

# IMPACT OF TSUNAMI AFFECTED POPULATION IN THE COASTAL REGIONS OF NAGAPATTINAM DISTRICT TAMILNADU

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## ABSTRACT

Social impact of Tsunami has most vulnerable impact on children , women and age group of people. The livelihood of the people are affected. This study collected data information from **Nagapattinam** district Tamilnadu. The comparative study is on high tsunami affected area is **Vadakkupoyyur** less tsunami affected area is **Pratabaramapuram** . The variables selected for the study are “F.C” which is “ Fish Catches” , “F.S” represent “Fish Sellers” , “Fc.G” represent “ Fish Catcher Government Employees” and “O” represent others. Total sample is 2sample is distributed between highly tsunami affected and less tsunami affected area having 120 samples each . Samples are divided in the four categories each one is having 30 samples. The data is collected and analysed through random sample method.Percentage method is used to analyse the data. This research article suggest that awareness programs should be conducted and also improve the medical facility in the affected region. Create livelihood opportunity for the people in the sea shore area. The government and the NGOs should concentrate on developing mangrove forest in the sea shore area to prevent huge impact due to natural disasters.

Keywords:Sea shore area, tsunami affected area, impact, Fish Catches (F.C), Fish Sellers (F.S), Fish Catches Cum Government Employees (Fc.G) and Others (O).

## Introduction

On Sunday 26 December Tsunami occurs in Indian ocean in the year 2004. 15 years ago one of the most severe disaster in Indian ocean was the Tsunami event.This disaster had an impact on three factors. They are impact on human life, environment impact, economical impact.Asset, infrastructure, buildings, natural resources are fully or partially damaged. Social impact of Tsunami has most vulnerable impact on children, women and aged group of people.The livelihood of the people are affected.

This study collected data information from **Nagapattinam** district Tamilnadu. The comparative study is on high tsunami affected area is **Vadakkupoyyur** less tsunami affected area is **Pratabaramapuram**. All table represent “F.C” which is “ Fish Catches” , “F.S” represent “Fish Sellers” , “Fc.G” represent “ Fish

Catcher Government Employees” and “O” represent others total sample is 240 sample is distributed between highly tsunami affected and less tsunami affected area having 120 samples each samples or in the divided in the four categories each one is having 30 samples. The data is collected and analysed through random sample method.

### The tools of analysis:

Percentage method is used to analyse the data.

**Table – 1**  
**Age and Sex Wise of the Sample Respondents**

Sl. No	Age Group	Highly Affected				Less Affected				Total
		F.C	F.S	F.c.G	O	F.C	F.S	F.c.G	O	
1	Below 20	7 (23)	8 (27)	6 (20)	11 (37)	9 (30)	7 (23)	5 (17)	8 (27)	61 (25)
2	21-40	11 (37)	13 (43)	9 (30)	10 (33)	11 (37)	12 (40)	8 (27)	9 (30)	83 (35)
3	41-60	7 (23)	5 (17)	10 (33)	5 (17)	6 (20)	8 (27)	10 (33)	8 (27)	58 (24)
4	Above 61	5 (17)	4 (13)	5 (17)	4 (13)	4 (13)	3 (10)	7 (23)	5 (17)	37 (15)
	<b>Total</b>	30 <b>(100)</b>	30 <b>(100)</b>	30 <b>(100)</b>	30 <b>(100)</b>	30 <b>(100)</b>	30 <b>(100)</b>	30 <b>(100)</b>	30 <b>(100)</b>	240 <b>(100)</b>
	<b>Sex</b>									
1	Male	19 (63)	18 (60)	21 (70)	16 (53)	17 (57)	20 (67)	18 (60)	17 (63)	148 (62)
2	Female	11 (37)	12 (40)	9 (30)	14 (47)	13 (43)	10 (33)	12 (40)	11 (37)	92 (38)
	<b>Total</b>	30 <b>(100)</b>	30 <b>(100)</b>	30 <b>(100)</b>	30 <b>(100)</b>	30 <b>(100)</b>	30 <b>(100)</b>	30 <b>(100)</b>	30 <b>(100)</b>	240 <b>(100)</b>

**Source:** Computed.

**Note:** Figures in parentheses denote the percentages.

The above table(1) explains the age and sex wise category of highly tsunami affected and less tsunami affected people. In the tsunami affected area under different categories such as Fish Catches “F.C” , Fish

Sellers “F.S”, Fish Catches Come Government Employees “Fc.G” and others “O” are explain in the above table each category of 30 samples both high tsunami is affected and less tsunami affected are selected. The total of 240 samples are taken.

Below the age group of 20, 61(25 percentage) samples are taken in the highly tsunami affected area and less tsunami affected are together. In the highly tsunami affected area Fish Catches are 7 , Fish Sellers are 8, Fish Catches Come Government Employees are 6 and others are 11 . In the less tsunami affected area Fish Catches are 9, Fish Sellers are 7, Fish Catches Come Government Employees are 5 and others are 8.As far as the fish catches under below 20 age group or concerned the less tsunami affected sample shows 30% and high affected sample shows 23 % . Hence the less tsunami affected fish catches sample has more percentage compare to highly affected fish catching sample.

The age group of 21 - 40 totally 83 (35 percentage) samples are taken. This age group is tsunami highly productive. In the highly tsunami affected area Fish Catches are 11 , Fish Sellers are 13, Fish catches Come Government Employees are 9 and Others are 10. In the less tsunami affected area Fish Catches are 11 , Fish Sellers are 12, Fish catches Come Government Employees are 8 and others are 9.This age group were highly occupied in various occupations in both high tsunami affected and less tsunami affected sample respondents. As for was the fish catches ( F.C) under 21 - 40 age group are concerned the less affected sample shows 37 % and highly affected sample shows 37 percentage Hence both less affected and effected fish catches (F.C) have equal participation in the category.

The age group of 41 - 60 totally 59 , (24 percentage)samples are taken. This age group is highly productive. In the highly tsunami affected area Fish Catches are 7 , Fish Sellers are 5 , Fish catches Come Government Employees are 10 and Others are 5. In the less tsunami affected area Fish Catches are 6 , Fish Sellers are 8, Fish catches Come Government Employees are 10 and others are 8.

The age group of Above - 61 totally 37 (15 percentage) samples are taken. In the highly tsunami affected area Fish Catches are 5 , Fish Sellers are 4 , Fish catches Come Government Employees are 5 and Others are 4. In the less tsunami affected area Fish Catches are 4, Fish Sellers are 3, Fish catches Come Government Employees are 7 and others are 5.The above table shows that those who are above 60 years of age are meager.

Sex wise distribute sample respondents shown the male samples are highly involved in the livelihood activity compare to the female respondents in both high tsunami affected and less tsunami affected sample respondents.

Table – 2

## Religion and Caste Wise of the Sample Respondents

Sl. No	Religion	Highly Affected				Less Affected				Total
		F.C	F.S	Fc.G	O	F.C	F.S	Fc.G	O	
1	Hindu	12 (40)	12 (40)	14 (47)	13 (43)	12 (40)	11 (37)	12 (40)	15 (50)	101 (42)
2	Muslim	4 (13)	3 (10)	4 (13)	3 (10)	3 (10)	4 (13)	2 (7)	0 -	23 (10)
3	Christian	14 (47)	15 (50)	12 (40)	14 (47)	15 (50)	15 (50)	16 (53)	15 (50)	116 (50)
	<b>TOTAL</b>	30 <b>(100)</b>	30 <b>(100)</b>	30 <b>(100)</b>	30 <b>(100)</b>	30 <b>(100)</b>	30 <b>(100)</b>	30 <b>(100)</b>	30 <b>(100)</b>	240 <b>(100)</b>
	<b>Caste</b>									
1	ST\SC	12 (40)	9 (30)	6 (20)	10 (33)	11 (37)	10 (33)	8 (27)	11 (37)	77 (32)
2	BC	16 (53)	18 (60)	20 (67)	14 (47)	16 (53)	15 (50)	19 (63)	15 (50)	133 (55)
3	OC	2 (7)	3 (10)	4 (13)	6 (20)	3 (5)	5 (17)	3 (10)	4 (13)	30 (13)
	<b>TOTAL</b>	30 <b>(100)</b>	30 <b>(100)</b>	30 <b>(100)</b>	30 <b>(100)</b>	30 <b>(100)</b>	30 <b>(100)</b>	30 <b>(100)</b>	30 <b>(100)</b>	240 <b>(100)</b>

Source: Computed.

Note: Figures in parentheses denote the percentages.

The above table 2 explain the religion and caste category of highly tsunami affected and less tsunami affected people. In the tsunami affected area under different categories such as Fish Catches “F.C”, Fish Sellers “F.S”, Fish catches Come Government Employees “Fc.G” and others (O) are explain. In the table shows religion wise distribution like Hindu, Muslim, Christian and caste wise calculate like ST/ SC, BC, OC Most of the Christian religion lives in seashore area affected in tsunami. The Hindu religion totally 101 samples are taken. In the tsunami highly tsunamiaffected area of Fish Catchers are 12, Fish Seller are 12, Fish Catches Come Government Employees are 11 and Others 13. In the less tsunamiaffected area of Fish Catchers are 12, Fish Seller are 11, Fish Catches Come Government Employees are 12 and Others 15.

The Muslim religion totally 23 samples are taken. In the highly tsunami affected area of Fish Catchers are 4, Fish Seller are 3, Fish Catches Come Government Employees are 4 and Others 3. In the less tsunami affected area of Fish Catchers are 3, Fish Seller are 4, Fish Catches Come Government Employees are 2 and Others zero.

The Christian religion totally 116 samples are taken. In the highly tsunami affected area of Fish Catchers are 14, Fish Seller are 15, Fish Catches Come Government Employees are 12 and Others 14. In the less tsunami affected area of Fish Catchers are 15, Fish Seller are 15, Fish Catches Come Government Employees are 16 and Others 15. The Christian population is mostly affected in both highly tsunami affected and the less tsunami affected samples. At the same time the table shows that Muslim people live far away from the seashore area, so that Muslim population is less affected in the highly affected sample (10 percentage).

The SC/ ST caste totally 77 samples are taken. In the highly tsunami affected area of Fish Catchers are 12, Fish Seller are 9, Fish Catches Come Government Employees are 6 and Others 10. In the less tsunami affected area of Fish Catchers are 11, Fish Seller are 10, Fish Catches Come Government Employees are 8 and Others 11.

The BC caste totally 133 samples are taken. In the highly tsunami affected area of Fish Catchers are 16, Fish Seller are 18, Fish Catches Come Government Employees are 20 and Others 14. In the less tsunami affected area of Fish Catchers are 16, Fish Seller are 15, Fish Catches Come Government Employees are 19 and Others 15.

Hindu religion totally 30 samples are taken. In the highly tsunami affected area of Fish Catchers are 2, Fish Seller are 3, Fish Catches Come Government Employees are 4 and Others 6. In the less tsunami affected area of Fish Catchers are 3, Fish Seller are 5, Fish Catches Come Government Employees are 3 and Others 4. Table shows that OC caste is less affected in both the highly tsunami affected and the less tsunami affected samples. MBC caste is highly tsunami affected in both less tsunami affected and highly tsunami affected samples.

**Table-3**  
**Education and Occupation - Wise of the Sample Respondents**

Sl. No	Education	Highly Affected				Less Affected				Total
		F.C	F.S	Fc.G	O	F.C	F.S	Fc.G	O	
1	Illiterates	4 (13)	3 (10)	0 (0)	0 (0)	3 (10)	1 (3)	0 (0)	0 (0)	11 (5)
2	Primary	6 (20)	7 (23)	4 (13)	3 (10)	5 (17)	6 (20)	2 (7)	1 (3)	34 (14)
3	Middle	8 (27)	9 (30)	5 (17)	4 (13)	7 (23)	7 (23)	3 (10)	5 (17)	48 (20)
4	Secondary	6 (20)	5 (17)	7 (23)	9 (30)	5 (17)	5 (17)	8 (27)	9 (30)	54 (22.5)
5	HSC	5 (17)	4 (13)	6 (20)	8 (27)	7 (23)	5 (17)	10 (33)	9 (30)	54 (22.5)
6	Graduates	1 (3)	2 (7)	8 (27)	6 (20)	3 (10)	6 (20)	7 (23)	60 (20)	39 (12)
	<b>TOTAL</b>	<b>30 (100)</b>	<b>30 (100)</b>	<b>30 (100)</b>	<b>30 (100)</b>	<b>30 (100)</b>	<b>30 (100)</b>	<b>30 (100)</b>	<b>30 (100)</b>	<b>240 (100)</b>

**Source:** Computed.

**Note:** Figures in parentheses denote the percentages.

The above table 3 explain the education and occupation wise highly tsunami affected and less tsunami affected sample respondents. In the tsunami affected area under different categories of occupation such as Fish Catches (F.C) , Fish Sellers (F.S) , Fish Catches Come Government Employees (Fc.G) and others (O) are explained the table. This table shows education wise sample categories classified into Illiterates, primary Schools, Middle School, Secondary School, Higher Secondary School, Graduates so on. Illiterate peoples not able to work at government department and other community people not involved in the above occupation. That is the reason our sample respondents shown that Fish Catches Come Government Employees (Fc.G) and others (O) not representing the sample in both highly tsunami affected and less tsunami affected group. Higher secondary and secondary level studied people involved in the livelihood occupation for nearly 22.5percentages both highly tsunami affected and less tsunami affected area respectively.

Table 4

## Income from Variable Sources of the Respondents

Sl. No.	Income	Highly Affected				Less Affected				Total
		F.C	F.S	F.c.G	O	F.C	F.S	F.c.G	O	
1	Below 100000	11 (37)	8 (27)	5 (17)	6 (20)	10 (33)	9 (30)	4 (13)	5 (17)	58 (24)
2	100001-200000	9 (30)	12 (40)	7 (23)	8 (27)	8 (27)	10 (33)	6 (20)	7 (23)	67 (28)
3	200001-300000	6 (20)	7 (23)	10 (33)	9 (30)	8 (27)	8 (27)	11 (37)	10 (33)	61 (29)
4	Above 300000	4 (13)	3 (10)	8 (27)	7 (23)	4 (13)	3 (10)	9 (30)	8 (27)	46 (19)
		<b>30</b> <b>(100)</b>	<b>30</b> <b>(100)</b>	<b>30</b> <b>(100)</b>	<b>30</b> <b>(100)</b>	<b>30</b> <b>(100)</b>	<b>30</b> <b>(100)</b>	<b>30</b> <b>(100)</b>	<b>30</b> <b>(100)</b>	<b>240</b> <b>(100)</b>

Source: Computed.

Note: Figures in parentheses denote the percentages.

The income group 2,00,000 to 3,00,000 is the middle income group which contributes more number of sample respondents in both highly tsunami affected and less tsunami affected groups in all the categories. The income group 1,00,000 to 2,00,000 is low middle income group which contributes Second in number of sample respondents in both highly tsunami affected and less tsunami affected group in all the categories. The income group below 1,00,000 is low income which contribute third number of sample respondents in both highly affected and less affected group in all the categories. The high income group representing the sample is low in both highly tsunami affected less tsunami affected group in all the categories.

Table 5

## Per Weak Expenditure Details of the Sample Respondents

Sl. No	Expenditure	Highly Affected				Less Affected				Total
		F.C	F.S	F <sub>c</sub> G	O	F.C	F.S	F <sub>c</sub> G	O	
1	Food Items	101493 (58)	103070 (57)	109180 (55)	106376 (56)	102873 (58)	104063 (56)	114596 (54)	108166 (55)	849817 (56)
2	Non Food Items	72640 (42)	77833 (43)	90866 (45)	83453 (44)	74756 (42)	79183 (44)	97826 (46)	89890 (45)	666447 (44)
	<b>Total</b>	174133 <b>(100)</b>	180903 <b>(100)</b>	200046 <b>(100)</b>	189829 <b>(100)</b>	177629 <b>(100)</b>	183246 <b>(100)</b>	212422 <b>(100)</b>	198056 <b>(100)</b>	1516264 <b>(100)</b>

Source: Computed.

Note: Figures in parentheses denote the percentages.

The above table explains the expenditure of highly tsunami affected and less tsunami affected people. The table examines the food expenditure and non food expenditure of both the groups. When it comes to food expenditure the highly tsunami affected group spends less in all the categories where as the less affected group spend marginally higher in their spending across all categories compared to highly tsunami affected group. The non-food items also shows the same result between the two groups across all categories. This shows that, the expenditure is having affected by the tsunami disaster in the study area.

Table 6

## Saving of the Surveyed Household

Sl. No.	Saving	Highly Affected				Less Affected				Total
		F.S	F.C	F <sub>c</sub> G	O	F.S	F.C	F <sub>c</sub> G	O	
1	Cash in hand	3 (10)	4 (13)	3 (10)	5 (17)	2 (7)	4 (13)	4 (13)	3 (10)	28 (12)
2	Cooperative bank	5 (17)	6 (20)	4 (13)	3 (10)	5 (17)	4 (13)	3 (10)	4 (13)	34 (14)
3	Commercial bank	5 (20)	7 (23)	9 (30)	11 (33)	6 (20)	5 (17)	10 (33)	8 (27)	61 (25)
4	Post office	7 (23)	7 (23)	5 (17)	3 (10)	7 (23)	5 (17)	5 (17)	6 (20)	45 (19)
5	Chits	2 (7)	2 (7)	2 (7)	3 (10)	1 (3)	3 (10)	2 (7)	3 (10)	18 (7)
6	LIC	3	2	4	4	6	7	5	4	35



		(10)	(7)	(13)	(13)	(20)	(23)	(17)	(13)	(15)
7	Others	4 (13)	2 (7)	3 (10)	2 (7)	3 (10)	2 (7)	1 (3)	2 (7)	19 (8)
	<b>Total</b>	<b>30</b> <b>(100)</b>	<b>30</b> <b>(100)</b>	<b>30</b> <b>(100)</b>	<b>30</b> <b>(100)</b>	<b>30</b> <b>(100)</b>	<b>30</b> <b>(100)</b>	<b>30</b> <b>(100)</b>	<b>30</b> <b>(100)</b>	<b>240</b> <b>(100)</b>

**Source:** Computed.

Note: Figures in parentheses denote the percentages.

The above table 6 explains the saving of the household of highly tsunami affected and less tsunami affected people. In the tsunami affected area under different categories such as Fish Catches (F.C) , Fish Sellers (F.S) , Fish Catches Come Government Employees (Fc.G) and others (O) are explain the above table . The table shows savings of the sample household like cash in hand, Cooperative Bank, Commercial Bank, Post Office ,Chits, LIC and other ways of savings. Most of the people of highly tsunami affected and less tsunami affected sample save money at commercial bank very few in both the highly tsunami affected and less tsunami affected area save money at chit funds.

**Table 7**  
**Distribution of Debt Sample Respondents**

Sl. No.	Debt	Highly Affected				Less Affected				Total
		F.C	F.S	Fc.G	O	F.C	F.S	Fc.G	O	
1	Below 5000	2 (7)	3 (10)	9 (30)	8 (27)	0 (0)	1 (3)	9 (30)	8 (27)	40 (17)
2	5001-10000	4 (13)	3 (10)	7 (23)	6 (20)	3 (10)	5 (17)	7 (23)	6 (20)	41 (17)
3	10001-15000	5 (17)	4 (13)	5 (17)	6 (20)	6 (20)	4 (13)	5 (17)	6 (20)	41 (17)
4	15001-20000	8 (27)	6 (20)	4 (13)	5 (17)	9 (30)	8 (27)	4 (13)	4 (13)	48 (20)
5	20001-25000	7 (23)	5 (17)	3 (10)	4 (13)	6 (20)	7 (23)	3 (10)	3 (10)	38 (16)
6	Above 25001	4 (13)	9 (30)	2 (7)	1 (3)	6 (20)	5 (17)	2 (7)	3 (10)	32 (13)
	<b>Total</b>	<b>30</b> <b>(100)</b>	<b>30</b> <b>(100)</b>	<b>30</b> <b>(100)</b>	<b>30</b> <b>(100)</b>	<b>30</b> <b>(100)</b>	<b>30</b> <b>(100)</b>	<b>30</b> <b>(100)</b>	<b>30</b> <b>(100)</b>	<b>240</b> <b>(100)</b>

**Source:** Computed.

Note: Figures in parentheses denote the percentages.

The about table 7 explains the debt with the help of income category of highly tsunami affected and less tsunami affected people. In the tsunami affected area under different categories such as Fish Catches (F.C), Fish Sellers (F.S) , Fish Catches Cum Government Employees (Fc.G) and others (O) are explain the above table. Usually we come to know that the low income people are highly prone to the disaster. This table showing different story. Which means that the middle income or more affected in both the highly tsunami affected area and less tsunami affected area. Which is very clearly depicted in the table showing that the income group of above 10,000 is 65 percentage in the sample taken in the tsunami affected region.

### **POLICY IMPLICATIONS :**

This research article conclude that the people living in the coastal region are affected the most. It also concluded that the belong to Christian religion are most affected in the region. By closely examining the sample , we are able to identify that the illiterate and uneducated are also affected at large. When it comes to food expenditure the highly tsunami affected group spends less in all the categories where as the less tsunami affected group spend marginally higher in their spending across all categories compared to highly tsunami affected group. This research article suggest that awareness programs should be conducted and also improve the medical facility in the affected region. Create livelihood opportunity for the people in the sea shore area. The government and the NGOs should concentrate on developing mangrove forest in the sea shore area to prevent huge impact due to natural disasters.

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