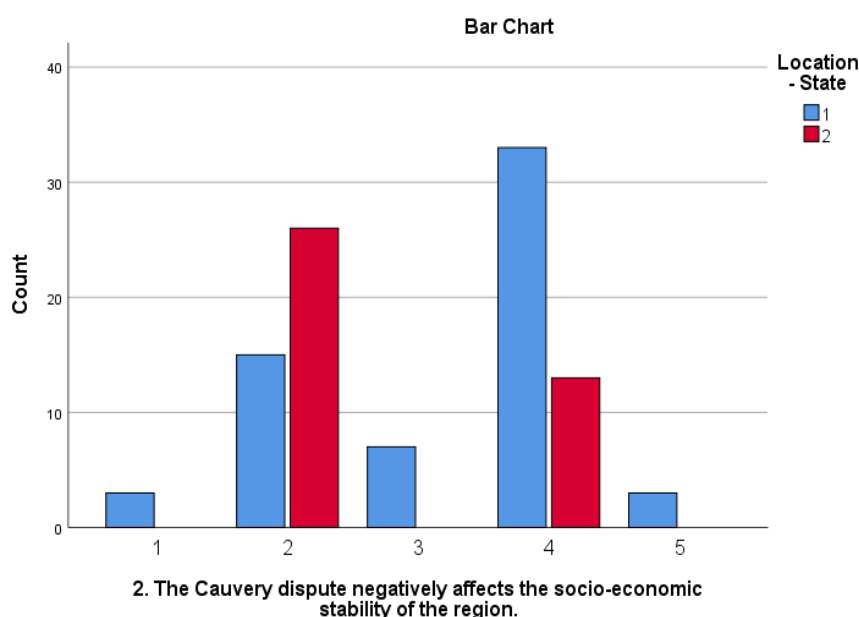
Chi-Square Tests			
	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	20.814 ^a	4	.000
Likelihood Ratio	25.122	4	.000
Linear-by-Linear Association	8.398	1	.004
N of Valid Cases	100		

a. 6 cells (60.0%) have expected count less than 5. The minimum expected count is 1.17.

Variable 2: "The Cauvery dispute adversely impacts socio-economic stability." vs. Location (State)
Chi-square value: 20.814, $p = .000$

Interpretation:

Strong statistical significance once again indicates that perception of socio-economic effect differs extensively across states. Likelihood ratio and linear-by-linear association ($p = .004$) concur with this tendency.



Hypothesis testing – Since the Chi- Square test is showing a significant association with societal behaviour and perception regarding the Cauvery water crisis, we are rejecting the Null hypothesis (H0) and accepting the Alternate hypothesis (H1).

Objective – 2: To analyze and compare the attitudes of individuals from Karnataka and Tamil Nadu regarding the Cauvery issue.

ONE - WAY ANOVA ANALYSIS

Descriptives									
		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
4. The Cauvery water crisis has heightened tensions between the communities of 1 and 2.	1	61	4.39	.759	.097	4.20	4.59	3	5
	2	39	2.67	1.722	.276	2.11	3.22	1	5
	Total	100	3.72	1.484	.148	3.43	4.01	1	5
5. I believe that current legal interventions are effective in managing the Cauvery water crisis.	1	61	3.36	1.001	.128	3.10	3.62	1	5
	2	39	3.33	1.722	.276	2.78	3.89	1	5
	Total	100	3.35	1.321	.132	3.09	3.61	1	5

Test of Homogeneity of Variances					
		Levene Statistic	df1	df2	Sig.
4. The Cauvery water crisis has heightened tensions between the communities of 1 and 2.	Based on Mean	72.220	1	98	.000
	Based on Median	12.932	1	98	.001
	Based on Median and with adjusted df	12.932	1	77.662	.001
	Based on trimmed mean	65.573	1	98	.000
5. I believe that current legal interventions are effective in managing the Cauvery water crisis.	Based on Mean	33.772	1	98	.000
	Based on Median	7.015	1	98	.009
	Based on Median and with adjusted df	7.015	1	70.523	.010
	Based on trimmed mean	31.244	1	98	.000

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
4. The Cauvery water crisis has heightened tensions between the communities of 1 and 2.	Between Groups	70.936	1	70.936	47.219	.000
	Within Groups	147.224	98	1.502		
	Total	218.160	99			
5. I believe that current legal interventions are effective in managing the Cauvery water crisis.	Between Groups	.018	1	.018	.010	.920
	Within Groups	172.732	98	1.763		
	Total	172.750	99			

Variable 4: "The Cauvery water crisis has raised tensions between communities."
Mean: State 1 = 4.39, State 2 = 2.67, F value = 47.219, p = .000

Interpretation:

Statistically significant difference between states in the perception that tensions between communities have increased. Levene's Test ($p = .000$) shows unequal variances. So, responses are strongly polarized by state.

Variable 5: "I think that current legal interventions are effective."

Mean: Both states approximately 3.35, $F = 0.010$, $p = .920$

Interpretation:

No difference in perception of legal effectiveness between states. Individuals across both states share similar beliefs about how the legal system operates.

Hypothesis testing: As the One-Way ANOVA test reveals a significant difference ($F = 47.219$, $p\text{-value} = 0.000$) between Karnataka and Tamil Nadu in perceptions concerning inter-community tensions, we are rejecting the Null hypothesis (H_0) and accepting the Alternate hypothesis (H_1). This indicates that attitudes towards the crisis are significantly different across the two states.

But for the case of legal interventions, the $p\text{-value}$ is 0.920, which is non-significant. So, here we are unable to reject the Null hypothesis, which states that opinions about legal effectiveness are equal in both states.

Objective – 3: To evaluate the influence of media on the psychological responses and perspectives of people concerning the Cauvery crisis.

REGRESSION ANALYSIS

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.440 ^a	.193	.185	1.224
a. Predictors: (Constant), 6. The Cauvery water dispute has created a sense of regional pride in my state.				
b. Dependent Variable: 7. I believe the allocation of Cauvery water is fair to my state.				

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	35.168	1	35.168	23.465	.000 ^b
	Residual	146.872	98	1.499		
	Total	182.040	99			
a. Dependent Variable: 7. I believe the allocation of Cauvery water is fair to my state.						
b. Predictors: (Constant), 6. The Cauvery water dispute has created a sense of regional pride in my state.						

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.282	.348		3.684	.000
	6. The Cauvery water dispute has created a sense of regional pride in my state.	.451	.093	.440	4.844	.000
a. Dependent Variable: 7. I believe the allocation of Cauvery water is fair to my state.						

Dependent: "The allocation of water is fair to my state"

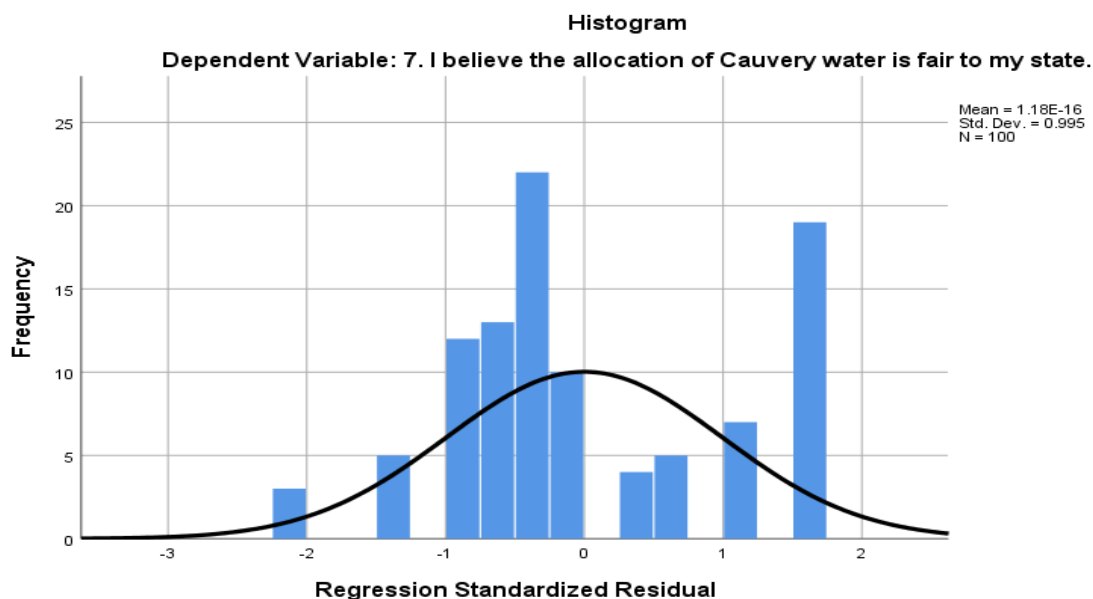
Predictor: "Cauvery dispute has created a sense of regional pride"

$R^2 = 0.193$, $F = 23.465$, $p = .000$

Interpretation:

19.3% of the variation in water allocation fairness perception is accounted for by regional pride.

There is a Positive relationship: $B = 0.451$, $t = 4.844$, $p = .000$. Individuals who have a greater sense of regional identity are more inclined to view the water allocation as fair — possibly an in-group bias.



Hypothesis testing – As the regression model is significant in prediction (p -value = 0.000) and R^2 value is moderate (0.193), we are rejecting the Null hypothesis (H_0) and accepting the Alternate hypothesis (H_1). This indicates that psychological reactions like perception of fairness and opinion formation are impacted significantly by regional pride, which can be influenced by media narratives and exposure.

7. OVERALL INTERPRETATION OF THE STATISTICAL ANALYSIS ON THE CAUVERY WATER DISPUTE STUDY:

The statistical outcomes evidently show that regional identity and geographic location have a considerable impact on public perception of the Cauvery water dispute.

1. Chi-square tests verified that perceptions regarding the influence on everyday life and socio-economic stability differ significantly by states.
2. ANOVA results indicated a striking difference in the way communities view inter-state tensions, but no regional differences existed in perceptions of legal effectiveness.
3. Regression and correlation tests identified a strong positive link between regional pride and opinion generation, emphasizing that the conflict not only impacts water sharing but also feeds a sense of state-oriented loyalty and prejudice.

Overall, it seems from the findings that the Cauvery problem is rooted in socio-political sentiments, and any attempt to solve it has to take regional feelings, historical grievances, and identity-oriented narratives into account, along with legal and technical actions.

Therefore, a sustainable resolution will need empathetic policymaking, inclusive talks, and open water governance processes to address both the pragmatic requirements as well as the emotional bases of the affected people.

8. KEY FINDINGS:

1. Regional identity also serves as a key factor in influencing individual opinion, emotional reaction, and sense of justice and crisis effect.
2. The respondents of both states felt more emotional tension, but the kind and extent of psychological impact were quite dissimilar.
3. Karnataka respondents exhibited greater perceived injustice and emotional disturbance, whereas Tamil Nadu respondents exhibited greater regional pride and collective defense responses.

4. Legal intervention was regarded with comparative indifference throughout states, reflecting a shared wariness or cautious acceptance of judicial proceedings.
5. The feeling of belonging and group membership surfaced as a strong psychological motivator, with a prominent role in fairness, blame, and entitlement judgments.

9. CONCLUSION

This research sought to investigate and contrast the psychological outlook of Karnataka and Tamil Nadu people towards the centuries-old Cauvery water controversy. Using a rigorous quantitative analysis through chi-square tests, ANOVA and regression, results reveal that the controversy is not exclusively political or legal, but one that is highly rooted in the communal thought and regional identity of the populace.

The findings point to social attitude and behaviour as having a marked difference between the two states, particularly regarding perceived impact of daily life, socio-economic stability, and inter-group tensions. Legal proceedings were perceived similarly in both states, whereas regional pride, fairness in water distribution, and geographical identity in opinion formation were issues of definite psychological variation. This indicates how identity narratives, perhaps conditioned by history, media, and state-specific discourse, influence how individuals emotionally and cognitively react to the conflict.

In addition, regression analysis also validated that regional pride is an effective predictor of public opinion, demonstrating the substantial influence of group membership and affective identification in creating public attitude towards inter-state resource conflicts. The strong correlation between regional identity and public opinion validates the premise that emotional and psychological considerations must be addressed within any conflict resolution attempt. In closing, the research highlights the need to settle the Cauvery water dispute not only on technical or administrative grounds, but also on psychological and socio-cultural grounds. To ensure sustainable settlement, policymakers and stakeholders need to engage in empathetic conversation, build mutual comprehension, and tackle the underlying emotional and identity-based dynamics that drive public opinion and inter-state relations. By integrating psychology into water management, we can imagine a more inclusive and harmonious framework for inter-state cooperation.

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